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**Design pour débattre : comment créer des artefacts
dissonants, et leurs situations de communication, afin
d'ouvrir des espaces de contestation mutuelle (agonisme)
et d'expression des voix marginales (dissensus)**

Maxime Mollon

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THÈSE DE DOCTORAT

DE L'UNIVERSITÉ PSL

Préparée à L'École Nationale Supérieure des Arts Décoratifs

Design pour débattre

Comment créer des artefacts dissonants,
et leurs situations de communication,
afin d'ouvrir des espaces de contestation mutuelle (agonisme)
et d'expression des voix marginales (*dissensus*).

Soutenue par

Max MOLLON

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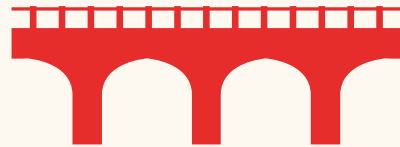
Designing for Debate



How to craft dissonant artefacts and their communication situations so as to open spaces for mutual contestation (agonism) and the expression of marginal voices (dissensus).

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Designing for Debate



How to craft dissonant artefacts and their communication situations so as to open spaces for mutual contestation (agonism) and the expression of marginal voices (dissensus).

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Designing for Debate

How to Craft Dissonant Artefacts and Their Communication Situations so as to Open Spaces for Mutual Contestation (Agonism) and the Expression of Marginal Voices (Dissensus).

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Abstract

Living in a democracy or working in a group requires the use of deliberative processes to agree and decide on ways of living together and projecting ourselves into common desirable futures. However, these processes remain an illusion, according to the political philosopher Chantal Mouffe. Because, decision by consensus often marginalises minority opinions, but also, rationality does not make it possible to overcome conflicts. They are rather often rooted in affects. Consequently, how can we open spaces for debate that are participatory, inclusive and that mobilise the affects? What methods and roles for such an agnostic design (from the Greek *Agon*, adversary)?

My first contribution is the definition of a group of practices (and its 6 common properties), and of the research field that studies them (and the typology of its research objects). These are the “group” and the “research field” of design for debate. Among these practices, my study focuses on “Discursive Design” for debate, in which programmes such as Critical Design, Speculative Design and Design Fiction participate.

To answer my questions, three fieldworks have been explored iteratively (a series of five projects), among stakeholders (e.g. an ethics commission, and a research laboratory), using qualitative methods borrowed from action research, ethnography and Information and Communication Sciences.

The analysis revealed how design can stimulate interpersonal debate when it generates a ‘dissonance’ among the social values of the public, by presenting an ambivalent artefact (which juxtaposes discordant social values). I have called this form of ethnomethodology through design, the bridging experiment. As a second result, beyond the simple design of an artefact, design can reach and mobilise a “public” (in the sense of John Dewey) concerned by a latent issue, by joining it in its own context. And, by orchestrating a whole communication situation where audiences and artefacts meet. I offer a descriptive model called the Discursive Design Communication System.

Thus, when it thwarts the polarisation of opinions, the artefact takes on the role of a non-human diplomat, which intensifies conflicts in order to connect worlds that do not speak to each other. But also, as a media, design adopts the role of an “agnostic mediating artefact,” which opens up multidimensional communication situations—between human, non-human and fictional actors.

The contributions of this thesis are conceptual (a glossary of concepts related to the ‘tactic of dissonance’), practical (a method of design-driven ethnomethodological research, and a communication model of Discursive Design), empirical (six case studies and the analysis of a systemic and longitudinal experience of one year of design residency in an ethics commission) and theoretical (discussions on design’s specific contribution to the political—defined by Mouffe as the very condition of the confrontation of opinions that is intrinsic to the endeavour of living together). I start with the analysis of a Critical Design project pre-dating the Ph.D. research (Dog & Bone, 2010-2011). Its limitations—its provocativeness and the strategy of the exhibition, which did not allow debate to occur—lead me to question the concept of ‘provocation,’ and instead, to explore ‘dissonance’ (drawing on Festinger 1957). Following this first experience, I fine-tune my central research object, which includes practices that draw on Reflective (Sengers et al., 2005), Discursive (Tharp & Tharp 2008), Adversarial (DiSalvo 2009) and Participatory design. Throughout a review of the literature, I refine my understanding of what designing for debate means, elaborating on the concept of agonism (a situation of constantly renewed confrontation. Mouffe 2000). In seeking ways of dissemination other than the art and design exhibition, I come to examine how to orchestrate a “communication situation” (Goffman) that includes humans and non-humans.

I finally outline potential roles offered to the political designer in contemporary societies.

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0 INTRODUCTION

Design as an Agent of the *Political*?

From debates on genetically modified organisms to a worker’s weekly team meeting, the same mechanism polarises many debates and undermines democracy: *consensus*.¹ According to the Belgian political philosopher Chantal Mouffe, consensus is built on the will of the majority. It excludes and relegates disagreeing opinions to the margins, favouring extremism and oppression.

The matter of thwarting consensus does not spare design because its contemporary entanglement with policy-making is directed either towards consensus-making (e.g. through design thinking) or towards behavioural change (e.g. through cognitive psychology’s so called ‘nudges’).² Hence, if designing is to transform “an existing situation into a preferable one”³ I wondered for whom are these forms of design preferable? And, how do we enable debate about what is *preferable*?

I subsequently looked for ways to design for debate. For my research, I took a body of unconventional design practices that challenge consensus and our visions of the preferable as my object of study. This form of “new social design”⁴ aims at providing an experience of the *political*. According to Mouffe, the *political* can be understood in contrast with politics. While the term politics refers to the activities of administrating humans in society, the *political* is a state of antagonism and of confrontational opinions, intrinsic to the enterprise of living together.⁵ The *political* concept has allowed me to consider the study of how to design confrontation. I hence tried to find out:

- How could design thwart consensus? What are design specific contributions to enabling an experience of the *political*?

To answer these questions, this dissertation is organised in a threefold structure.

The first step is dedicated to studying existing literature to define the research field in which this thesis takes place (Chapter 1). I also define my epistemological positioning (Chapter 2). Elaborating on Chapter 1, I then search for the limitations pertaining to existing practices of designing for debate, on which to focus my research questions (Chapter 3). To this end, I review the related works, within academic literature, and I start from reviewing the limitations met in my own practice—*Dog & Bone* (2010-2011). The limitations I point out lead me to define a research strategy (Chapter 4).

¹ Terms in red are reported in the Glossary.

² **Thomas C. Leonard**, ‘Richard H. Thaler, Cass R. Sunstein, Nudge: Improving Decisions about Health, Wealth, and Happiness,’ *Constitutional Political Economy* 19, no. 4 (1 December 2008): 356–360.

³ **Herbert A. Simon**, *The Sciences of the Artificial*, 2019th ed. (Cambridge, MA: MIT Press, 1969).

⁴ **Ilpo Koskinen**, ‘Agonistic, Convivial, and Conceptual Aesthetics in New Social Design,’ *Design Issues* 32, no. 3 (July 2016): 18–29.

⁵ **Chantal Mouffe**, *Agonistique* (Paris: Beaux Arts de Paris éditions, 2014).

I have chosen to conduct this research in a *designerly way*⁶—this refers to research, through the practice of design—specifically through the making of ten projects developed between November 2012 and June 2018, five of which are examined here.

The second step is dedicated to experiments on what sparks debate within the design of an artefact. I carried out four experiments related to one design project—*L'Éphéméride* (2015). For this project, I spent a year doing a design residency at the *Espace Éthique île-de-France*, an ethics commission based at the St-Louis Hospital in Paris. I studied the qualities of my artefact; my design process; the participants' comments in a debate session; and the session's consequences for the stakeholder (respectively, in chapters 5, 6, 7, 8).

In the third step, I focus on the situation in which debate takes place—through two experiments (chapters 9 and 10). These two chapters are structured around the same four design projects exploring different debate situations. In the *OneHealth* (2014) project, I propose a fictional scientific poster exhibition as part of a microbiology conference. In the project *#Hack.my.cafeteria* (2016) I made a fictional campus cafeteria menu, entirely based on a genetically modified species, for a research laboratory. A speculative debate in the form of a role-play is the activity I organised in an ethics commission for *Epicure.app* (2015). And via the website *politique-fiction.fr* (2017) a series of speculative online news articles describes a 'post-presidential election' situation, in France.

Please note, in order to facilitate and accelerate, as much as possible, the long reading that awaits you, six elements have been added consistently.⁷ Overhead titles indicate the type of content of each section and chapter. **Emphasis marks (bold text) systematically indicate key arguments**—in my writing and in quoted texts. Hand-drawn sketches are used as complementary language to support or organise ideas. The conclusion of each chapter follows an identical structure—it recalls the question addressed, the answer proposed and the progression of the argument that led to this answer. When appropriate, a diagram or table summarises the chapter's contribution. Finally, a red margin is added to deliverables (diagrams, tables, methodological guidelines, etc.).

⁶ Nigel Cross, 'Designerly Ways of Knowing,' *Design Studies*, Special Issue Design Education, 3, no. 4 (1 October 1982): 221–27.

⁷ In addition, the graphic layout of this dissertation has been composed with the (print and digital) reader's need in mind. Find details in this online appendix: maxmollon.com/permalink/PHD_Appendix-INTRO-Layout.pdf (accessed Sept 2019).

Foundations

CH1 IDENTIFYING A RESEARCH FIELD Designing for Debate

I first review the design history literature in order to distinguish different types of relation of design with the *political*, i.e. the antagonism and confrontation inherent in collective life (in Section 1). Among those I focus on a body of *political* practices and attempt to identify its core properties (Section 2). I finally review the design research literature so as to outline the boundaries of a research field that take *political* design practices as an object of study (Section 3).

1 HISTORICAL PERSPECTIVE Two Different Relations of Design to the *Political*

My introduction evoked Herbert's Simon definition of design as a quest for the preferable. This definition implies to ask an eminently *political* question that is, for whom have design practices been actually 'preferable?' How did design address this question throughout the history of design? This question will serve to see what kind of relationship design had with its own *political* implications, since its early days.

I now present a non-exhaustive¹ summary of the design history literature. It is mostly based on the work of the French historian of design, Alexandra Midal, notably, on her 2012 book *Politique Fiction*.² I also draw on the work of the French-Italian historian of design Emanuele Quinz—i.e. in Jehanne Dautrey and Quinz's book on the history of 'strange' practices of design.³

1.A 1840–1930: Reformism Through Design, an Ambiguous Relationship to Industry

1.A.1 The Great Exhibition

I would like to begin by travelling back to late-nineteenth-century Europe, to Victorian England and the first major celebration of industrialisation, the 1851 Great Exhibition of the Achievements of All Nations. This event, which welcomed 6 million visitors, was the occasion to demonstrate the prowess of the new means of industry, like industrial standardisation. This was achieved by housing the event right in the middle of London in Hyde Park in a 70,000-metre square hall erected within 17 weeks—the Crystal Palace. Displaying all sorts of innovations, the venue and its 14,000 exhibitors gave a face to this new method of production and organisation. This was the accomplishment of Sir Henry Cole, an Inspector of Decorative Arts and adviser to Prince Albert, who is credited with the first usage of the word 'design' in 1849.

This first event provides us with an interesting debate to discuss. Two arguments were offered as a rationale for the event: while some people believed in machine-led fabrication as a way to ease workers' labour conditions, others viewed it as a means of productivity, arguing that the economy was the main lever for social change. The debate was between quality and quantity: on the one hand, Sir Henry Cole's initial ambitions (i.e. to demonstrate that the best things are the best designed ones); on the other, people advocating for productivity.

¹ Unfortunately, my account does not include a non-occidental-centric historical perspective. Also, the following episodes are extremely summarised. The complex national and international historical influences to which they are subject are not detailed.

² **Alexandra Midal**, *Politique Fiction* (St-Étienne, FR): Éditions EPCC Cité du design – ESADSE, 2012). | This publication came out for the eponym exhibition, at the *Biennale Internationale du design* of Saint-Etienne 2013 (France).

³ **Jehanne Dautrey and Emanuele Quinz**, eds., *Strange Design: From Objects to Behaviors* (Villeurbanne, FR): It: éditions, 2015.

These people comprise for instance Richard Redgrave and his quote “That is best what sells best.”⁴ Another contrast can be highlighted between Cole’s ambitions and the actual perception of the exhibited content’s quality.⁵

These debates—together with Henry Cole’s attempt to promote his faith in the benefits of industrial progress (economic growth, the sharing of wealth, the easing of labour, and the pacification of nations through trade for greater justice and democracy)—constitutes only one step in the long discussion of the consequences of subordinating design to the industry.⁶

1.A.2 The Social Question

In the 1860s can be found another example of debate crystallising the question of personal values and design’s target audience. Due to the fruitless attempts of the Great Expo, at least from the point of view of intellectuals, practitioners such as William Morris took a reflective step back. It seemed necessary to totally rethink the links between human beings, art, and machine. On the one hand, Morris’ master, Professor John Ruskin, was the first to express concerns about the poor working conditions of factory workers and the ironic contradiction between their extreme poverty and the shop full of goods produced by their labour. On the other hand, Morris, inspired by the Gothic craftsmanship of cathedral architecture, aimed at tackling this issue by reaching the beautiful, the fair, and the spiritual.⁷ In his vision, decorative arts would enable people to be happier at work which, in addition to supporting a noble aesthetic, would also bring about the reform of modern society.⁸

One expression summarised this situation and the great problem of the 19th century—the social question. The first Industrial Revolution ushered in an era of hope. With the inventions of the steam machine, railroads, steam boats, and the textile industry came the progress of hygiene, medical and scientific knowledge, and wealth. And yet, wretchedness had never been so great as among the ones who were manufacturing such inventions. From Karl Marx to Proudhon and later the Situationists, socialist thinkers and artists addressed this contradiction. In order to picture the intensity of these debates, in addition to Alexandra Midal’s work, I would like to recall the cruelty of the social conditions of the ones who worked in the manufacturing houses soon to be called factories.

⁴ Redgrave’s quote as reported in the book: “Industrialists consider good taste an impediment to sales. Their position can be summarised in the principle: ‘That is best what sells best’.” **Renato De Fusco and Miquel Izquierdo**, *Historia del diseño* (Barcelona: Santa & Cole, 2005): 59.

⁵ In the days following the great expo, critics and artists were disappointed by the aesthetic mediocrity of productions that were trying to mechanically reproduce craft objects.

⁶ For the same question on another period, see: **Wim de Wit**, *Design for the Corporate World, 1950–1975* (London: Lund Humphries, 2017).

⁷ Morris, despite its anti-elitist stance, was raised in an upper middle-class family and his lifestyle was described as “late Victorian, mildly bohemian, but bourgeois,” **Fiona MacCarthy**, *William Morris: A Life for Our Time* (London: Faber, 2010), 602.

⁸ **William Morris et al.**, *Contre l’art d’élite* (Paris: Hermann, 1985).

Indeed, farmers who turned workers, attracted by the promise of fixed and regular incomes, suffered from malnutrition and disease as well as under urban pollution, toxic wastes, unsanitary and unbearable working conditions in coal or steel factories. In 1840, the life expectancy of an adult worker, working 12 hours a day with no days off, was 30 years (and even lower for child labourers).

For the first time in history, a large number of people had become members of the industrial working class.⁹ And in the heart of this febrile social situation, designers already engaged in, and reflected about, their political role in society.

1.A.3 The Modernists

To go back to Midal's review: Nikolaus Pevsner, German and later British art and architecture historian, released his book *Pioneers of the Modern Movement* in 1936. He enthusiastically hailed the Great Exhibition that had taken place 85 years earlier as one of the first forays made by the discipline of design and placed the first landmarks of the Modernist movement in the year 1920 and describing the architecture of Walter Gropius, forthcoming director of the German Bauhaus school.

To summarise very briefly, modernism aimed at bringing comfort to all through standardisation.¹⁰

A striking example of an ambiguous relationship between designers' development of a specific aesthetic as a way to support ideologies and political values can be found in the year 1933. The aesthetic of functionalism spread by modernist designers (such as the Bauhaus movement and its standardisation project inspired by Marxism) was comparable to the Nazis' aesthetic and design principles—who closed the school in 1933. Both forwarded an idea of the technology at the service of democracy, with quite different perspectives, to say the least. To conclude with Midal's observation, "any attempt to conceive of design based on form first requires it to be considered as a system of values and representations that are eminently political."¹¹

⁹ **Dorothy Thompson**, *The Chartists: Popular Politics in the Industrial Revolution* (New York: Pantheon, 1984). | The great majority of the European population of the time is either farmer or worker. Therefore, the most represented political ideologies at that time are the ones defending the workers' rights: from socialism to communism. When the Chartist movement gets at its peak, a widespread 'workers consciousness' constitutes.

¹⁰ The Modern movement is based on a total faith in the power of machine-based production system, it aims at restoring the lost connection between consumers and production; at developing a geometric industrial aesthetic free of ornaments; and at establishing a truly democratic culture through standardisation, which allows workers to afford the goods they produce, and insures full power to the mass of workers.

¹¹ **Midal**, *Politique Fiction*, 179.



Figure 1 | Design's ambiguous relation to its authors' values and to the industry can be summarised with this complex example. Redesigning work surfaces like an assembly line, contributed to easing women's labour and supported an abolitionist ideology. But did it restrain women territory to the kitchen? | (Top-Left) In 1869, Catharine Beecher Stowe designed a project for a house without a servant (slave), optimising the efficiency and rationality of the space, starting with the kitchen.¹² | (Bottom-left) Around 1912, Lillian & Franck Gilbreth sought to apply the teachings of Taylorism to rationalise the housewife's moves and redesign the kitchen. | (Right) In 1953, Gardner Soule proposed the Cornell kitchen (advertisement in *Popular Science* magazine, Sep, 1953).¹³

By drawing on Alexandra Midal's work, I have briefly suggested how designers developed—very early in the history of the field—a political awareness and self-critical discourses. Through attempts to create a 'preferable' society they demonstrated a reformist posture. In the following subsection, I review different kinds of practices built in reaction to design's unsatisfying attempts to contribute to a 'preferable' society. They build a different kind of relation to the *political* (i.e. contestation and controversy).

Jumping from the Modernist movement to the sixties and the seventies, I propose to look into designers' pursuance at expressing self-critical positions through their design productions.

¹² Catharine Esther Beecher, *A Treatise on Domestic Economy: For the Use of Young Ladies at Home, and at School* (New York: Harper, 1848).

¹³ These three examples are extracted from Catherine Clarisse, *Cuisine, recettes d'architecture* (Besançon: Editions de l'Imprimeur, 2004).

1.B 1960s & 1990s: Self-Criticism and Contestation

1.B.1 Italian Radical Design

In 1972, the exhibition *Italy, The New Domestic Landscape* was put together by the Argentine curator Emilio Ambasz, in charge of the architecture department of the Museum of Modern Art (MOMA) at the time. His intention was to give a preview of the intense, complex, and often contradictory directions explored by Italian designers. In the exhibition catalogue, he writes, “Italy has become a micromodel in which a wide range of the possibilities, limitations, and critical issues of contemporary design are brought into sharp focus.”¹⁴

Ambasz proposes to differentiate three prevalent attitudes towards design in his corpus: a **conformist** one, a **reformist** one, and one of **contestation** which combines both enquiry and action. The first attitude regroup projects which do not question the sociocultural context in which they are released. They are concerned with exploring the aesthetic qualities of design objects for themselves and were the most visible part of the Italian design landscape at the time. The second category—reformist projects—find their designers torn by a dilemma. The one of being very concerned about their role within consumerist society, without being able to control the interpretation or uses of their production. And without being able to make structural changes to the system on which their design is dependent.¹⁵ Therefore, instead of inventing new forms, this category of projects would either demonstrate reinterpretations of existing ones or reformulate known forms with altered meanings. An example of this re-semantisation strategy is Enzo Mari’s *Proposta per un’autoprogettazione* (1973), an attempt to cut ties with the industry in terms of economy, production, and distribution.¹⁶

As recalled by Ambasz, the distinction between the two groups is not clear-cut. The third approach—contestation—deals with this paradox by getting to the ‘roots’ (i.e. etymologically, being ‘radical’). However, if the projects themselves can be grouped in categories, the designers that gathered under the movement “Radical Design” followed dynamic and conflicting trajectories—as now outlined.¹⁷

¹⁴ Emilio Ambasz, *Italy, the New Domestic Landscape: Achievements and Problems of Italian Design* (New York: The Museum of Modern Art, 1972).

¹⁵ Indeed, being the transmission belt of capitalism, knowing it and knowing people hate you for that might be schizophrenic enough to motivate Ettore Sottsass Jr to write his cold blooded dark humour essay: “It really seems as though I am responsible for everything since I work for industry [...] how can one destroy the Capital? How to make industry without design?” Ettore Sottsass Jr, ‘Tout le monde dit que je suis méchant (Mi dicono che sono cattivo), Casabella n° 376, 1973,’ in *Design, L’Anthologie*, ed. Alexandra Midal (HEAD, 2013), 317.

¹⁶ Despite trying to be his own backer in a previous project, with no much success, here Mari would take advantage of standardisation by proposing 19 models of pieces of furniture, easily put together with nails and hammers, with their plans free of charge for the public. | *Proposta per un’autoprogettazione*, 1973 for the project, 1974 for the exhibition in the Galleria Milano.

¹⁷ For a more complete account of Radical Architecture, please see: Neil Spiller, *Visionary Architecture: Blueprints of the Modern Imagination* (London: Thames and Hudson, 2006) | Felicity Dale Elliston Scott, *Architecture or Techno-Utopia: Politics After Modernism* (Cambridge, MA: The MIT Press, 2007).

I now draw on a different source. In their 2014 work *Strange Design: du design des objets au design des comportements* (re-published in English in 2016 as *Strange Design: from Objects to Behaviours*),¹⁸ Jehanne Dautrey and Emanuele Quinz propose a peculiar reading of the history of Design. Their book is focused on design (self-)critical ability, using “strange” products to raise critique.

Four main areas of design are highlighted: Italian Radical Design from the 60s, Dutch Droog Design from the 90s, English Critical Design from the 2000s, and similar practices in contemporary France. In his introductory essay to the book¹⁹ Quinz details how Italian Radical architects such as Andrea Branzi moved from designing architecture to designing objects. Working under the assumption that both the discipline of design as well as the Modernist movement had failed to transform capitalism and the culture of consumption, such architects were “convinced that the city no longer embodied a place but a model of behaviour, a condition, and that this was transmitted via commodities.”²⁰ The standardisation of affordable products for all did not bring either comfort or better distribution of wealth. In fact, according to Quinz, it was instead the act of purchasing and owning goods that became synonymous with happiness.²¹ In reaction to the proliferation of consumerist culture, some designers gathered within the *Superarchitettura* exhibition in 1966 near Florence in Pistoia, Italy, grouping their practices under the umbrella of ‘Radical Design.’²²

Radical Design can be interpreted in a number of ways. Emanuele Quinz proposes a history of ‘strange’ design and details three main dimensions:

- Strategies of “re-semantisation,”²³ embedding as many sensorial properties as possible into an existing type of object to create a creative shock.
- What he calls “non-objects,” where designers do not focus on the object itself but rather on generating deviant perceptions and behaviours.
- And “banal objects,”²⁴ where the kitsch aesthetic (which had lately become fashionable) would be pushed to its maximum, acting as a negative resistance, a somewhat dystopian attempt to destroy the good taste of middle-class homes.

¹⁸ Dautrey and Quinz, *Strange Design*, 380.

¹⁹ Emanuele Quinz, ‘Prologue, A Slight Strangeness. Objects and Strategies of Conceptual Design,’ in *Strange Design*, ed. Jehanne Dautrey and Emanuele Quinz (Villeurbanne (FR): it: éditions, 2015), 10–51.

²⁰ Andrea Branzi, ‘Postface,’ *No-Stop City: Archizoom Associati*. [Orléans: HYX, 2006, 147.], quoted in Quinz, ‘Prologue,’ 25–26.

²¹ Quinz, ‘Prologue,’ 25–26

²² The movement includes notably: Archizoom Associati (Andrea Branzi, Gilberto Corretti, Paolo Deganello, Massimo Morozzi, Dario Bartolini and Lucia Bartolini), Superstudio (Adolfo Natalini, Cristiano Toraldo di Francia, Piero Frassinelli, Alessandro Magris and Roberto Magris), Alessandro Mendini, and others.

²³ Quinz, ‘Prologue,’ 19. | The systematic counterpoint to functionalism via the overload of visual meaning intends to raise attention and consciousness towards the role of objects. This strategy found a theoretical ground in the emergent discipline of semiotic carried by Umberto Eco at the time. | Eco, Umberto. *La structure absente : introduction a la recherche semiotique*. Translated by Uccio Esposito-Torrigiani. Paris: Mercure de France, 1972.

²⁴ Quinz, ‘Prologue,’ see page 22, for “non-objects” and 25 for “banal objects.” | Previous kitsch attempts blended with pop-art and new consumption trends. Thus, designers have either stopped using the object as a lever of criticism; amplified the kitsch aesthetic; or given up trying criticism and proposed the most commonplace objects possible.



Figure 2 | The Dream Bed Series (picture of a small-scale model) exemplifies an attempt to sharply distinguish the aesthetic of an object from the mainstream of mass production and standardisation. This “re-semantisation” strategy intended to get people to question their behaviour as consumers, to question the industry, as well as the role of design. Image: Archizoom Associati, *Letti di sogno-Dream Beds*, 1967–2000, Project by Gilberto Coretti. Models: *Elettro rosa* (*‘Electro rose’*). | Image Credit: Atribune.com

To summarise briefly, Quinz’s categories show designers’ reactions to the resilience of a capitalist society mutating into a new-born consumerist one. They also give a glimpse of the increasingly complex relationship of designers with their own field. It allows to point different postures, including a reformist and a contestant one.²⁵

1.B.2 Dutch Droog Design

Following Quinz’s chronology in his essay on strange design practices, we move to the Netherlands in the 90s with “Droog Design.”²⁶ According to Quinz, “Droog Design” uses strangeness as a protest against the values of a consumerist society, such as its excesses and wastes. They deliberately display contestation and support off-beat values through a mix of aesthetics and ethics traits and statements. These designers would either reuse useless elements or accumulate and multiply banal elements (e.g. a lamp made of 85 light bulbs).²⁷ In short, they remained anchored into realism and into the familiarity of the domestic and the quotidian unlike the utopian perspective and eccentric aesthetic of some Radical Design projects. Quinz regards the school of Droog Design as having a kind of ‘quiet approach’ to strangeness.²⁸ That said, this period also witnessed a very rich and heterogeneous production where, after 1991, this strategy of reuse spread into a fashion of reinterpreting classic design icons.

²⁵ Please note that I use the term posture rather than a stand, or a position, because it involves the body and actions, and it implies—at least in French—an effort to deliberately hold a position.

²⁶ The Dutch design collective Droog (meaning ‘dry’) was formed in 1993 by design historian Renny Ramakers and designer and educator Gijs Bakker. See this interview from Droog studio founder’s Renny Ramakers and Gijs Bakker in icon magazine bit.ly/droogIconMag (Web archive). | Please find the list of not-shortened links in the final Bibliography section.

²⁷ Rody Graumans and Droog Design, *The 85 Lamps* (1993).

²⁸ Quinz proposes this formulation while pointing at: **Alice Rawsthorn**, ‘Let’s Hear It for Quiet Design,’ *The New York Times*, 17 May 2009, sec. Fashion & Style, nyti.ms/2LQbuE2 (accessed June 2018). He also lists other elements distinguishing Droog Design from its predecessors: the sober and disinclined aesthetic (maybe proper to Dutch culture and sense of humour, according to the author); objects were mainly commercialised and usable.



Figure 3 | Proposing concepts and aesthetics that stood as counterpoints to the contemporary trends was the fundamental characteristic of Droog Design. This was a way to critique the values of consumerist society. An example of the aesthetic of reuse of 'useless' elements can be found in one of Droog's best-known design products: *You can't lay down your memories: Chest of Drawers*, 1991, by Tejo Remy, Droog Design. This piece is represented above, on the cover of a booklet made for a retrospective exhibition in 2006–2007 at the Museum of Arts and Design (MoMA), New York, called: *Simply Droog. 10 + 3 years of creating innovation and discussion*. | Credit : MoMA.

Droog Design and Radical Design relations to the *political* are rich and complex. In addition to Quinz's selection of practices, many other historical examples can be provided. In the next section, I will extend the historical development of political and self-critical practices to cover the period from the 1990s on to contemporary times.

1.C 1990s–Onward: Critical and Reflective Practices

Are these practices still alive today? Continuing the literature review, I want to briefly introduce and compare four types of contemporary design practices.

1.C.1 Interrogative Design

Krzysztof Wodiczko's²⁹ earliest Interrogative Design projects were developed in 1988. He later gathered a group of artist-researchers in 2001–02 within the Interrogative Design group at MIT.³⁰ Like its predecessors, this practice aims at making under-discussed political conditions and issues more visible, but in contrast to previous movements it intends to resolve these situations temporarily or metaphorically, like a “bandage”:

“A bandage covers and **treats the wound** while at the same time **exposing its presence**. Its presence signifies both the experience of pain and the hope of recovery.”

A bandage also marks the possibility of becoming obsolete someday. Such ‘bandages’ are developed, “as equipment that will **communicate, interrogate and articulate** the circumstances and the experiences of the injury.” They are also intended to allow one, “to see the world as seen by the wound!”³¹ Interrogative Design productions are not primarily sold in design galleries or showrooms but often performed in urban environments. Addressed topics often focus on “marginalized and estranged city residents,”³² at least as far as Wodiczko is involved. The work of the Interrogative Design group at large can be better described in the words of their former website:

“Design research, design proposal, and design implementation, all can be called interrogative when they take a risk in **exploring, articulating, and responding to the questionable conditions of life**.”

Therefore, its goal, while combining art and technology into design, is to “infus[e] it with emerging cultural issues that play critical roles in our society **yet are given the least design attention**.”³³

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²⁹ Wodiczko is a Poland born and New York City-based artist. He is renowned for his large-scale slide and video projections on architectural facades and monuments since the 1980s, according to krzysztofwodiczko.com/about/ (accessed June 2018).

³⁰ He has taught at MIT since 1991 and was the Director of the Center for Advanced Visual Studies from 1995-96. According to interrogative.org: bit.ly/interrogativeD (Web archive).

³¹ The previous quotes are from the *Bandage Text*, and the group's statement, taken from interrogative.org: bit.ly/interrogativeD-B (Web archive before May 2002). | Please note that quotes are kept in their original form regarding orthographic choices (US spelling, for instance in the next quote). | My emphases.

³² krzysztofwodiczko.com/about/ (accessed June 2018).

³³ From [Interrogative.org](http://interrogative.org): bit.ly/interrogativeD-C (Web archive, after June 2002). | Find also my archive of the bandage text in this online appendix: maxmollon.com/permalink/PHD_Appendix-CH1-Interrogative_Reflective.pdf (accessed Sept 2019).



Figure 4 | Krzysztof Wodiczko, Homeless Vehicle (1988). These vehicles provided a shelter and a visibility to people living in the streets of New York City in the 90s during a real estate crisis. The project intended “an exposition and articulation of the unacceptable conditions of their lives,” Wodiczko explained. “People should not need this kind of equipment. The utopian vision of this kind of project was based on the hope that its very function would eventually make it obsolete. I wanted to contribute to the understanding of the unacceptability of the situation, and bring people closer to the homeless.” The device has “symbolic functions, articulating through design all the needs of homeless people that should not exist in a civilized world.”³⁴
Credit: Galerie Lelong.

1.C.2 Critical Design

Since the 2000s, the latest embodiments of an explicit *political* and self-critical role for design can be found in contemporary practices such as Critical Design, Speculative Design, and Design Fiction.

Fiona Raby and Anthony Dunne developed the terms “Critical Design” through their practice as a duo named Dunne & Raby and through ten years of teaching³⁵ which often led to collective exhibitions strongly supported by Paola Antonelli.³⁶ The terms Critical Design were first coined by Dunne in his Ph.D. thesis (published as *Hertzian Tales* in 2005).³⁷ The concept was consequently elaborated by both Dunne and Raby in the work *Design Noir*, various interviews and online essays, such as the *Critical Design FAQ*,³⁸ and most recently in the book *Speculative Everything*.³⁹

According to their last book, Critical Design is “critical thinking” translated into materiality, “using design language to engage people,” “not taking things for granted,” and “always questioning what is given.” The term critical is often defined in opposition to “affirmative design” (conformist design that reinforces the status quo).⁴⁰

Critical Design aims “to challenge narrow assumptions, preconceptions and givens about the role products play in everyday life.”⁴¹

Over time, topics covered by the British duo’s projects evolved from issues related to electronic products (such as the lack of transparency and knowledge regarding their making, functioning, consequences, and so on)⁴² to cultural, social, and ethical implications of new technologies at large.⁴³ With time, Dunne & Raby also started employing the term ‘speculative’ and ‘design fiction’⁴⁴ to talk about their work.

³⁵ Respectively trained at architecture and industrial design at the Royal College of Art (RCA), Fiona Raby was professor of industrial design at the University of Applied Arts in Vienna and Anthony Dunne completed a Ph.D. at RCA in 1999—in the *Computer Related Design* department founded by Gillian Crampton Smith in 1990. In 2005, the programme changed its name to *Design Interactions*. Dunne was appointed as its head the same year. In 2015 they moved to the Parsons School of Design in NYC and the programme closed.

³⁶ The course productions are known to have participated in a series of worldwide exhibitions dragging a lot of attention in the communities of Art and Design, especially through 3 exhibitions curated by Paola Antonelli at the Museum of Modern Art (MoMA): *Safe: Design Takes on Risk* (2005); *Design the Elastic Mind* (2008); *Talk to Me: Design and the Communication between People and Objects* (2011).

³⁷ **Dunne, Anthony.** *Hertzian Tales: Electronic Products, Aesthetic Experience and Critical Design*. Cambridge (MA): The MIT Press, 2005.

³⁸ **Dunne, Anthony.** ‘Frequently Asked Questions.’ In *Design Interactions Yearbook*, Royal College of Arts. London, 2007. Text accessible at: dunneandraby.co.uk/content/bydandr/13/0/

³⁹ **Dunne, Anthony, and Fiona Raby.** *Speculative Everything: Design, Fiction, and Social Dreaming*. Cambridge, MA: The MIT Press, 2013.

⁴⁰ **Dunne, Raby.** *Speculative Everything*, 34–35. (All quotes extracted from these pages.)

⁴¹ **Dunne.** ‘Frequently Asked Questions.’

⁴² **Dunne.** *Hertzian Tales*.

⁴³ **Dunne, Raby.** *Speculative Everything*.

⁴⁴ “United Micro Kingdoms: A Design fiction” and “What Are Design Fictions?” are the title of two sections of Dunne and Raby’s 2013 website: unitedmicrokingdoms.org/ (not accessible since 2019), see: bit.ly/DR-UMK (Web archive).



Figure 5 | Anthony Dunne and Fiona Raby, Evidence Dolls, 2005.

“Evidence Dolls is a research project commissioned by the Pompidou Centre in Paris for the D-Day exhibition. It is part of an ongoing investigation into how design can be used as a medium for public debate on the social, cultural and ethical impact of emerging technologies.”⁴⁵ One hundred special dolls were produced. Users can open a drawer located in the crotch and store a strand of a partner’s hair for future DNA sequencing. The use of this test has yet to be defined. The project explores some of the social consequences of DNA sampling technology on the affective life of single women. | (Left) One doll decorated. Credit: Kristof Vrancken/Z33. (Right) a hundred dolls on bookshelves in an exhibition setting. Credit: Patrick Bolger/Science Gallery Dublin.

1.C.3 Speculative Design

Dunne and Raby used the term “Speculative Design” in 2007 to describe their practice which was formerly known as Critical Design.⁴⁶ They did not, however, claim to have coined this new term, acknowledging the fact that it had already existed for some time.⁴⁷ Their last book gives an extensive account of their projects newly labelled as Speculative Design along with other uses of the terms. A detailed development of the practice was proposed by Dunne’s former student James Auger in his 2012 Ph.D. thesis.⁴⁸

As defined by Auger,

“Speculative design combines informed, hypothetical extrapolations of an emerging technology’s development with a deep consideration of the cultural landscape into which it might be deployed, to speculate on future products, systems and services.”⁴⁹

According to Auger, Speculative Design aim is to deliver proposals that are essentially tools for questioning. He observes,

“Their aim is [...] not to propose implementable product solutions, nor to offer answers to the questions they pose; they are intended to act like a mirror reflecting the role a specific technology plays or may play in each of our lives, **instigating contemplation and discussion.**”⁵⁰

Topics addressed by Speculative Design projects often focus upon, but are not limited to, emerging research and their impacts on everyday lives.⁵¹

⁴⁶ “Critical Design uses speculative design proposals to challenge narrow assumptions, preconceptions and givens about the role products play in everyday life.” | **Dunne**. ‘Frequently Asked Questions.’

⁴⁷ “The term speculative design has been floating around for a while – it’s definitely not us that came up with it.” | **Anthony Dunne and Fiona Raby**, ‘Critical World Building. Interview by Rick Poynor,’ in *Design Fiction*, ed. Alex Coles, EP Vol.2 (Berlin: Sternberg Press, 2016), 50.

⁴⁸ **James H Auger**, ‘Why Robot?: Speculative Design, the Domestication of Technology and the Considered Future’ (Royal College of Art, 2012), [www/](#) | Auger’s thesis is based on the practice of the British duo Auger-Loizeau started in 2000—formed with the designer and Goldsmith-based teacher, Jimmy Loizeau.

⁴⁹ **James H Auger**, ‘Definition of Speculative Design,’ Auger Loizeau (Blog), June 21, 2013, augerloizeau.tumblr.com/post/53524176947/definition-of-speculative-design/

⁵⁰ **Auger**, ‘Why Robot?,’ 29. | My emphasis.

⁵¹ **Tobie Kerridge**, ‘Does Speculative Design Contribute to Public Engagement of Science and Technology?,’ in *Multiple Ways to Design Research: Research Cases That Reshape the Design Discipline. Proceedings of the Swiss Design Network Symposium* (Lugano, Switzerland, 2009), 208–24, [www/](#)



Figure 6 | Michael Burton & Michiko Nitta, *Algaculture* (2010), view of a near-future algaculture symbiosis suit, part of the *AfterAgri* project. “Algaculture designs a new symbiotic relationship between humans and algae. It proposes a future where humans will be enhanced with algae living inside new bodily organs, allowing us to be semi-photosynthetic. [...] Why design new food on what we have now, when we could re-design how we fuel the body altogether?”⁵²
Credit: Burton-Nitta.

1.C.4 Design Fiction

Design Fiction was initially developed through the work of the Near Future Laboratory.⁵³ Julian Bleecker defined the term in an essay in 2009.⁵⁴ It was extensively developed⁵⁵ and popularised by collaborations with—and the strong support of—the science-fiction writer Bruce Sterling⁵⁶ (who considers himself a critic of Design Fiction rather than a practitioner).⁵⁷

In addition to Sterling’s very generic definition⁵⁸ Bleecker defines the practice as follows:

“The conclusion to the designed fiction are objects with stories. These are stories that speculate about new, different, distinctive social practices that assemble around and through these objects.”

Noting that “Design fictions help tell stories that **provoke and raise questions**,” Bleecker observes how,

“Design fiction is about creative provocation, raising questions, innovation and exploration. [...] [These] provocations are objects meant to produce new ways of thinking about the near future, optimistic futures, and **critical, interrogative perspective**.”⁵⁹

In the beginning of his essay, Bleecker makes his point about the mutual influence of technology development and science-fiction by pointing at how research on ubiquitous computing drew its inspirations from science-fiction.⁶⁰ He also draws on the work of the American scholar David Kirby on the influence of sci-fi movies on science.⁶¹ Consequently, the main stream of topics explored by Design Fiction projects remained in the field of science and technology.

⁵³ Founded around 2007 by Julian Bleecker and Nicolas Nova, later joined by Fabien Girardin and Nick Foster.

⁵⁴ **Julian Bleecker**, ‘Design Fiction: A Short Essay on Design, Science, Fact and Fiction’ (18 March 2009), drbfw5wfjlxon.cloudfront.net/writing/DesignFiction_WebEdition.pdf

⁵⁵ The words ‘design fiction’ are said to appear first in Bruce Sterling’s book *Shaping Things*, in 2005, as a pretty unformed idea. The term’s coining is attributed to Julian Bleecker, who presented it in a talk at the *Engage Design* conference in 2008 and further developed it in his essay from 2009—According to Joshua Glen Tanenbaum, Assistant professor in informatics at UC Irvine, in May 2014, on: [quora.com/What-is-design-fiction/](https://www.quora.com/What-is-design-fiction/) (accessed Sept 2018).

⁵⁶ Notably through his Wired.com blog, his hyperactive twitter account, and in academia, through a cover story published in the *Interactions* journal: wired.com/category/beyond_the_beyond/ | twitter.com/bruces/ | **Bruce Sterling**, ‘COVER STORY: Design Fiction,’ *Interactions* 16, no. 3 (May 2009): 20–24.

⁵⁷ **Bruce Sterling**, ‘Most Design Fiction Will of Course Be Pretty Bad. Interview by Verina Gfader,’ in *Design Fiction*, ed. Alex Coles, EP Vol.2 (Berlin: Sternberg Press, 2016), 87–98.

⁵⁸ “The deliberate use of diegetic prototypes to suspend disbelief about change. [...] It means you’re thinking very seriously about potential objects and services and trying to get people to concentrate on those rather than entire worlds or political trends or geopolitical strategies. It’s not a kind of fiction. It’s a kind of design. It tells worlds rather than stories.” | **Torie Bosch**, ‘Sci-Fi Writer Bruce Sterling Explains the Intriguing New Concept of Design Fiction,’ *The Slate Group*, 2012, bit.ly/Sterling-Slate/ (accessed Sept 2018).

⁵⁹ **Bleecker**, ‘Design Fiction,’ 7–8. | The three quotes are taken to these pages.

⁶⁰ **David Kirby**, ‘The Future Is Now: Diegetic Prototypes and the Role of Popular Films in Generating Real-World Technological Development,’ *Social Studies of Science* 40, no. 1 (30 September 2009): 41–70, doi.org/

⁶¹ He settles on two famous articles from Genevieve Bell and Paul Dourish. Bleecker extrapolates from this observation to note that fiction often follows facts, like in Jurassic Park movie, which is strongly based on scientific expertise. Facts also often follow fiction—as with Star Wars interfaces inspiring Cisco Industries’ hologram product.

A major difference between Design Fiction and previously introduced terms is the innovation-driven (and business-driven) context that saw the rise of this practice.⁶² Consequently, other differences include a flexible use of the terms, describing either critical or non-critical postures,⁶³ but also describing design projects as much as Hollywood movies.⁶⁴ Another difference is the context of circulation of the work and the kinds of communities involved. Respectively, these works were often disseminated online and rarely in art galleries, at first. They seemed to have reached communities interested more in technology, innovation, science-fiction, and movie-making than in contemporary art and design fairs.



Figure 7 | For the Shenu *Hydrolemic System* project (2012), the curators of an exhibition at the *Documenta 13* festival asked the Japanese design studio Takram to design a water bottle, in a future where, for example, only 15% of the drinking water would remain due to an environmental disaster (we can easily imagine a second Fukushima accident). Their proposal of artificial internal organs (top-right and left) and water and nutrient rations (bottom-left), allow us to filter and recycle our own fluids, in order to save 85% of our daily water consumption. They designed six artificial organs including the Nasal Cavity Inserts for keeping water from escaping the body by condensing exhaled breath into dew (bottom-right), an Arterial-Jugular Heat Exchangers, and a Urine Concentrator.⁶⁵ | Credit: Naohiro Tsukada and Takram.⁶⁶

⁶² Bleecker's essay draws on David Kirby's research on "how entertainment producers construct cinematic scenarios with an eye towards generating real-world funding opportunities and the ability to construct real-life prototypes." Kirby introduces the term "diegetic prototypes" to account for the ways these props "demonstrate to large public audiences a technology's need, viability and benevolence." | Kirby, 'The Future Is Now,' 1.

⁶³ Noa Raford describing speculative promotional campaigns, like Microsoft corporate future visions, as bad corporate design fictions: news.noahraford.com/?p=1313/ (accessed Sept 2018).

⁶⁴ Bruce Sterling describing Spike Jonz's movie, *Her* (2013), like a design fiction movie: wired.com/2014/01/design-fiction-spike-jonze-her-vs-minority-report/ (accessed Sept 2018).

⁶⁵ takram.com/projects/shenu-hydrolemic-system/ (accessed Sept 2018).

⁶⁶ For a more visual introduction to Design Fiction and the practices presented earlier, see the three first videos of the Design Fiction Club seminar: designfictionclub.com/ (accessed Sept 2018).

1.D Mutual Contestation and Collective Contestation, Two Distinct Relations of Design to the *Political*

This review of literature, shows, first, design’s politically ambiguous relation to the industry (since the 1840s). Second, it presents how designers’ attempt to create a ‘preferable’ society was met with disillusionment and moved from reformism to self-criticism (recurrently from the 1920s to the 1970s). And, third, it points out how such critical strategies have manifested themselves repeatedly over time (from the 1990s onward). However, what makes the difference between early design practices and those described after the 1930s? What is unique about this group of practices in terms of the *political* experience they seem to offer?

Coming back to Emilio Ambasz’s classification from 1972 helps to consider this point. As noted earlier, the curator of the exhibition *Italy and the New Domestic Landscape* attempted to gather projects from Italian design from the 60s and 70s and arrange them into three categories: conformism, reformism, and contestation.

By following Ambasz’s typology, we can distinguish reformist practices that crystallise a political commitment (i.e. manifesting political values, and a vision of the preferable, through design choices) from contestation practices, that nurture a relationship with the *political* (i.e. publicly stimulating affect and disagreement about a vision of the preferable). Among the practices previously presented, those that existed before the 1930s are reformist.⁶⁷ In these stances, designers behave according to their vision of the preferable. They do not seem to primarily intend to start a discussion on the collective definition of the preferable. The selection of practices presented after the 1930s is different. They propose a message about the preferable, rather than (or in addition to) a preferable use. They are intimately linked to the *political* because they foster politicisation—that is, to position one’s opinions (for / against) when it comes to issues that affect collective life. In short:

- **Reformist practices are politically engaged** practices, but they are not explicitly fostering relations of confrontation of opinions. I do not address these practices in my thesis.
- **Political practices**, discussed below, intend to foster opinion confrontation.

I now propose to distinguish two types of *political* practices that draw on Ambasz’s ‘contestation’ practices. The first type of practice fosters ‘collective contestation.’ I now give some examples in order to mark the difference with the projects shown in the previous literature review. For instance, Greenpeace’s *Orizon* project (2017) presents a fictional real estate agency using predictive computer algorithms to simulate the rise in water levels caused by global warming so as to find future seafront properties. This design fiction is not reformist—it does not intend to support a vision of the preferable where global warming is turned into a profit-oriented business.

⁶⁷ This stance is not limited to the 1930s. Many similar approaches can be found in contemporary design.

On the contrary, it was carried out as part of a campaign intending to raise collective awareness of climate change issues and to encourage citizen protest and political actions.⁶⁸

Other approaches to support collective contestation through design do not necessarily use fiction and sometimes merge with reformist approaches—but they nonetheless act as a form of public contestation. For example, these three research projects identify approaches that involve activism, struggle, contestation and forms of reformism. Catherine Flood and Gavin Grindon, curators of the 2014–2015 *Disobedient Objects* exhibition, reviewed many forms in which design may support citizens movements for social change and to enable disobedience.⁶⁹ The American scholar and activist Edward (Tad) Hirsch selected and studied activist practices supporting mass mobilisation using the expression: Contestational Design,⁷⁰ And Magnus Ericson—independent curator based in Stockholm—and Ramia Mazé—Helsinki-based researcher, educator, and designer—released *DESIGN ACT, Socially and Politically Engaged Design Today—Critical Roles and Emerging Tactics*. The book traces both current and past projects addressing political and societal issues. They are described as a forms of activism and socially responsible designs that demonstrate a political engagement *in* and *through* action.⁷¹

The second type of practices is ‘mutual contestation.’ These practices do not quite fit with such a ‘collective’ endeavour. They do tend to express critique and to “oppose prevailing ideologies.”⁷² But they do not display an explicit goal to build a ‘collective’ contestation, and to assert claims, or to enforce political views. Instead, they seem to foster collective relations and experiences that are ones of reflection and disagreement. A project like Wodiczko’s *Homeless Vehicles* (1972), for instance, can lead to disagreement between passers-by, law enforcement officials and people who are homeless. It thus leads to a form of ‘mutual’ contestation.

⁶⁸ orizon.immo/ (accessed Nov 2018). | Greenpeace France (Laurence Veyne, communication director) and the marketing agency Artefact, aimed to denounce the inaction and lack of ambition of States, just before the COP23. But also, the cynicism of multinational companies that are slow to change their industrial strategies. The campaign was publicised in France through the website Usbek et Rica bit.ly/UR-greenP (accessed Nov 2018).

⁶⁹ Catherine Flood and Gavin Grindon, *Disobedient Objects (Catalogue)* (London: V & A Publishing, 2014). vam.ac.uk/content/exhibitions/disobedient-objects/ (accessed Sept 2018).

⁷⁰ Contestational design is “a unique form of design activity whose aim is promote particular agendas in contested political arenas.” | Edward A. (Tad) Hirsch, ‘Contestational Design: Innovation for Political Activism’ (Ph.D. Dissertation, Massachusetts Institute of Technology, 2009), 5. www/

⁷¹ Magnus Ericson and Ramia Mazé, eds., *Design Act: Socially and Politically Engaged Design Today – Critical Roles and Emerging Tactics* (Sternberg Press / Iaspis, Berlin / Stockholm, 2011) | See: design-act.se/index.php?vald=about/ (accessed Nov 2018).

⁷² Geert Zagers and Claire Warnier, ‘Designing Critical Design,’ in *ZOOM in ZOOM out: Z33 Design & Art Projects Collected* (Z33, Hasselt / MER. Paper Kunsthalve vzw, Gent (Belgium), 2008), www/

To conclude, this brief survey of design history makes it possible to **further work on a body composed of design practices that engage others with two types of *political* relation:**

- I understand **collective contestation** as a form of collective struggle, it is the action of **expressing contentious opinions as a group that reached a consensus** about an object of dissent.
- **Mutual contestation** is the action of **expressing contentious opinions towards others** in a collective, while no agreement is found.

These postures both contribute to engaging people in a *political* experience—in Chantal Mouffe’s sense of the experience of collective life, rooted in affects and antagonism. Their difference is the scale on which the disagreement takes place—understood as a state reached when a collective does not reach a **consensus**.⁷³ It either stand at the interpersonal level; or it can take place between a group and another group, an institution or an organisation, etc. (See Fig. 8).

These two stances may be contrasted with practices where designers convey their politically engaged vision of the preferable. Especially when they do this through artefacts that offer a preferable use—which does not seem to primarily intend to start a discussion on the collective definition of the preferable. These practices are not part of the body at stake in the present work.

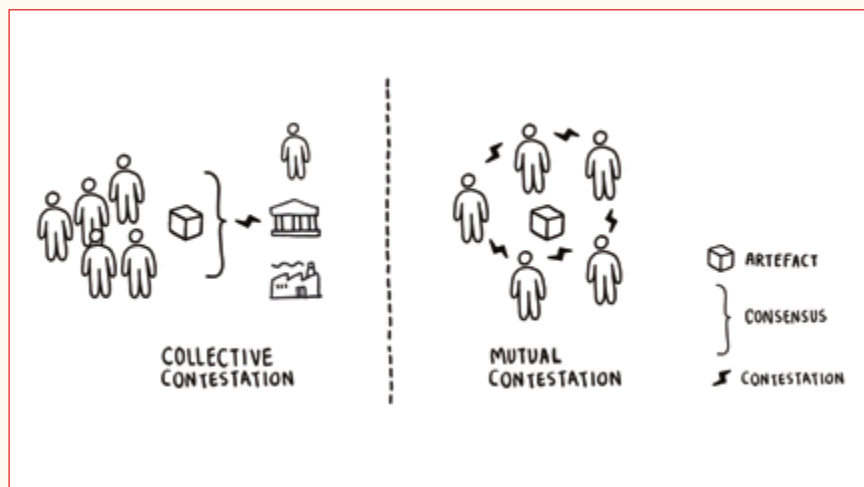


Figure 8 | Schematic representation of two kinds of *political* relations enticed by a design artefact. Left: a group reached a consensus on the claim of the (collective) contestation they want to express—the contestation is elicited by an artefact (pictured as a cube). Right: a group expresses contestation against each other. Disagreement is fed by the experience of encountering the artefact.

Finally, the **first contribution** of Chapter 1 takes the shape of a brief review of design history that distinguishes two of design’s relations to the *political*.

73 Consensus is a state of collective agreement of opinions between the members of a majority of people. | Red coloured words can be found in the thesis glossary.

2 PRACTICE PERSPECTIVE A Body of Practices That Spark Debate

This second section discusses some of the disparate practices previously reviewed. I wonder what term to use to refer to these practices as a whole. Then, I attempt to identify core properties that could bind them as a common (but still heterogeneous) body.

2.A Defining Debate as a Key Concept of the *Political*

What terms could evoke the dual relationship of contestation highlighted in the previous section?

It is important to note that Design Fiction, Critical Design, and Speculative Design, that play a predominant part in my research, are not isolated approaches.

As noted by Dunne and Raby in 2007, “There are many people doing this who have never heard of the term critical design and who have their own way of describing what they do.”⁷⁴ Among the list of Critical Design’s primary relative practices given in this 2007 interview, they proposed such terms as Cautionary Tales, Conceptual Design, Contestable Futures, Design Fiction, Interrogative Design, Radical Design, Satire, Social Fiction, and Speculative Design, to which I propose to add Discursive Design, Design for Debate, Future Probe Design,⁷⁵ contestational design,⁷⁶ critical engineering,⁷⁷ critical making,⁷⁸ critical software,⁷⁹ critical technical practice,⁸⁰ counter-functional design,⁸¹ and ludic design.⁸²

Among these terms, one of them echoes Dunne’s quote given in the previous subsection when he refers to design’s ability to ‘spark debate.’ I suggest that the terms ‘design for debate’ grasps especially well the nature of both collective contestation and mutual contestation. The history of the term **debate** allows to make this point.⁸³

The noun ‘debate’ evokes the process and outcome of collective contestation, which is the articulation of arguments and counter arguments in a public setting—and which contributes to public debate.

⁷⁴ Dunne and Raby, ‘Critical Design FAQ.’

⁷⁵ Paul Gardien’s *Future Probes Design* are also called Philips’ *Design Probes*. See: bit.ly/microbialhome1 and bit.ly/microbialhome2. | The link referring to Paul Gardien and the terms ‘Future Probes Design’ is inaccessible: design.philips.com/probes/whataredesignprobes/index.page/ Probes are mentioned in: Steven Kyffin and Paul Gardien, ‘Design Case Study Navigating the Innovation Matrix: An Approach to Design-Led Innovation,’ *International Journal of Design* 3, no. 1 (2009): 57–69, www/

⁷⁶ Hirsch, ‘Contestational Design.’

⁷⁷ Julian Oliver, Gordan Savičić, and Danja Vasiliev, ‘The Critical Engineering Manifesto’ (October 2011), www/

⁷⁸ Garnet Hertz, *Conversations in Critical Making* (CTheory Books, 2015), www/

⁷⁹ Matthew Fuller, *Behind the Blip: Essays on the Culture of Software* (Brooklyn, NY: Autonomedia, 2003).

⁸⁰ Philip E Agre, *Computation and Human Experience* (Cambridge, MA: Cambridge University Press, 1997).

⁸¹ James Pierce, ‘Working by Not Quite Working: Designing Resistant Interactive Proposals, Prototypes, and Products’ (Ph.D. Dissertation, Carnegie Mellon University, 2015).

⁸² William W Gaver et al., ‘The Drift Table: Designing for Ludic Engagement,’ in *CHI ’04 Extended Abstracts on Human Factors in Computing Systems*, CHI EA ’04 (New York, NY, USA: ACM, 2004), 885–900.

⁸³ These paragraphs combine sources drawn from the Oxford English Dictionary and etymonline.com/word/debate#etymonline_v_822/ (accessed Nov 2018).

Indeed, since perhaps the 15c, ‘debate’ means ‘a formal dispute, a debating contest, an interchange of arguments in a somewhat formal manner.’ It means ‘to argue for or against in public’ since the 1520s. Further back in time, the verb debate came to convey the interpersonal nature of mutual contestation. Its meaning, ‘to quarrel, dispute,’ is from late 14c. and the one of ‘discuss, deliberate upon the pros and cons of,’ is from the 13c. This 13c meaning comes from Old French *debatre* (Modern French *débattre*), originally ‘to fight,’ from de- ‘down, completely’ + *batre*, from Latin *battuere* ‘beat.’ And last, beyond etymology, the French verb *débattre*, or rather, *se débattre* (literally, to debate oneself), has another meaning that is translated in English as ‘struggle.’ The French Larousse dictionary defines *se débattre* as “To fight vigorously, make great efforts to try to free oneself from what holds, clings[...] to escape something.”⁸⁴ I see in this play on words between debate and struggle, another reference to Mouffe’s work on ‘agonism,’ and the emancipation of marginal voices against the oppression of consensus—Mouffe’s work is further introduced in Chapter 3.

‘Design for debate’ may now be used to evoke to a body of *political* practices that can foster collective or mutual contestation. However, the historical origins of the terms need to be unravelled as they stand as (only) one possible root of the practices fostering mutual and collective contestation.

2.B Acknowledging and Challenging the ‘Design for Debate’ Initial Canonical Practice

I now retrieve the historical context in which ‘design for debate’ was coined in order to acknowledge its particular features and also to challenge them.

The expression “design for debate” was coined in an educational context, but was also applied to academic and professional (art, design, other) purposes.

Indeed, the expression was initially coined by Anthony Dunne who,

“asked his students at the Royal College of Art in London to respond to this forthcoming challenge [i.e. emerging technologies and ethics] by coming up with some pertinent ‘what if’ scenarios.”⁸⁵

⁸⁴ This was my own translation. Original quote: “Lutter avec vigueur, faire de gros efforts pour essayer de se dégager de ce qui tient, maintient, enserre [...] pour échapper à quelque chose.” | See: larousse.fr/dictionnaires/francais/se_d%c3%a9battre/21776?q=se+debattre/ (accessed Nov 2018).

⁸⁵ Anthony Dunne, ‘Design For Debate,’ in *Neoplasmatic Design*, ed. Marcos Cruz, Steve Pike, 90–93. | Published online at dunneandraby.co.uk/content/bydandr/36/0/. Accessed Sept 2018.

The previous quote, extracted from a 2008 issue of the *Architectural Design journal*,⁸⁶ is better contextualised in an interview by Dunne, published in 2009.

Dunne reminds,

“A few years ago I was commissioned by RCA to write some briefs on **how designers could engage with emerging technologies**. One of the most useful roles they could play, it seemed, was to explore the impact these technologies might have on our daily lives if they were implemented; to examine possible implications rather than applications. The design proposals that would come out of such investigations would be hypothetical and explore negative as well as positive possibilities. **Their aim would be to spark debate** about how to achieve technological futures that reflect the complex, troubled people we are, rather than the easily satisfied consumers and users we are supposed to be. As this was quite an unusual role for design, **we decided we should be as clear as possible and named the category ‘Design for Debate.’**”⁸⁷

Beyond the educational context, the use of design as a medium to spark debate has been used as an academic and professional practice in the fields of public engagement with science.⁸⁸

In addition to this, the use of critique, speculation and fiction through design, which lays as essential features of design for debate, were also suggested⁸⁹ as a means of academic research. It was used for self-reflection and as a ground for the development of careers in art.⁹⁰ More recently, it also developed in the form of new kinds of professional practices—for instance, consultancy practices for policymaking,⁹¹ R&D,⁹² as well as for activism and communication.⁹³

Consequently, if considered as professional practices, several questions arise: can methodologies and assessment criteria be defined for these practices? What is the perceived (and actual) value of these practices for a stakeholder? How to make a living out of a radically critical practice?

⁸⁶ This issue was guest edited by Marcos Cruz, an architecture researcher, and Steve Pike, an art-science practitioner. They investigated the manipulation of biological material through design so as to highlight the impact of emerging and progressive biological advances on architecture and design practices.

⁸⁷ **Jacob Beaver, Tobie Kerridge, and Sarah Pennington**, eds., *Material Beliefs* (London: Goldsmith's, University of London / Interaction Research Studio, 2009), 63. | The book can be retrieved from research.gold.ac.uk/2316/ (accessed Dec 2018). | My emphases.

⁸⁸ superflux.in/index.php/about/ (accessed Sept 2019).

⁸⁹ Dunne & Raby suggest Critical Design to be “a form of social research” integrating critical thinking with everyday life. **Dunne**, *Hertzian Tales*, 147. or a “kind of knowledge-making work.” **Blecker**, ‘Design Fiction,’ 41.

⁹⁰ palaisdetokyo.com/fr/content/marguerite-humeau-0/ (accessed Nov 2018).

⁹¹ openpolicy.blog.gov.uk/2016/10/31/speculating-on-the-future-of-rail/ (accessed Sept 2019).

⁹² According to Dunne in an interview given in 2017, previously cited. | **Dunne and Raby**, “Critical World Building.”

⁹³ See the previously given example of orizon.immo/

The firsts major design for debate experiences developed a strong relation with existing actors of the promotion of science.

The book *Material Beliefs*⁹⁴ reports on this and on the eponymous research project. Tobie Kerridge, as a project leader, took *Material Beliefs* as a terrain for his 2015 Ph.D. thesis entitled *Designing Debate*.⁹⁵ The project explored the use of design critiques and speculations for a better engagement of the general public with emerging science—upstream in the research process, before inventions roll out into the world under the form of fixed applications and ‘consumable’ products. The *Material Beliefs* (2006–2008) project was funded by an Engineering and Physical Science Council (EPSRC) grant, and it was committed to the Public Engagement Programme.⁹⁶ The Finnish design researcher Ilpo Koskinen⁹⁷ provides a helpful analysis of the rise of these practices by shedding light onto this project’s funding context. He reminds us how these practices’ turn to questions of science and society operated under the impulse of the GMO public protest in the early 2000s: “The main impetus was the debate on genetically modified food (GM), [... which] raised a public outcry so loud that several European countries imposed limitations on GM products.”

A similar information is given in official documents edited by the British House of Lords in 2000:

“As we argued in Chapter 1 above, science cannot ignore its social context. In Chapter 2 we reviewed evidence of a decline in trust; rebuilding trust will require improved communication in both directions [science and society].”⁹⁸

The rest of that text then refers to the Monsanto company and the case of GM farming. A number of funding opportunities for better public engagement emerged in the same period as the basis for the RCA Design Interaction course. Several Speculative Design projects were developed in this context, in order to prevent the sometimes emotive reactions triggered by some applications of emerging technologies. Koskinen also refers to the designer and lecturer Tim Parsons, who observed (in his book entitled *Thinking: Objects*)⁹⁹ that, “Whereas scientists may claim to be involved in value-free research, its ethical implications can be highly emotive, particularly when certain applications are proposed.” This is especially true in the case of GM organisms used in farming.

⁹⁴ Beaver, Kerridge, Pennington, *Material Beliefs*.

⁹⁵ Tobie Kerridge, ‘Designing Debate: The Entanglement of Speculative Design and Upstream Engagement’ (Ph.D. Dissertation, Goldsmiths, University of London, 2015), doi.org/

⁹⁶ “Material Beliefs was a two-year research project, based at the Interaction Research Studio in the Department of Design at Goldsmiths, University of London, and funded by” an EPSRC grant. “The project brought together a network of designers, engineers, scientists and social scientists to explore potential implications of emerging biomedical and cybernetic technologies.” research.gold.ac.uk/2316/ (accessed Nov 2018). | Material Beliefs has involved many designers from the Goldsmith University of London and the RCA (Royal College of Art) according to: materialbeliefs.co.uk/ (accessed Nov 2018).

⁹⁷ Ilpo Koskinen et al., *Design Research Through Practice: From the Lab, Field, and Showroom* (Amsterdam: Morgan Kaufmann / Elsevier Science, 2011), 91.

⁹⁸ Great Britain, Department of Trade and Industry, *The Government Response to the House of Lords Select Committee on Science and Technology, Third Report: Science and Society*, vol. 4875, (London: Stationery Office, 2000). | Extracted from the *Material Beliefs* book, p. 8.

⁹⁹ Tim Parsons, *Thinking: Objects, Contemporary Approaches to Product Design* (Lausanne: AVA Publishing, 2009). Quotes are extracted from pages 147–148. | See: objectthinking.com/ (accessed Nov 2018).

Proposing ‘applications’ is what Parson suggests to prevent the kind of mistrust and polarisation of opinions that has been observed in the case of GM framing. According to him, designers can operate prior to debates and give more tangible ‘handles’ on the subject—as compared to ‘dry, text-based’—by materialising issues through design artefacts. Parson gives the example of two projects, the *SymbioticA project*¹⁰⁰ and *Material Beliefs*.

He adds:

“**successful collaborative design projects** [between designers, scientists and the public] **can operate as cultural litmus paper, gauging public perception**, imagining potential issues and generating awareness before radical new technologies arrive in the public domain changing irrevocably the fabric of our lives.”

Yet, in addition to arming the public with knowledge for debate, I suggest that there is nothing refraining policymakers and technology evangelists to use design for debate as a “cultural litmus paper” to test an audience’s acceptability of scientific progress. In his 2015 Ph.D. thesis, Kerridge elaborates on this and on the recent history of public engagement with science. He reframes the impetus for the encounter of designers and sciences promoters. According to Kerridge, maintaining a somewhat rhetorical frontier, between society and science, led ‘public engagement with science’ actors (and networks of material, financial, and political resources)¹⁰¹ to consider the general public as irrational and as an outsider.¹⁰² But this also led to practising public engagement as a positive promotion of emerging technologies, whose multiplicity of versatile applications thus becomes fixed.¹⁰³ Overcoming this mechanism was seen as a goal for designers, during the *Material Beliefs* project.¹⁰⁴

But I suggest that another element may also be ‘overcome.’ Could designers for debate be funded by actors that have an independent stance, like an ethics commission? Or a technophobic stance, for instance? Can crafting this project/funding setting be part of the designer for debate’s work?

¹⁰⁰ *SymbioticA* is an artistic laboratory dedicated to the research, learning, critique and hands-on engagement with the life sciences. Among many projects, Oron Catts and Ionat Zurr, explore—in the *VictimLess Leather* project (2004)—possibilities of wearing lab-grown ‘leather’ without killing an animal, as a starting point for cultural discussion on society’s relationships with living systems: symbiotica.uwa.edu.au/ (accessed Nov 2018).

¹⁰¹ **Brian E. Wynne et al.**, ‘Taking European Knowledge Society Seriously: Report of the Expert Group on Science and Governance to the Science,’ *European Commission. Brussels*, 2007.

¹⁰² **Kerridge**, ‘Designing Debate,’ 2015, 134.

¹⁰³ **Brian E. Wynne**, ‘Public Engagement as a Means of Restoring Public Trust in Science – Hitting the Notes, but Missing the Music?,’ *Public Health Genomics* 9, no. 3 (2006): 211–220.

¹⁰⁴ **Tobie Kerridge**, ‘Designing Debate: The Entanglement of Speculative Design and Upstream Engagement,’ in *DRS2016* (Brighton, UK, 2016): 6.

White-cubes galleries and exhibitions became of form of standard setting (and staging) for circulating designs for debate.

Kerridge reports on this, while underlining how exhibition catalogues became the major kind of reflective literature produced by designers and curators on these practices:

“These publications range from virtual, book-exhibitions, and examples include *Design Noir* (Dunne & Raby, 2001), *Augmented Animals* (Auger, 2001), *Consuming Monsters* (Dunne & Raby, 2003) and *Self-made objects* (Ibars, 2003), along with catalogues from group exhibitions in which critical design has a smaller or larger presence, for example *Strangely Familiar* (Blauvelt, 2003), *D.DAY - le design aujourd’hui* (Guillaume, 2005), *Wouldn’t it be nice...* (García-Antón et al., 2007), *Design and the Elastic Mind* (Antonelli, 2008), and *Nowhere/Now/Here* (Feo & Hurtado, 2008), through to publications linked to exhibitions that have focused on critical design, including *PopNoir* (Lopez Milliken, 2005), *Designing critical design* (Zagers & Warnier, 2008) and *WHAT IF...* (Dunne et al., 2009) and *IMPACT!* (EPSRC, 2010).”¹⁰⁵

In addition to this list, one of the most famous exhibitions of these design practices is eventually the 2008 exhibition *Design and the Elastic Mind*.¹⁰⁶ The curator Paola Antonelli has grouped exhibited projects into six categories on the MoMA website, including one entitled design for debate:

“**Design for Debate** is a new type of practice that **devises ways to discuss the social, cultural, and ethical implications of emerging technologies by presenting not only artifacts, but also the quizzical scenarios that go with them.** These projects shamelessly place the human being at the centre of the universe and seek to take into account scientific and technological progress while respecting and preserving our essence as individuals.”¹⁰⁷

For Kerridge, the recurring use of exhibitions so as to reach viewers, installed, he says, “an identity for the practice by making certain associations more durable by establishing a network of institutions and literature.”¹⁰⁸ Exhibitions became a form of standard, to the extent that the British design scholar Matthew Malpass—who have thoroughly studied different kinds of critical design practices both in his doctoral thesis as well as in his 2017 book—considers critical designs to actually be, “produced for exhibit rather than sale.”¹⁰⁹ This standard question reaches beyond the circulation means.

¹⁰⁵ Kerridge, ‘Designing Debate,’ 2015, 34–35.

¹⁰⁶ The exhibition surveys, “the latest developments in the [design] field. It focuses on designers’ ability to grasp momentous changes in technology, science, and social mores, changes that will demand or reflect major adjustments in human behavior, and convert them into objects and systems that people understand and use.” Retrieved from moma.org/calendar/exhibitions/58/ (accessed June 2018).

¹⁰⁷ moma.org/interactives/exhibitions/2008/elasticmind/ (accessed June 2018).

¹⁰⁸ Kerridge, ‘Designing Debate,’ 2015, 36.

¹⁰⁹ Matthew Malpass, ‘Contextualising Critical Design: Towards a Taxonomy of Critical Practice in Product Design’ (Ph.D. Dissertation, Nottingham Trent University, 2012), 4.

Malpass also talks of the content of these exhibitions as constituting an “emerging canon” since the MoMa exhibition.¹¹⁰ Still, do exhibitions actually feed public discussions? Is this medium restricted to reaching exhibitions goers? Can exhibition settings include debating activities? What alternative public-facing activities may be relevant to spark debate?

Under the impetus of the previous context—involving design schools and science promotion actors—two intertwined elements, at play in design for debate’s origins, can also be acknowledge and challenged. The use of projections in the future(s)—i.e. designing for a world that does not exist (yet)—is a frequent means and language of design for debate practices. But it can be considered as one out of many tools for exploration and critical distancing. The second element is design for debate’s roots in outreach programmes (called ‘public discourse’ in the US, ‘public engagement’ in the UK and ‘*scientifique vulgarisation*’ in France). Design for debate, in fact, deals with issues of collective life that are not limited to scientific popularisation issues.

In order to make this point, I very briefly reviewed the topics addressed by design authors through time. The issues chosen by designers can be seen as a litmus test of a society’s contemporary issues (the chosen topic also depends on the social class and the idiosyncratic matters of concern of the designer).

In the 1960s, Radical Design addressed the standardisation of goods in an industrialised and capitalist society. In the 1990s, Droog Design targetted waste and consumerism, while Interrogative Design aimed at shedding light on marginalisation and different modes of existence out of the norm. In the 2000s, debate issues included, for instance, the emergence of micro-informatics and electronic products as unquestioned opaque devices (1997),¹¹¹ objects generating electromagnetic waves (2001)¹¹² and the popularisation of genome sequencing (2005).¹¹³ Later, the field of Design Fiction moved from ‘ubiquitous-computing’ and ‘the Internet of things’ (2007)¹¹⁴ to the impact of emerging technologies on society (biotechnology, transhumanism, automation, data, and so on).¹¹⁵

This evolution of topics shows that designing for debate is definitely not limited to explore questions pertaining to the field of technology. What other issues could debate be sparked on? What kinds of publics could this practice reach, through which media?

110 Matthew Malpass, *Critical Design in Context: History, Theory, and Practices* (London, New York, NY: Bloomsbury Academic, an imprint of Bloomsbury Publishing, 2017), 3.

111 *Hertzian Tales* project (1994-97), Dunne & Raby.

112 *Placebo Project* (2001), Dunne & Raby.

113 *Evidence Dolls* project (2005). For instance, Dunne & Raby remind how the first major achievement of the *Human Genome Project* (the “full” sequencing of human DNA, which took 10 years) inspired their work. See the video interview given to Parsons, GIDEST: bit.ly/DR-GIDEST/ (accessed Sept 2018).

114 *Slow Messenger* (2007), Julian Bleecker and the Near Future Laboratory.

115 Find a complementary typology of topics explored in Tobias Revell’s blog post: bit.ly/CDrevell/ (accessed Sept 2019).

Finally, the definition of design for debate itself seems vague. It was first formulated by Dunne during a conference at the 2007 Interaction Design Innovation Forum at Postdam in Germany.¹¹⁶

“It’s not about trying to predict the future and get into forecasting but simply about trying to move upstream and not waiting for science to become technology and then products and then design at that level. It’s about trying to think about new possibilities while we are still at a scientific stage and **design in a way that might facilitate a public discussion about what we want.**”

This was refined in the *Architectural Design* magazine from 2008. The RCA students’ projects he presents,

“explore [the] different ways [in which] thought experiments and ‘what if...’ scenarios can be used—**not to predict or anticipate the future—but as tools to help us understand and debate the kind of world we want to live in.**”¹¹⁷

By referring to what “we” want, Dunne indicates the elements of a real *political* purpose, that of sharing expectations and discussing what is common, what organises people as groups and as societies. In addition to this Dunne refers to matters of biotechnologies, and to elements that are rather applicable to critiquing through design in general—such as representing uncomfortable and provoking speculative situations. Dunne’s definitions are thus pretty vague regarding the mutual contestation and debating dimensions of these practices.

It appears that the terms design for debate can extend beyond their initial educational context, their initial definition and beyond the approaches, themes and relationships that these practices have developed with actors of public engagement with science. However, if they do this, should their name be challenged too? I will address this question in my next section. Meanwhile, I now ask: what fundamental properties can link these practices into a coherent whole?

¹¹⁶ **Anthony Dunne**, ‘Design for Debate: From Applications to Implications’ (Talk presented at the Innovationsforum Interaktionsdesign Conference, Potsdam, Germany, 31 March 2007), vimeo.com/734763/ (accessed Sept 2018).

¹¹⁷ **Dunne**, ‘Design For Debate,’ 90.

2.C Six Core Properties of *Political Practices* That Spark Debate

Below, I reviewed the design practice and design academic literature. I tried to find different sources that addressed similar qualities. Through this analysis I suggest that disparate approaches using design to spark debate share at least six properties.

First, design itself is the medium used by these practices to formulate critiques. This, yet evident property, is constant through time in Dunne’s work. When he transformed his 1999 Ph.D. thesis into a published work in 2005, he added,

“Although the technological focus of this book is electronics, **I hope that its main argument, that design can be used as a critical medium** for reflecting on the cultural, social, and ethical impact of technology, is even more relevant today.”¹¹⁸

The second property, closely interwoven to the first one, is criticality. What Dunne phrased, in an interview from 2017, as “critiquing through design”¹¹⁹ is not limited to Critical Design. Critical Design, “**is only one of a wide range of related practices** from Design and beyond that provide important perspectives distinct from critical theory that we could learn from” according to the American design researcher James Pierce and coauthors—Phoebe Sengers, Tad Hirsch, Tom Jenkins, William Gaver and Carl DiSalvo.¹²⁰

The authors also point how the critique formulated through design is, notably, a disciplinary self-oriented critique. They understand Critical Design in relation to practices which:

- Expand beyond their limited institutional market-oriented mission.
- Question the social role of (conventional) design.
- And build upon the last century’s history of playful forms of critiques achieved through art and design.¹²¹

Then, the authors suggest moving beyond the strict definition of ‘Critical Design’ terms, and from the historical baggage they carry, in order to nourish the scope of vocabulary defining critical approaches to design. A similar attempt is carried here.

¹¹⁸ Dunne, *Hertzian Tales*, 13.

¹¹⁹ Dunne and Raby, ‘Critical World Building. Interview by Rick Poynor.’

¹²⁰ James Pierce et al., ‘Expanding and Refining Design and Criticality in HCI,’ in *Proceedings of CHI ’15* (New York, 2015), 2083–2092. | Bold emphases by the authors.

¹²¹ This is paraphrased from the following quote: “As a design practice, critical design™ is perhaps better understood in relation to (1) recent design approaches that expand design methods, tactics and strategies beyond generating consumer[able] products [...]; (2) a 100-year history of avant-garde approaches, including Dada, Situationism, and tactical media [...], and; (3) activist approaches to Design specifically, and making more generally, that aim to question and reframe the social role of institutional practices of design.” James Pierce et al., “Expanding and Refining Design and Criticality in HCI,” 2085–2086.

The third and fourth properties lay beyond disciplinary self-critical postures, where design attempts to involve others with reflection and to challenge societal questions.

I evoked earlier how the practices I study do not necessarily display an explicit goal to ‘contest’ or to involve others with collective contestation. Rather, they hold a posture oriented towards ‘reflection.’ Ramia Mazé makes a comparable observation. She notes three possible forms of criticality in contemporary design practices.¹²² Designers can be critical with regard to their own practice, to the discipline of design, as well as to societal and political phenomena. Mazé argues that whereas the first kind of criticality aims at internal questioning (on an individual level in order to situate one’s practice), the second challenges design traditions and paradigms. It attempts to trigger the evolution of the practice of design (what she calls ‘criticality within a community of practice or discipline’). The third kind of criticality sees designers address pressing issues in society.

While the three modes generally overlap and influence each other, the third type of criticality identified by Mazé is the one that is of interest here—i.e. criticality in addressing societal and political issues. This stance *may* necessarily regards other audiences than designers themselves or art and design related communities. It may include others in a reflection activity. I therefore suggest considering the next two core properties as *reflective* and *participatory*.

In order to introduce the fifth property, it is useful to phrase that, in the vast majority of cases, the artefacts produced by these practices do not necessarily benefit the work of making a better version of the artefact.

As phrased by the Austin, Texas-based interaction design researcher Jon Kolko, this practice notably delivers, “A design that is intended to provoke thought, and is **never intended to actually be built.**”¹²³ According to Tobie Kerridge, designer and design researcher from Goldsmith College in London, “the ambition here is [neither] to iterate or improve the design.”¹²⁴ These practices do not deliver unfinished prototypes. They are not considered as mere “intermediary objects”¹²⁵ which did not find their final shape, yet. They rather are forms of ‘discursive design fictions’ according to Kolko. They convey a *discourse* so as to engage others with thinking critically.

122 Ramia Mazé, ‘Critical of What? / Kritiska Mot Vad?’, in *Iaspis Forum on Design and Critical Practice: The Reader*, ed. Magnus Ericson et al. (Stockholm / Berlin: Iaspis / Sternberg Press, 2009), 378–398.

123 Jon Kolko, ‘Discursive Design Fictions,’ ac4d Austin Center for Design (blog), May 17, 2012, ac4d.com/2012/04/discursive-design-fiction/ (accessed June 2018). | In this blog post, Kolko is reporting on the course of the New York City-based design educator Allan Chochinov.

124 Tobie Kerridge, ‘Does Speculative Design Contribute to Public Engagement With Science.’

125 Jean-François Boujut and Eric Blanco, ‘Intermediary Objects as a Means to Foster Co-Operation in Engineering Design,’ *CSCW* 12, no. 2 (June 2003): 205–219.

Sixth and last core property, these designs contribute to processes of opinion-making and confrontation. That said, it is important to recall how the practices I attempt to regroup as a body are employed for different matters. As Dunne and Raby list it in their last book,

“Design as critique can do many things—pose questions, encourage thought, expose assumptions, provoke action, **spark debate**, raise awareness, offer new perspectives, and inspire. And even to entertain in an intellectual sort of way.”¹²⁶

While design is traditionally framed in relation to the industry, this kind of design that ‘sparks debate’ address social groups about the common—that is, what is (or is not) collectively shared. In short, these practices develop *adversarial* relations between artefact and viewers, and in between members of an audience.¹²⁷

Consequently, I now offer to consider six of the properties that allow to characterise and regroup different practices into a multifaceted but coherent body. Indeed, design’s relation to the *political*, can now better be qualified as: **the use of design as a medium**, carrying **dis-course**, in order to involve self and others in an **adversarial stance**, so as to **participate in critique** and **reflection** about design itself as well as about societal questions.

To sum it up, this section offered ‘**design for debate**’ as an **appropriate term** so as to refer to a body of disparate practices that install **collective and mutual contestation relations** with people—i.e. by intending to spark debate. This body will stand as the research object of the present study.

I unravelled one of the historical origins of designs that offer mutual or collective contestation. Doing this, I showed how the terms design for debate were coined in an educational context but **could further expand in academic and professional ones**. The initial relations these practices developed with actors of the public-engagement with science actors, including their **expectations** (promotion of science), **media/locations** (exhibitions), **and topics** (science and technology) **may be compared to a standard, left open to be challenged**.

And I proposed six of the properties that characterise the present practices as a multifaceted body.

Outlining design for debate as a body of approaches is the **second contribution** of Chapter 1.

¹²⁶ Dunne and Raby. *Speculative Everything*, 43.

¹²⁷ The adjective *adversarial* is chosen with Carl DiSalvo’s work in mind, introduced in a few pages.

3 ACADEMIC PERSPECTIVE A Research Field Focusing on Designs That Spark Debate

This third section offers to consider the body of practices of design for debate as an object of study that is common to a large number of enquiries—thereby forming a field of research. I will review the literature while looking for three elements: existing theoretical constructs that may allow to better understand the body of practices at stake; I will ask if this research field is really distinct from existing ones; and if so, how it is structured—i.e. what are the objects of research addressed by the literature.

In the following survey, I will especially focus on Critical Design, Speculative Design and Design Fiction,¹²⁸ because these are the practices that have seen the greatest development regarding the intent of sparking debate. This is, consequently, where the literature is more abundant (academic one and designers' essays). And because they are at the centre of a growing literature in design research.

3.A The Intersections of Four Theoretical Constructs

When drawing onto the six core properties of design for debate previously identified, it seems that the practices that spark debate are 'designerly,' critical, reflective, adversarial, participatory and discursive. I hence reviewed the literature that addresses the theoretical framework of such qualities and identified four theoretical constructs that seem to encompass them.¹²⁹

A 'theoretical construct'—such as Adversarial or Reflective Design—is thought as “a tool to think and make with—rather than as a means of naming a movement,” according to the American design scholar Carl DiSalvo.¹³⁰ It enables the interpretation and often gathers disparate practices into a systematic account of one distinctive quality. I distinguish theoretical constructs from terms such as Critical Design or Design Fiction which can be understood as 'programmes' of thought and actions. They involve concepts, practices and designed objects and mainly emerged as a necessity to qualify a designer's own practice.¹³¹

The four theoretical constructs are now introduced.

128 In this manuscript, I will use capital letters when talking about the terms Design Fiction, Speculative Design and Critical Design, as referring to the definitions listed in my Section 1—respectively by Bleecker and Sterling, Auger, and Dunne and Raby.

129 Reviewing the practice and the literature was done at the same time, in my research process. These two tasks nurtured each other, thereby influencing my choice of terms when naming the core properties.

130 **Carl DiSalvo**, *Adversarial Design* (Cambridge, MA: The MIT Press, 2012), 17.

131 The notion of programme is borrowed to **Annie Gentès**, *The In-Discipline of Design: Bridging the Gap Between Humanities and Engineering*, Design Research Foundations. (Cham: Springer International, 2017), 160 and 199. | and **Johan Redström**, *Making Design Theory* (Cambridge, MA: The MIT Press, 2017), 39.

3.A.1 Reflective Design

Reflective design gathers the critical and reflective properties of design for debate.

Donald Schön's concept of "reflective practitioners" (elaborated in the eponymously titled book)¹³² inspired a larger trend of thinking in the HCI (Human Computer Interaction) field and in design research. One such approach is Phoebe Sengers, Kirsten Boehner, Shay David and Joseph 'Jofish' Kaye's¹³³ notion of "Reflective Design."

To summarise their approach in one sentence, the authors ask, "what values, attitudes, and ways of looking at the world are we unconsciously building into our technology, and what are their effects?"¹³⁴

Pointing to the unconscious adoption of the values embedded in design processes and products,¹³⁵ the authors underline how they strongly subscribe to critical theory, arguing that "our everyday values, practices, perspectives, and sense of agency and self are strongly shaped by forces and agendas of which we are normally unaware, such as the politics of race, gender, and economics."

In their paper, the authors begin by offering a definition of reflection in regard to 'critical reflection,'¹³⁶ the fact of raising awareness of unconscious facets of an experience. Without it, one would unthinkingly adopt values and everyday experiences. Critical reflection is "folded in all our ways of seeing and experiencing the world." The authors then move on to proposing a working definition of the concept of "Reflective Design." It is understood as a set of principles and approaches which "guide designers in rethinking dominant metaphors and values and engaging users in this same critical practice."¹³⁷

The definition is further drawing on critical theory and advocate for a socially responsible technology design.

The authors subsequently draw upon six distinct practices in order to build their concept of Reflective Design: Value-sensitive design,¹³⁸ Critical Design,¹³⁹ Ludic Design,¹⁴⁰ Critical Technical Practice,¹⁴¹ Reflection-in-action,¹⁴² and Participatory Design.¹⁴³ They explicitly mention which parts are borrowed and which parts are omitted in the case of each practice (details are given in an online appendix).¹⁴⁴

¹³² Donald A Schön, *The Reflective Practitioner: How Professionals Think in Action* (New York, NY: Basic Books, 1983).

¹³³ All authors based at the Culturally Embedded Computing Group, Cornell Information Science, Ithaca, NY state, USA (at the time).

¹³⁴ Phoebe Sengers et al., 'Reflective Design,' in *Proceedings of the Decennial Conference on Critical Computing (CC)* (Aarhus, Denmark, 2005), 49.

¹³⁵ For example, the development of technologies that "focus on cognition to the detriment of emotional aspects, and the dominance of work-centred approaches 'risking making all of life like work' (p.49)" as reported by Simon Bowen, quoting Sengers et al.'s paper: Simon John Bowen, 'Crazy Ideas or Creative Probes?: Presenting Critical Artefacts to Stakeholders to Develop Innovative Product Ideas,' in *Proceedings of the EAD Conference* (Izmir, Turkey, 2007), 2.

¹³⁶ I will expand on the 'critical reflection' notion, and the role it plays in my thesis, in Chapter 3.

¹³⁷ Sengers et al., 'Reflective Design.' Two previous quotes are from page 50, and this one 58.

¹³⁸ Batya Friedman, Peter H. Kahn, and Alan Borning, 'Value Sensitive Design and Information Systems,' in *The Handbook of Information and Computer Ethics*, ed. Kenneth Einar Himma and Herman T. Tavani (New York, NY: John Wiley & Sons, Ltd, 2008), 69–101.

¹³⁹ Dunne. *Hertzian Tales*.

¹⁴⁰ Gaver et al., 'The Drift Table.'

¹⁴¹ Agre, *Computation and Human Experience*.

¹⁴² Schön, *The Reflective Practitioner*.

¹⁴³ Michael J Muller, Daniel M Wildman, and Ellen A White, 'Taxonomy of PD Practices: A Brief Practitioner's Guide,' *Commun. ACM* 36, no. 4 (1993): 26–28.

¹⁴⁴ maxmollon.com/permalink/PHD_Appendix-CH1-Interrogative_Reflective.pdf

In a similar way, I wish to avoid making a strict interpretation of Sengers and coauthors' work. I understand Reflective Design as applicable to other fields than technology design, and as a non-exclusive group which might be composed of disparate practices yet to be invented.

3.A.2 Adversarial Design

Carl DiSalvo popularised Mouffe's political theory within design research communities through his 2013 book *Adversarial Design*¹⁴⁵ and several papers—Mouffe's theory is further introduced in [CH3 | Section 11.B](#). The book draws on Mouffe's concept of agonism, as a state of forever ongoing (or looping) contestation where the opponent is respected as an adversary, not an enemy. It builds a theoretical framework onto political theory and the turn of philosophy of technics and sociology towards objects. The author offers “Adversarial Design” as a theoretical construct to regroup and interpret designed things in terms of their agonistic qualities and as a means to purposely aim for agonism through designing.

In a nutshell, drawing on a consequent corpus of examples, DiSalvo's book unravels Adversarial Design characteristics in the specific field of computational technologies. It focuses on three different design mediums (and three corpuses of examples): information design, social robots and ubiquitous computing. Within a precise terminology, DiSalvo shows how the previous mediums may be developed in agonistic ways via tactics that he phrases as ‘revealing hegemony,’ ‘reconfiguring the remainder,’ and ‘articulating collectives.’

More specifically, DiSalvo attributes the terms **Adversarial Design** to a kind of cultural production that “does the work of agonism.” He adds, this expression “means that designed objects can function to **prompt recognition of political issues and relations, express dissensus, and enable contestational claims and arguments.**”¹⁴⁶ By arousing relations and experiences of contestation and contributing to public discourses, these artefacts' properties open spaces for the expression of disagreement.

¹⁴⁵ DiSalvo, *Adversarial Design*.

¹⁴⁶ DiSalvo, *Adversarial Design*, 13. | My emphases.

3.A.3 Participatory Design

A set of practices, known as **Participatory Design**, aims to actively involve all stakeholders in a design process. In particular, the expertise of the designers/researchers and the situated expertise of the people impacted by the project's results are put together.¹⁴⁷

On the one hand, these practices focus on processes and methods of participation. The designer becomes a facilitator who creates favourable conditions for interaction between participants.¹⁴⁸ Participants are therefore not simply subjects of observation or information providers, they are co-creators.¹⁴⁹

On the other hand, these practices focus on those involved in participation. In this respect, this approach has a political dimension of empowerment of the user regarding the decision-makers. This dimension is historically rooted in the late 1960s, within the various labour rights movements that emerged in occidental countries. The designers have contributed to these movements by questioning their role and the fact that they have “failed in their assumed responsibility to predict and to design-out the adverse effects of their projects.”¹⁵⁰ During the 1970s, the rise of computer equipment in the workplace initiated the participatory design of information technology in Europe and more particularly in the Scandinavian countries under the name workplace democracy movement.¹⁵¹

Participatory Design, also called co-design or co-creation, is particularly oriented towards conflict resolution and consensus. Yet, in recent years, adversarial approaches to participatory design have been developed to use confrontation as a step of participation.¹⁵² In the context of this research, participatory design might be put to the work of exploring adversarial postures to spark debate and reflection, through discursive means.

¹⁴⁷ **Susanne Bødker**, ‘Creating Conditions for Participation: Conflicts and Resources in Systems Development,’ *Hum.-Comput. Interact.* 11, no. 3 (September 1996): 215–236.

¹⁴⁸ **John Thackara**, *In the Bubble Designing in a Complex World* (Cambridge, MA: The MIT Press, 2006).

¹⁴⁹ **Elizabeth B.-N. Sanders and Pieter Jan Stappers**, ‘Co-Creation and the New Landscapes of Design,’ *CoDesign* 4, no. 1 (1 March 2008): 5–18. | **Muller, Wildman, and White**, ‘Taxonomy of PD Practices: A Brief Practitioner’s Guide.’

¹⁵⁰ **Nigel Cross, ed.**, ‘Preface,’ in *Design Participation: Proceedings of the Design Research Society’s Conference 1971* (Manchester: Academy Editions, London, UK, 1972), 11.

¹⁵¹ **Kristen Nygaard and Olav Terje Bergo**, ‘The Trade Unions - New Users of Research,’ *Personnel Review*, 1 February 1975.

¹⁵² **Erling Björgvinsson, Pelle Ehn, and Per-Anders Hillgren**, ‘Agonistic Participatory Design: Working with Marginalised Social Movements,’ *CoDesign* 8, no. 2–3 (1 June 2012): 127–44.

3.A.4 Discursive Design

The terms **Discursive Design** were proposed by Bruce and Stephany Tharp¹⁵³ in 2009 as a meta-category to regroup a plethora of existing programmes (the ones I previously listed), regarding a common property.¹⁵⁴ In a 2013 paper, the authors include this theoretical construct as one of the 4 fields of industrial design which count: commercial-, responsible-, experimental-, and discursive-design.¹⁵⁵ In their 2019 book, they offer that,

“With discursive design, the designer use product type, functionality, appearance, and other elements to deliberately and explicitly encode meaning and evocative capacities into objects with the goal of ‘saying’ something about or to individuals and society.”¹⁵⁶

The part of this concept that interests us here is the fact it encompasses a key property of the practice of many practitioners. For instance, Dunne and Raby do not design for a ‘user’ but for a “viewer” an “imager”¹⁵⁷ or a “spectator,” according to Sterling.¹⁵⁸ It is not the use of the artefact that matters most but the idea of use, a **rhetorical use**¹⁵⁹ in Malpass’ words. But it is above all the reaction it provokes that counts.¹⁶⁰ This is what Bruce and Stephany Tharp clearly summarise through the following figure.¹⁶¹

¹⁵³ Core77.com presents Bruce and Stephanie Tharp as the leaders of a husband-and-wife design studio in Ann Arbor, Michigan. They are also teaching industrial design at the University of Michigan’s Stamps School of Art & Design—where Bruce is also an Associate Professor.

¹⁵⁴ **Bruce and Stephanie Tharp**, ‘The 4 Fields of Industrial Design,’ Core77 (Blog), 05 Jan. 2009, bit.ly/Core77-4fields/

¹⁵⁵ **Bruce and Stephanie Tharp**, ‘Discursive Design Basics: Mode and Audience,’ in *Nordes* (Copenhagen–Malmö, 2013), 406–409, archive.nordes.org/index.php/n13/article/view/326/

¹⁵⁶ **Bruce and Stephanie Tharp**, *Discursive Design: Critical, Speculative, and Alternative Things*, (Cambridge, MA: The MIT Press, 2019), 13.

¹⁵⁷ “In everyday life we design for users and the design language needs to be transparent and natural. In fiction we are designing for a viewer or imager and the design language needs to be unnatural and even glitchy.” **Dunne and Raby**, *Speculative Everything*, 96.

¹⁵⁸ “Design fiction doesn’t have a user, it has a spectator.” **Bruce Sterling**, ‘From Fiction to Design, from Design to Fiction’ (Talk, 8 February 2013), liftglobal.org/lift13/sessions/ | No publication is available. The quote is my own transcription.

¹⁵⁹ “Rhetorical use in critical practice is established by constructing narratives of use. This means designing the object’s context and the presentation of scenarios that give meaning to the object. [...] film, images, photomontage, and vignette.” **Malpass**, *Critical Design in Context*, 47.

¹⁶⁰ The viewers “become the protagonist in the story, playing out individual and informative roles. Their reactions become the true products of this form of design research.” **Auger**, ‘Why Robots,’ 153.

¹⁶¹ **Bruce and Stephanie Tharp**, *Discursive Design*. 241–243.

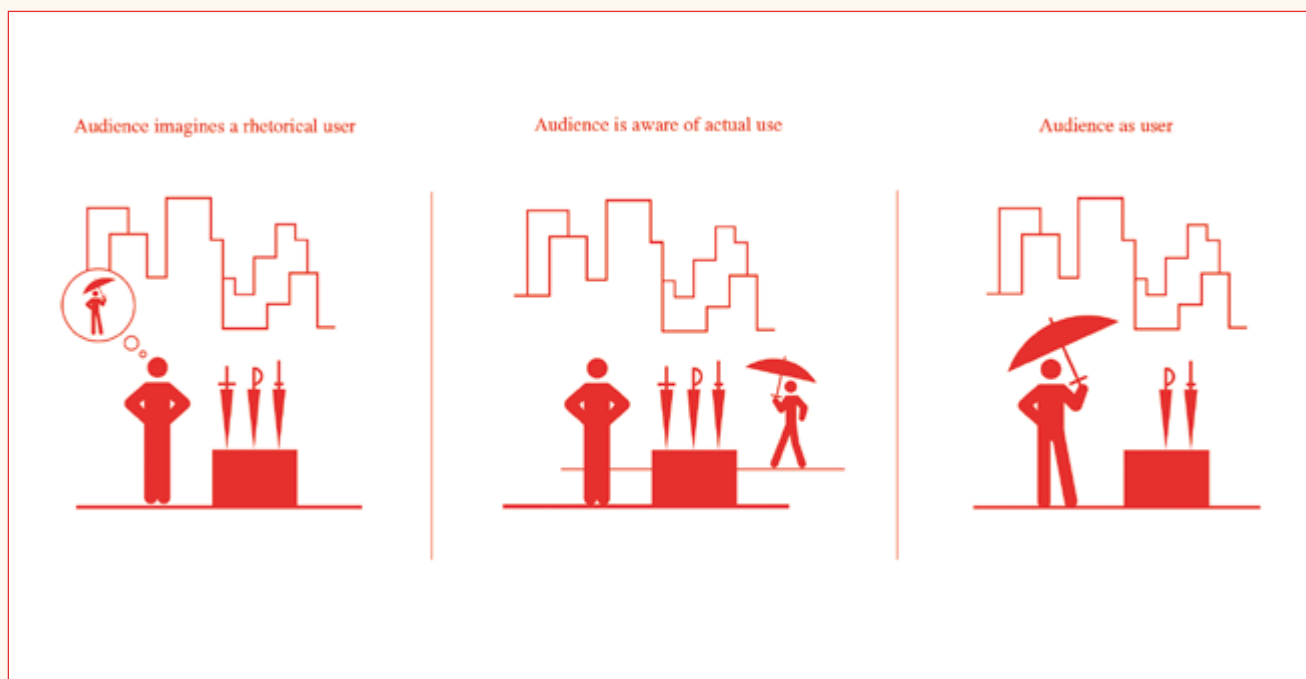


Figure 9 | Three primary relationships linking a (usable) artefact and an audience: Audience imagine a rhetorical user (left); Audience is aware of actual use (middle); Audience as user (right). Credit : Bruce and Stephanie Tharp.

“The primary motivation of discursive design is to achieve audience reflection”¹⁶² via an artefact that is not (necessarily) used. It should be noted, however, that designs that are discursive may be used for other applications than triggering debate. Corporate future vision videos, for instance, can be understood as discursive designs aiming at evaluating (and influencing) the potential reception of a new product. It is therefore relevant to combine this construct with the previous ones I presented. In addition, the discursive nature of these artefacts imply that they reach imaginers, viewers, spectators, or in short, an **audience**—which is a term I will use from now on together with the concept of ‘public.’¹⁶³

Finally, I would like to precise that each of the previous constructs gather a great number of research works that may not be concerned with design for debate. I rather suggest that the intersecting zones of the four theoretical constructs—**Reflective Design, Adversarial Design, Participatory Design and Discursive Design**—**delineate the boundaries of the field of research that takes design for debate as an object.** Combining constructs may prove useful, to structure the study of different facets of the design practices that spark debate, during an experiment.¹⁶⁴ Conceptually, it may give handles to describe these practices as delivering ‘discursive and adversarial designs so as to engage viewers with participatory reflection,’ for instance.

¹⁶² Bruce and Stephanie Tharp, *Discursive Design*, 53.

¹⁶³ The concept of public—i.e. the people that come together to deal with a common matter of concern—coined by John Dewey is introduced in a couple of pages ([CH1 | Section 3.C.2](#)). Please note that I will also use the plural formation, ‘audiences,’ considering Dewey’s argument that the ‘public,’ being a heterogeneous and contingent mixture of people, is always plural.

¹⁶⁴ For instance, it may be valuable to draw on the literature pertaining to Participatory, Reflective and Adversarial Design at the same time, when conducting an experiment that assesses artefacts’ ability to generate critique and disagreement in a collective discussion.

3.B In What Terms Should One Refer to This Field of Research?

The previous subsection leaves us with questions. In what terms should one refer to this field of research otherwise than ‘Reflective Discursive Adversarial and Participatory Design?’ Is this field actually redundant with existing ones—thus making the use of a new term unnecessary? I now answer by reviewing existing works of research that study bodies of practices to which ‘designs that spark debate’ may belong.

Adversarial, Reflective and Discursive Design are three first gatherings. Yet, the study of artefacts made to spark debate cannot be presented as belonging to only one of these three constructs because these constructs offer more resources as intersecting fields than if one of them competes to include the others.

The practices I study can be used for a variety of other purposes than debating. This variety means they can be studied from different angles depending on the qualities they have—their criticality, their activism, their explorative potential, etc. For instance, gatherings of these practices coined in the academic literature include Simon Bowen’s use of ‘critical design practice’ as an umbrella term,¹⁶⁵ Matthew Malpass’s use of the same terms to build up a taxonomy,¹⁶⁶ and Ramia Mazé’s model of ‘critical practice.’¹⁶⁷ These meta-categories take criticality as a prominent property. They are inspirational to study designs that rely on critical thinking as a means of stimulating debates. Yet, these meta-categories do not allow enough to grasp the *political* and debatable dimension of design.

Also drawing on critical postures in design and HCI are Daniel Fallman’s design exploration research¹⁶⁸ and James Pierce’s alternative and oppositional design.¹⁶⁹ These gatherings are turned towards design’s constructive potential and its ability to deliver alternatives to what exists. They both address design’s ability to entice reflection. Fallman’s terms and conceptualisation are less suited than Pierce’s ones to describe design’s ability to elicit contestation. In this respect, Pierce’s work may be evoked along with Tad Hirsch’s contestational design¹⁷⁰ and Magnus Ericson and Ramia Mazé’s

¹⁶⁵ Within the British designer and design researcher words, “Critical design practices are my umbrella term for a set of related approaches that aim for similar ends via the practice of design (in its widest sense) – by producing artefacts which afford critical reflection.” **Bowen**, ‘Crazy Ideas or Creative Probes?’, 1.

¹⁶⁶ **Malpass**, *Critical Design in Context*, 127–128. | Malpass proposes a taxonomy of critical design practice, made of ‘associative,’ ‘critical’ and ‘speculative’ design practices. It intends to provide a theoretical and conceptual apparatus to engage with a larger field than Dunne and Raby’s *Critical Design*.

¹⁶⁷ **Ramia Mazé**, ‘Occupying Time: Design, Technology, and the Form of Interaction’ (Ph.D. Dissertation, School of Arts and Communication, Malmö University, Sweden and Department of Interaction and System Design, School of Engineering, Blekinge Institute of Technology, Sweden, 2007), 208–232.

¹⁶⁸ According to the Swedish design researcher and designer, a design exploration research artefact “often seeks to test ideas and to ask ‘What if?’—but also to provoke, criticise, and experiment to reveal alternatives to the expected and traditional, to transcend accepted paradigms, to bring matters to a head, and to be proactive and societal in its expression.” **Daniel Fallman**, ‘The Interaction Design Research Triangle of Design Practice, Design Studies, and Design Exploration,’ *Design Issues* 24, no. 3 (July 2008): 4–18, 7.

¹⁶⁹ **James Pierce**, ‘Working by Not Quite Working,’ 49.

¹⁷⁰ **Hirsch**, ‘Contestational Design.’

Design Act typology¹⁷¹—evoked when concluding my first section. Pierce, Hirsch, and Ericson & Mazé’s works provide a useful ground to describe the participatory and *political* nature of the present body of practices, namely, ‘collective contestation.’ **Yet, they fall short with evoking and conceptualising ‘mutual contestation,’ which I consider as one of the essence of the *political*.**

Why not simply coin new terms, such as *Political Design* or *Agonistic Design*? On the one hand, developing a more varied array of labels has been suggested as relevant to better describe and characterise the complexity of different critical postures in design and research.¹⁷² On the other hand, I tend to avoid adding new terms to a list that never seems to stop growing (either it be in terms of programmes or of theoretical constructs). Hence, in spite of pinpointing an existing gathering of design practices to which the my research object may belong, I turned to existing terms. I looked for those whose conceptualisation is not fully articulated. I considered employing the existing expression ‘design friction,’¹⁷³ but friction lacks a political and collective dimension.

I finally found in ‘**design for debate,**’ the simplest formulation to encompass the dimensions of collective discussion and opinion confrontation that is proper to the *political*— and, therefore, **to represent both a group of practices and a field of research.** These terms are all the more relevant given the definition of the notion of debate that I proposed earlier—which opens the terms beyond Anthony Dunne’s formulation, to a larger scope of definitions and applications. **I will also regularly use the terms ‘designing for debate,’** as a complement to design for debate, in order to mark this opening of the terms to a renewed enquiry. This is also a way to refer to the study (and the practice) of a deliberate posture of crafting debate conditions, situations and experiences.

Additionally, from this perspective, designing for debate can be seen as a broader field that includes practices of debate facilitation, collective intelligence, citizen assembly organisation, and so on. Consequently, it may better be understood as a branch of social design. In this larger body, **the practices that confront an audience with artefacts that are not necessarily used (discursive designs) can be understood as a subset—i.e. discursive design for debate.**¹⁷⁴

¹⁷¹ Ericson and Mazé, *Design Act*, 127. | In *Design Act*, the authors offer a model of critical practices of design among examples of co-design, participatory design and socially responsible design practices.

¹⁷² James Pierce et al., ‘Expanding and Refining Design and Criticality in HCI.’ | Pierce and coauthors reviewed different critical design discourses in HCI research. They suggested that developing new labels allows to better qualify different postures in critical design and research. For instance, Pierce’s ‘alternative and oppositional design’ concept is a contribution to this endeavour, according to James Pierce, ‘Working by Not Quite Working,’ 49.

¹⁷³ Mònica Gaspar Mallo, ‘F(r)ictions. Design as Cultural Form of Dissent,’ in *Design History Society Annual Conference* (Barcelona, 2011), 7–10. | Laura Forlano and Anijo Mathew, ‘From Design Fiction to Design Friction: Speculative and Participatory Design of Values-Embedded Urban Technology,’ *Journal of Urban Technology* 21, no. 4 (2 October 2014): 7–24. | ‘Design Friction’ is also the name of the Nantes (France)-based design fiction studio led by Estelle Hary, Bastien Kerspern and Lea Lipperra.

¹⁷⁴ Please, note that my study mainly focuses onto this subset. But findings may apply to the larger body of practices, and to design in general.

3.C Outlining the ‘Designing for Debate’ Research Space Through a Review of Related Works

Now that designing for debate has been suggested as both a body of practices and a field of research—that are distinct from, and complementary to existing ones—I wonder about what composes and how is structured this research field. I thus set a typology of the research objects addressed in the literature.

There is a growing literature enquiring about the individual practices that compose the design for debate body. But, some of them are not specifically focused on mutual and collective contestation. This is the case of the following.

Some research works address design’s ability to propose constructive alternatives. For instance, the historical design imperative of ‘usefulness’ is challenged through Søren Rosenbak’s draw on pataphysics.¹⁷⁵

Provocative oppositions and constructive speculations about alternative futures are investigated through James Pierce’s concept of design resistance (based on alternative and oppositional design, described earlier).¹⁷⁶ Offering critical and constructive alternatives to normative designs is enabled through Åsa Wikberg Nilsson, Marcus Jahnke’s concepts of norm-criticality and norm-creativity.¹⁷⁷

Other works in the literature address critical and speculative design practices’ relation to oppression and colonialism. Notably, the complex relationships between gender, technology, social, and cultural oppression—together with a design disciplinary self-critical approach—is questioned through Luiza Prado’s concept of a “feminist speculative design.”¹⁷⁸ Speculative design practices are used to query ‘sound’ in relation to violence. Through Pedro Oliveira’s concept of “Sonic Fiction” sound can be used as a medium for design and as a decolonial epistemology for assessing design questions.¹⁷⁹

The relationship between design, politics, and activism around the notions of race, climate change, and colonialism, is also addressed via Deepa Butolia’s mixing of Jugaad thinking and Critical Design.¹⁸⁰

¹⁷⁵ Søren Rosenbak, ‘The Science of Imagining Solutions: Design Becoming Conscious of Itself Through Design’ (Ph.D. Dissertation, Umeå University, Umeå Institute of Design, 2018).

¹⁷⁶ James Pierce, ‘Working by Not Quite Working.’

¹⁷⁷ Åsa Wikberg Nilsson and Marcus Jahnke, ‘Tactics for Norm-Creative Innovation,’ *She Ji: The Journal of Design, Economics, and Innovation* 4, no. 4 (1 December 2018): 375–91, doi.org/10.1007/s12571-018-0000-0

¹⁷⁸ Luiza Prado de Oliveira Martins, ‘Privilege and Oppression: Towards a Feminist Speculative Design,’ in *Proceedings of Design Research Society* (Umeå, Sweden, 2014), 980–990.

¹⁷⁹ Pedro J. S. Vieira de Oliveira, ‘Design at the Earview: Decolonizing Speculative Design through Sonic Fiction,’ *Design Issues* 32, no. 2 (Spring 2016): 43–52.

¹⁸⁰ Deepa Butoliya, ‘Critical Jugaad,’ in *Proceedings of the Ethnographic Praxis in Industry Conference*, vol. Nov 29, 2016, 2016, 544–544.

Elsewhere, critical and speculative design is studied for its participatory potential, notably through the work of Lenskjold and Jönsson¹⁸¹ or the ones of Hefin Jones and he's participatory speculation.¹⁸² The way speculative design brings together a multiplicity of voices, and allows constructive criticality between scientists and non-scientists, is also investigated by Veronica Ranner through the concept of “polyphonic futures.”¹⁸³

This list is not exhaustive. For instance, it does not include the flourishing use of fiction in design and HCI research. Rather, listing these works aims to testify of academics' genuine interest for the approaches composing the present body of practices.

I now peculiarly address the works focused on the *political* and debatable nature of the practices at stake. While reviewing the literature, I listed the research objects addressed by each study. I then regrouped them in categories, in order to provide a structure supporting the designing for debate research field. The resulting typology was very close to the categories of the following model.

181 Li Jönsson and Tau Ulv Lensskjold, 'Stakes at the Edge of Participation: Where Words and Things Are the Entirely Serious Title of a Problem,' in *Nordes*, (Stockholm, 2015).

182 hefinjones.co.uk/participatory-speculation/

183 Veronica Ranner, 'Polyphonic Futures – Design-Science between Polymorphism and Polyphonic Dialogism' (5 October 2015).

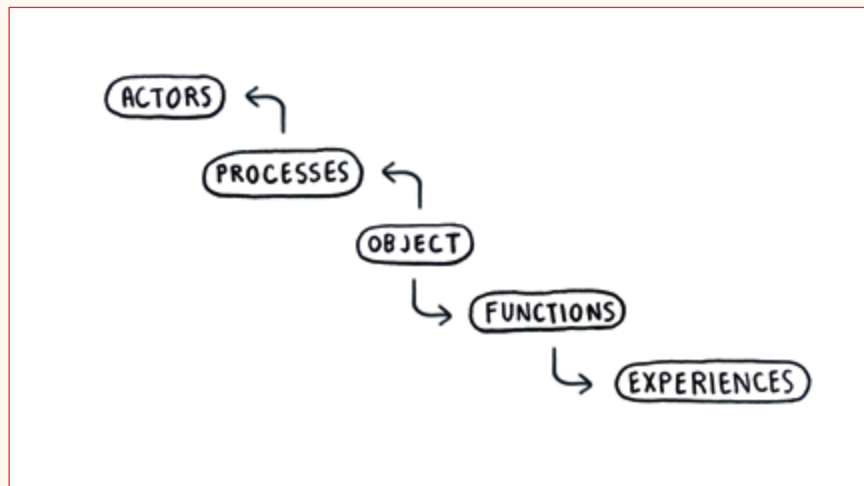


Figure 10 | Findeli & Bousbaci's so-called *Bremen model* or *Eclipse of the object model* depicts the evolutions of the research objects addressed by theoretical design writings, since the start of the last century. It spreads from the centre, upstream (left) and downstream (right) the release of a design project.

Both Montreal-based, Alain Findeli—French design epistemologist—and Rabah Bousbaci—Algerian architect and interior design teacher—offered the *Eclipse of the Object* diagram model in 2005.¹⁸⁴ Findeli and Bousbaci went through the analyses of a great number of theoretical texts about design, ranging from the past century to the present day, searching for the object of study in each text. They brought to light how, over that period, three categories of research objects have been predominantly represented, each one succeeding the other (in history).

- The first of these is the artefact and its aesthetic (the “object” category).
- The second is the making “process” and the “functions” of the artefact (appearing in the 60s).
- The third includes the actors implicated in, and by, the existence of the artefact (a development of the 90s)—this last category is referred to as “actors” and “experiences.”

The last two categories deploy upstream and downstream the release of a design artefact.

The authors make room for the (re)interpretation of some elements of the model. For instance, they point that it would be more relevant for participatory design projects to understand the downstream/upstream polarisation as a mingled continuum. The authors’ diagram therefore stands as a source of inspiration for further applications. Hence, I reinterpreted Findeli and Bousbaci’s model categories to better fit the practices of designing for debate.

¹⁸⁴ Alain Findeli and Rabah Bousbaci, ‘The Eclipse of the Object in Design Project Theories,’ *The Design Journal* 8, no. 3 (1 November 2005): 35–49, [doi.org/](https://doi.org/10.1080/17513758.2005.10561911)

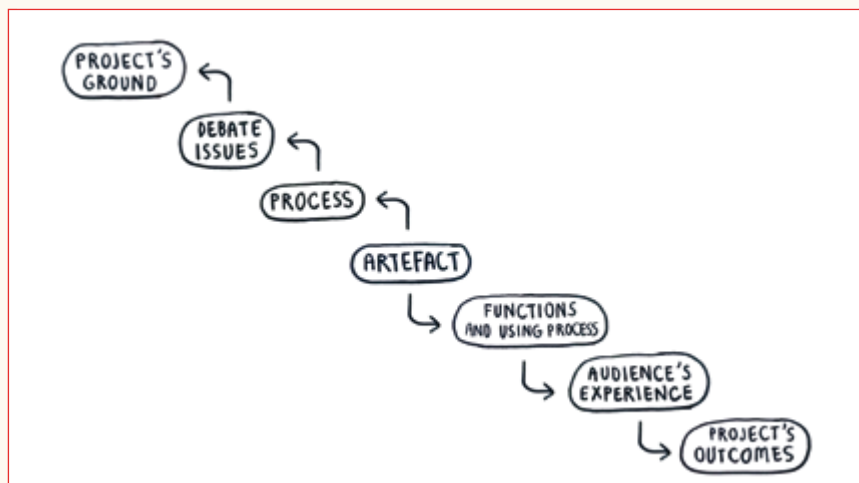


Figure 11 | I reinterpreted Findeli and Bousbaci's model to include the main elements of a generic design for debate project situation.

This diagram depicts the generic situation of a design for debate project. It starts from the artefact category and spreads **upstream and downstream its design process**. Therefore, each of the other categories are composed of two folds of the experience of making and circulating designs artefacts that sparks debate.

- (A) **The artefact itself.**
- (B) The project's **making process** (e.g. issue identification, methods, participatory approaches) and **functions** (e.g. sparking debate or reflection, dissemination, etc.).
- (C) The **debate issues** and the **audience's experience** (e.g. feedback, discourses).
- (D) The project's **ground** and **outcomes** (e.g. especially actors, but also funding, context, material, and shifts in public opinions or actors' change of practices).

Please note that my sketch is not intended to be used as a proper model, contrary to the original one. It is rather an aid to visually represent the typology that emerged from my review of the literature. In order to match my typology I adjusted the (C) category and added the (D) one, compared to the original diagram. These changes reflect the specificity of the design for debate project.

Findeli and Bousbaci appeared to have use their model for other applications too. At the time when the paper was written, the authors report on 3 years of using their model as a pedagogic introduction to the elements of a generic situation of a design project.

Within a similar intent, I turned my typology into a figurative representation, when used with design students. The following sketch depicts the elements of a generic situation of a design for debate project.

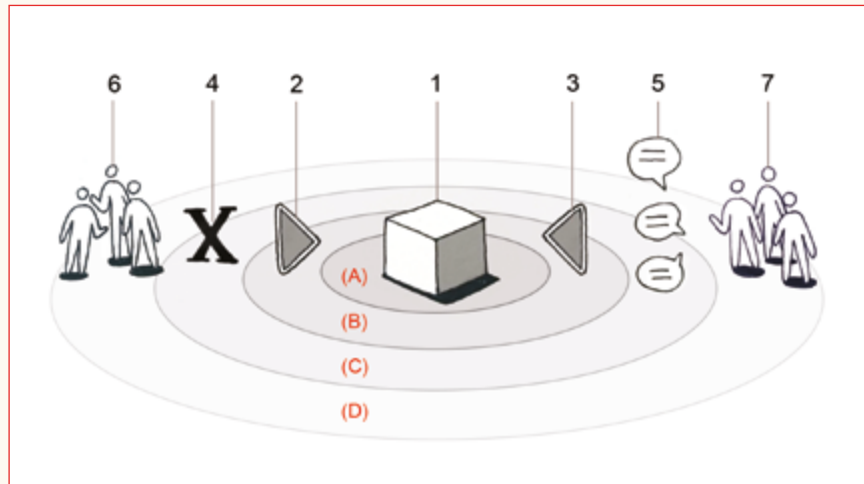


Figure 12 | The research objects addressed in the literature can be regrouped into four categories (A, B, C, D). The categories are composed of two folds, upstream and downstream the design process (respectively positioned at the left and right sides of the diagram). These categories are composed of different facets of the experience of making and circulating designs artefacts that sparks debate (numbered hereafter).

- (A) The artefact [1].
- (B) The project's making process [2]; and its functions and using process (e.g. dissemination) [3].
- (C) The debate issues [4]; and the audiences' experience (e.g. discourses) [5].
- (D) The project's ground (e.g. stakeholders) [6]; and the project's outcomes (e.g. public opinion) [7].

I will now present my review of the literature, organised within the previous categories. This typology makes it possible to better establish the research field as a coherent whole. Only key elements of the literature are now provided. Further reviews are developed in Chapter 3. Please note that references given may often belong to several categories at once. Moreover, these research works may not have been initially framed as belonging to an enquiry of design's relation to the *political*, (mutual and collective) contestation, or designing for debate.

3.C.1 Artefact Category

The first of these four categories within which I regrouped key components of the literature is *the artefact*. The debatable nature of the artefact is addressed by several authors under the concept of the design *thing*. The design scholar Thomas Binder and coauthors evoke, in their 2011 book the ability of “controversial design things”¹⁸⁵ to serve democratic functions. Carl DiSalvo and coauthors provide ground to the *thing* concept in a paper from 2014. They draw four elements from the science-studies scholar Bruno Latour and the artist/curator Peter Weibel.¹⁸⁶ First, contemporary democracy is ‘object-oriented’ (it takes shape through the stuff we make). Second, it revolves around ‘matters of concern’ (issues and their consequences).

185 Thomas Binder et al., *Design Things* (Cambridge, MA: The MIT Press, 2011), 187. | The authors refer to Chantal Mouffe's work as a possible framework for designing such 'things.'

186 Peter Weibel and Bruno Latour, eds., *Making Things Public: Atmospheres of Democracy* (Karlsruhe, Germany / Cambridge, MA: ZKM / The MIT Press, 2005) | Weibel and Latour curated the 2005 exhibition *Making Things Public: Atmospheres of Democracy*. It gathered ways in which things and productions from designers and artists embody, express and perform present and future social conditions.

Third, *things* are the association of objects and matters of concern. And fourth, they enable the formation of ‘publics,’ i.e. people who commit to address an issue. The authors understand design *things* as artefacts that make issues manifest.¹⁸⁷ Experiencing artefacts under this *political* light is a condition Latour calls *dingpolitik*.¹⁸⁸

From democracies to debating, the *thing* concept can also refer to the place of gathering for collective deliberations—according to Binder and coauthors, drawing on the word ‘ting’ in Nordic and Germanic culture.¹⁸⁹ In the same vein, the work of the French Information and Communication Sciences and design studies scholar Annie Gentès, offers details on the participatory nature of the *thing*. In her 2017 book, *The In-Discipline of Design*, Annie Gentès, proposed an original epistemology for design, at the intersection of humanities and engineering. She dedicates a chapter to the paradigm of “design as debate.”¹⁹⁰ Through an extensive drawing on etymology, she makes a useful distinction between designing ‘objects’¹⁹¹ (what can be understood because of a conceptual distance) and designing *things*¹⁹² (not clearly defined entities). Following Gentès, the collective judgement, discussions or deliberations required by the *thing*’s unidentified-ness is not a lack of understanding, but a lack of mutual-understanding of the element at stake. Her conclusion suggests that design therefore disrupts existing body of knowledge and is not only multidisciplinary, but in-disciplined—which is the thesis of the book. For the present study, I rather draw on another of her remarks: a part of what makes ‘design things’ *political* is how they prompt for a collective and participatory enquiry. Gentès and the previous authors’ conceptualisations allow to better understand what design authors mention as “the status of the prototype as a public entity” which embodies different forms of publicity, “including dissemination, demonstration, debate, promotion, education and ethics.”¹⁹³

Another question raised by Gentès is about the discursive nature of the artefact and its role as an interface for different scales of debating endeavours. Through the paradigm of “design as debate,” formal qualities and experiential properties of an artefact are taken into account.

187 Carl DiSalvo et al., ‘Making Public Things: How HCI Design Can Express Matters of Concern,’ in *Proceedings of CHI '14*, (New York, NY: ACM, 2014), 2398.

188 Bruno Latour, ‘From Realpolitik to Dingpolitik, or How to Make Things Public,’ in *Making Things Public: Atmospheres of Democracy*, ed. Peter Weibel and Bruno Latour, 2005. | From this, a stream of works explores the making of publics as a proper ‘function’ of design artefacts. See the next category of my typology.

189 In this interpretation, the activity of designing is interpreted as a process to handle conflicts. Please not that this work, and other ones referenced here, discuss the actual design making processes. Hence, they could also belong to my typology’s next category.

190 Gentès, *The In-Discipline of Design*. | The ‘debates’ Gentès mentions address issues related to sciences, the knowledge that sciences produce and their consequence on the societies. But part of her thinking is applicable to other contexts than science and technology. Several elements are taken from this chapter and spread among the current typology.

191 “The word ‘object’ is based on the Latin root of the verb ‘to throw’ and the preposition ‘ob’: ‘in front of’. [...] Because it is thrown in our path, in front of us, we pay attention to it. [...] The object is also primarily conceived as the subject of scrutiny, of exploration. It presupposes that we can ‘know’ it because of the distance and the play on our senses” Gentès, 210.

192 “The word ‘thing’ is quite different. The Old English þing first means ‘meeting, assembly,’ [...]. If a meteorite falls in the middle of a village, people gather around it and together try to figure out what this ‘thing’ is. [...] Thing is therefore a political word. The French word ‘chose’ from the Latin ‘causa,’ goes a little further in the same direction. A ‘causa’ is a ‘judicial process, lawsuit, case?’” Gentès, 210.

193 Kerridge, ‘Designing Debate,’ 2016, 5.

According to Gentès, debate can either happen “within the artefact itself” or “amongst social actors.” In the first case, the artefact’s “internal narrative” carries elements of a controversy. In the second case, “rhetorical strategies” are developed to support discussions (i.e. these are types of discourses used to introduce the artefact to the audience which are ‘obscene,’ ‘unfinished’ or ‘uncanny’).¹⁹⁴ This distinction is useful because it makes it possible to appreciate the role of the artefact within a debate. This can be made close to what Seago and Dunne called the “object as discourse”¹⁹⁵ and to Bruce and Stephanie Tharp’s 2018 book *Discursive Design*, introduced earlier.

Finally, the designs for debate’s aesthetic qualities are often described in an association with expected effects on viewers. For instance, an artefact’s counter-functional,¹⁹⁶ strange,¹⁹⁷ or provocative¹⁹⁸ nature is used for specific functions, like eliciting critical thinking and reflection. Functions are listed in the next category, below. Artefacts’ qualities and their effects find a dense literature which is reviewed in Chapter 3 (and hence not listed here).

In this category, designing for debate **artefacts are studied as things**; as **a prompt for collective and participatory enquiry regarding the artefact’s meaning**; and as **a vehicle for discourse** (either by embodying terms of a debate or stimulating interpersonal ones), **holding specific aesthetic qualities** (dissonance, strangeness, provocativeness, etc.).

3.C.2 Project’s Making and Functions/Using Category

The project’s *making process*, and its *functions and using process*, compose second category of the typology. From the artefact’s elaboration to its dissemination, a design for debate project can be developed within different stances. Matthew Malpass refers to one of them in terms of an “authoring posture”¹⁹⁹ (the designer is the one in charge of the creative choices). According to Dunne,²⁰⁰ this stance of the ‘designers as author’ allows to emancipate designers from the market’s imperatives and to develop a (self-)critical look on their productions. Participatory design is another stance. It has particularly been developed through the public engagement with science collaborations described in my previous subsection, but it was rarely accounted. Kerridge provides an analysis of two stances of participation between designers, scientists and engineers.

¹⁹⁴ Gentès, *The In-Discipline of Design*, 204.

¹⁹⁵ Alex Seago and Anthony Dunne, ‘New Methodologies in Art and Design Research: The Object as Discourse,’ *Design Issues* 15, no. 2 (1999): 11–17.

¹⁹⁶ Pierce, ‘Working by Not Quite Working.’ | Within the umbrella concept of ‘alternative and oppositional designs,’ Pierce describes things that appear and operate frictionally.

¹⁹⁷ Dautrey and Quinz, eds., *Strange Design*.

¹⁹⁸ Bardzell et al., ‘Critical Design and Critical Theory.’

¹⁹⁹ Malpass, *Critical Design in Context*, 61.

²⁰⁰ Dunne, *Hertzian Tales*, 75.

These stances are more or less close to keeping with an authoring posture: the collaborator is either considered as a provider of material for the designer; or they stand as a co-author (e.g. in Kerridge's case, a scientist and a designer go through a brainstorming session together).²⁰¹ Kerridge reports that participatory practices of designing for debate are characterised by a trade-off in the author's working process and design outcome—to the benefit of the project's complexity. Participatory design settings can inform design for debate processes. They can also be queried as relevant contexts to develop *political* stances. Mahmoud Keshavarz and Ramia Mazé notably argue for designers' active reflexivity about their posture and processes. In particular about how they can frame and stage types of participation that make more (and often less) room for the others' sensitivity.²⁰² Upstream the project's release, the making process has been described as exploratory,²⁰³ drawing on anthropology,²⁰⁴ and requiring long-term commitment,²⁰⁵ for instance. Downstream the project's release, many research works can be found on (what Findeli and Bousbaci named) the *functions* of the design. Most of them have been described without being explicitly connected to a debate endeavour. Examples taken to the list of 'programmes' that I gave earlier include using discursive designs so as to prompt critical thinking,²⁰⁶ reflection,²⁰⁷ and questions on the present.²⁰⁸ This list also includes functions that are more evidently linked to debating—carrying contestations,²⁰⁹ and eliciting viewers' contestation.²¹⁰ The practices studied in the design for debate research field are also examined for their functions upstream the artefact release. Some of them seem far from debating, at first, like exploring futures,²¹¹ widening the imagination of possible solutions,²¹² and contributing anthropological matters.²¹³

201 Kerridge, 'Designing Debate,' 2016. | When the collaborator stands as a provider of material for the designer, the process and outcome seems close to conventional ones. When they stand as co-authors, Kerridge observed conflicts of expectations (questioning versus promoting sciences), and of approaches (showing science findings by speculating on its consequences versus demonstrating what is technically feasible in the present-time).

202 Mahmoud Keshavarz and Ramia Mazé, 'Design and Dissensus: Framing and Staging Participation in Design Research,' *Design Philosophy Papers* 11, no. 1 (1 May 2013): 7–29. | Keshavarz and Mazé call for a systematic self-critical query of the designer's sensibility and of the overlooked 'political frontier' existing between different processes in which forms of knowledge are embodied. A second agenda beyond recognising others is here to forward a form of indisciplinarity of design research.

203 Daniel Falman the triangle of interaction design research.

204 Nicolas Nova, ed., *Beyond Design Ethnography* (Berlin / Geneva: SHS / HEAD, 2014), halshs.archives-ouvertes.fr/halshs-01514264/

205 Erling Björgvinsson, Pelle Ehn, and Per-Anders Hillgren, 'Participatory Design and "Democratizing Innovation",' in *Proceedings of the PDC '10 Conference* (New York, NY, USA: ACM, 2010), 41–50.

206 Hertz, *Conversations in Critical Making*.

207 Sengers et al., 'Reflective Design.' | James Pierce and Eric Paulos, 'Counterfunctional Things: Exploring Possibilities in Designing Digital Limitations,' in *Proceedings of the DIS '14 Conference* (Vancouver, BC, Canada: ACM Press, 2014), 375–84.

208 Krzysztof Wodiczko, 'Interrogative Design,' in *Critical Vehicles: Writings, Projects, Interviews* (Cambridge, MA: The MIT Press, 1999), 16–17.

209 Hirsch, 'Contestational Design.'

210 DiSalvo, *Adversarial Design*.

211 See for instance "Future Probes Design" in Kyffin and Gardien, 'Design Case Study Navigating the Innovation Matrix.'

212 Rosenbak, 'The Science of Imagining Solutions.'

213 Rachel Charlotte Smith et al., eds., *Design Anthropological Futures* (London: Bloomsbury Publishing, 2016).

Contributing to the making of publics is a function that has been peculiarly studied as specific to designing for debate. I therefore described it within more length. In a 2009 article,²¹⁴ Carl DiSalvo draws inspiration from the American pragmatist philosopher John Dewey. In the late 1920s, citizens are overwhelmed by the increasing amount of information reaching them through the press and the recent development of mass media, to the point of not being able to follow public affairs. To this observation by Walter Lippman,²¹⁵ Dewey argues that audiences are plural, contextual and come together in response to societal issues that affect them.²¹⁶ Often, identifying an issue is not enough for people to come together. The forming of a public requires people to acquire skills and understand their ‘attachments’²¹⁷ to the issue and to other involved actors. Object-oriented sociology described how the material world plays an essential role in the construction of publics.²¹⁸ The material world may include online forum, an artwork, or a magazine. DiSalvo draws on this to address designs for debate’s functions of forming publics around issues. The author pinpoints specific design tactics to form public, such as the revealing of the future consequences, or the actual roots of an issue.²¹⁹ While I am peculiarly interested in the use of discursive designs for debate, it is relevant to add that the specific function of making publics through design has also been developed and studied through other approaches—notably, participatory design approaches.²²⁰

Within this second category of the typology, research works look into **the variety of stances of making and disseminating a design for debate (e.g. participatory design)**. The functions studied (fostering critical thinking, reflection, etc.) are not always claimed by authors as deliberately linked to a *political* intent, except regarding **design’s participation to the ‘making of publics.’**

²¹⁴ Carl DiSalvo, ‘Design and the Construction of Publics,’ *Design Issues* 25, no. 1 (January 2009): 48–63.

²¹⁵ Walter Lippmann, *The Phantom Public* (New York: Harcourt, Brace, 1925) | Lippmann is an American journalist and social commentator. Dewey is an American philosopher.

²¹⁶ John Dewey, *The Public and Its Problems, an Essay in Political Inquiry* (Denver: Swallow, 1927).

²¹⁷ Antoine Hennion, ‘Doing survey on our attachments. How to inherit from William James?,’ *SociologieS*, [Online], Dossiers, Pragmatisme et sciences sociales : explorations, enquêtes, expérimentations, 23 February 2015, journals.openedition.org/sociologies/4953/

²¹⁸ Noortje Marres, *Material Participation: Technology, the Environment and Everyday Publics* (New York, NY: Palgrave Macmillan, 2016).

²¹⁹ What DiSalvo calls “projection” is a design tactic consisting in using design to represent a possible set of future consequences associated with an issue. He calls “tracing” the activity of exposing the underpinning structures of an issue. DiSalvo, ‘Design and the Construction of Publics,’ 52 and 55.

²²⁰ Karin Hansson et al., ‘Provocation, Conflict, and Appropriation: The Role of the Designer in Making Publics,’ *Design Issues* 34, no. 4 (25 September 2018): 3–7. | Based on the articles published in this special issue of the *Design Issues* journal, the editors provide a typology of participatory approaches to reflexive practices.

3.C.3 Debate Issues and Audience's Experience Category

The research objects, composing the third category of this typology, pertain to the debate issue and the audiences' experience. Carl DiSalvo's *Adversarial Design* book offers a precise and extensive review of Chantal Mouffe's concepts and potential application to design. Without entering into much details here, one element can be mentioned: issues that are open to debate may not seem *political* (or controversial) at first.²²¹ These issues are unspoken, unheard, overlooked, or sitting in one's blind spot. Therefore designers can contribute to 'prompt recognition of these issues,' according to DiSalvo.²²²

Many other pieces of literature are not listed here. They pertain to design for debate works that are not specific to discursive design for debate (which is the focus of my study). One example is the very rich literature on controversy mapping²²³ or issue mapping,²²⁴ which offers a resource of how (graphic and information) design has been employed to identify discourses, opinions and to prompt issues recognition—or at least to make them more graspable.

As for the audience experience, it is important to differentiate the research works that assess the actual audience's experience, from the ones describing the *expected* experience. Because, once distinguished, the audience's experience appears to be a research topic seldom addressed. The design practitioner and researcher James Auger notably reports on the audience experience in his 2012 Ph.D. thesis. While planning to engage exhibition visitors with critical reflection, he observed different kinds of experiences, ranging from rejection and outrage to meaningful comments depending on the artefact's features.²²⁵

In this third category, research works notably address the **under-discussed nature of the issues**; and the **mapping of issues** and opinions; but **fewer academic work appears to be done on debate participant's actual experience and feedback**.

²²¹ "In fact, revealing and articulating the contestable aspects of situations often perceived as non-political is a central goal of agonism because the political is a pervasive conditions and the contention that characterize agonism should occur continuously and everywhere." DiSalvo, *Adversarial Design*, 84.

²²² DiSalvo, *Adversarial Design*, 13.

²²³ Donato Ricci, 'Tensing the Present: An Annotated Anthology of Design Techniques to Inquire into Public Issues,' *Diseña*, no. 14 (31 January 2019): 68–99, doi.org/

²²⁴ Noortje Marres, 'Why Map Issues? On Controversy Analysis as a Digital Method,' *Science, Technology, & Human Values* 40, no. 5 (September 2015): 655–86, doi.org/

²²⁵ Auger, 'Why Robots,' 152 | Auger reports on several circulations of Auger-Loizeau's projects, including two iterations of the *Afterlife* (2001–2009) project, exhibited at the MoMA in 2007 and at Experimenta 09 in Lisbon, Portugal in 2009, where he collected two diametrically opposed feedback. See [CH5 | Section 20.A.2](#) for a detailed account.

3.C.4 Project's Ground and Outcomes Category

The last category of the typology comprehends research objects pertaining to the project's ground and its outcomes. Upstream and downstream the making process, scholars ask 'who is invited to debate'? Institutions have a peculiar weight on scientific debates, Gentès argues.²²⁶ According to the author, designers contribute to this question of who speaks by featuring their work in different institutions than artistic ones. Sparking debate can therefore be achieved by setting up a network of institutions and actors (science promoters, cultural centres, research labs, design universities²²⁷) in the process of making and circulating design projects, as forwarded by Kerridge, drawing on STS.²²⁸

According to Kerridge, these multi-actor settings have consequences on the making process, it implies to negotiate, among actors, the mutual understanding and expected outcomes resulting from actually sparking debates. But also, downstream the project's release, it allows designers to displace who is exposed to knowledge by bridging different audiences (scientists with lay public, the inside of the lab and the outside)²²⁹—thereby echoing Gentès's claim.

Upstream and downstream the making process, actors involved and the ones impacted by a project are often studied together. But few are the designing for debate projects that thoroughly assessed the actual impacts of an artefact's dissemination on public discourse or practices.²³⁰

Here, scholars ask about **who are the actors invited to debate, including institutions, and their influences on the project**. Yet there is **a lack of research on the actual impacts of designs for debate activities** (regarding shifts of opinions and change of practices for instance).

²²⁶ **Gentès**, *The In-Discipline of Design*, 208 | Gentès draws on Lyotard's 1979's study regarding who is in power to decide what we 'must' know (philosophers or politics) and borrows to the German philosopher Jürgen Habermas the vision from which, in democracy, specific institutions must be created to debate about the value and the use of science. | **Jean-François Lyotard**, *La Condition Postmoderne: Rapport Sur Le Savoir*: (Paris: Les Éditions de Minuit, 1979) | **Jürgen Habermas**, *The Theory of Communicative Action. Vol. 1, Reason and the Rationalization of Society* (Boston: Beacon Press, 1983).

²²⁷ **Kerridge**, 'Designing Debate,' 2015, 46. | Kerridge takes as a blueprint for speculative design's association with public engagement the example of Dunne and Raby's *Bioland* (2003) project. It was planned as a curatorial project involving an array of different communities together, around the topic of biotechnology—scientists to ethicists, museums and arts organisations, the public and designers. It was not executed within this form.

²²⁸ **Kerridge**, 'Designing Debate,' 2015, 83.

²²⁹ **Kerridge**, 'Designing Debate,' 2016, 6.

²³⁰ Moreover, the impact is often approximately estimated in terms of the number of articles, or number of comments, like in James Auger's Ph.D. thesis. Seldom is reported on the public's actual experience.

3.D A Need for Empirical, Pragmatist and Systemic Enquiry

To conclude, this (non-exhaustive) review of the literature brings me to formulate four reflections.

On the one hand, the literature review makes it possible to consider **the research field of designing for debate as composed of a very rich literature**. It can be organised in four main categories of scientific enquiry.

On the other hand, the reviewed works themselves can be used as **theoretical resources to inform research work**. I will tap into these references when looking for specific research questions and hypotheses in Chapter 3.

In addition, the four categories through which I structured the design for debate research field may prove **useful to organise an enquiry**. For instance, I will use the categories as a framework to structure my research methodology (see Chapter 4). Furthermore, I will articulate my research questions and hypotheses around the identification of specific *functions*—in Findeli and Bousbaci’s terms—attributed to designing for debate (see Chapter 3).

Finally, the literature review enables to see that certain aspects of the design for debate practices have not been studied in depth. These aspects are not actual research topics but **stances of research**.

- Indeed, it appears that few research address the human experience of making and debating discursive designs in a **pragmatist way**—namely, including people’s actual experience of making and debating, and accounting for the project’s outcomes.
- It also appears that very few research works span among the four categories of my typology in a **systemic way**—e.g. considering the link between the choice of a debate issue regarding the final debate experience of participants, while assessing the role of the artefact itself and the consequences of the project on a stakeholder.
- In addition to this, I suggest that it would be important to articulate theory with **empirical** accounts of practising design for debate—as stressed by Kerridge.²³¹

I will attempt to adopt such research stances as they appear as crucial to challenge the existing standards of practice and to provide a better understanding of designing for debate.

The **third contribution** of Chapter 1 is the framing of a coherent research field. This is summarised—together with the present section—in the upcoming Key Learnings section.

²³¹ Kerridge, ‘Designing Debate,’ 2015, 16. | Kerridge encourages designers to further commit to reflect on, and to assess the empirical dimension of their practice.

4 KEY LEARNINGS & FIRST THESIS STATEMENT ‘Design for Debate’ is Both a Body of Practices and a Research Field

This chapter has attempted to frame the practices that my research focuses on, and the field in which this research seats.

As a result, I present my first thesis statement. I understand designing for debate as a design stance, an intent to engage people with the *political* experiences of mutual and collective contestation. Furthermore, a variety of design practices can be gathered in a heterogeneous but coherent body of approaches aimed at sparking contestation and debate—that I call design for debate. This body may better be understood as a branch of social design that includes practices of debate facilitation, collective intelligence, citizen assembly organisation, and so on. Within this body, the practices that confront an audience with artefacts that are not necessarily used (discursive designs) can be understood as a subset—i.e. discursive design for debate. Design for debate also refers to a field of research, taking the previous practices as an object of study. The field can be structured through the following typology. It gathers the research works that deal with: (A) the artefact itself; (B) the making process and the functions of the project; (C) the ground and outcomes of the project; (D) the debate issues and the public’s experience. These four categories are related to different facets of the experience of making and circulating designs artefacts that sparks debate.

I came to this statement, first, by drawing on design history and realising that two of design’s relations to the *political* can be distinguished—collective contestation (where a collective that reached a consensus expresses shared contentious opinions) and mutual contestation (where dissent is directed towards others in a collective). My second argument was that ‘debate’ may be a key concept to draw these contestation and *political* practices together, that are otherwise disparate. I acknowledged one of the origins, and suggested to challenge the future developments, of ‘design for debate’ practices—beyond their initial educational context, their initial definition and beyond the approaches, themes and relationships that these practices have developed with actors of public engagement with science. To do this I pinpointed six core properties of this body, comprising the use of design as a medium, the carrying of discourse, and the involvement with adversarial, participatory, critical and reflective stances about design itself as well as about societal questions.

Finally, I have put to light that a rich field of research seemed to have taken, as an object of study, the practices dealing with forms of contestation, debate and the *political*. Its contours can be traced at the intersection of four theoretical constructs—Reflective Design, Adversarial Design, Participatory Design and Discursive Design—which allow to grasp and study the core properties listed before.

The three contributions of Chapter 1 therefore comprise:

- A brief review of design history literature that distinguishes two of design's relations to the *political*.
- The framing of a body of designing for debate practices, its six core properties, and the challenging of its foundations.
- The delineation of the contours and of the structure of a research field taking design for debate practices as a research object.

Elaborating on this first chapter, **my research is now focused on a subset of design for debate that is discursive and oriented towards mutual contestation—rather than collective contestation.**

Finally, Chapter 1 raised issues of expressing a plurality of contradicting points of view among citizens and among debate participants. **As a designer, researcher and citizen, I wonder:** What methods should be developed to create conditions enabling the expression of contestation, and especially mutual contestation? What specific effects does design generate in a situation of debate, or more broadly how does design contribute in a singular way to the *political*? What roles can such designers play in society?

In Chapter 2, I will draw on my previous conclusion to define the empirical, systemic and pragmatist stance of my research.

« Dis-moi **comment tu racontes**, je te dirai à la construction de quoi tu participes. »¹

“Tell me **how you tell things**, I will tell you what you’re involved in building.”

— Isabelle Stengers

1 Isabelle Stengers, 'Fabriquer de l'espoir au bord du gouffre : À propos de l'œuvre de Donna Haraway,' *La Revue internationale des livres & des idées*, no. 10 (March 2009) : 24–29, www.rilid.org | This is my own translation to English.

CH2 *EPISTEMOLOGY* **Grounding Research Within Design Projects**

In Chapter 2, I reflect on my personal background, training and institutional context and how these influenced the present research. The articulation between my host discipline (Information and Communication sciences) and the design research discipline is also questioned. I detail in what respects my practice, as a designer, is relevant to conducting academic research.

5 CONTEXT Personal Influences and Disciplinary Considerations

5.A Where Do I Speak From?

The sociology of science² and politically engaged scholars, starting by Marxist and materialist feminists in the 1980s, challenged the objectivity of scientific research. Along this line, Grada Kilomba suggested that the standpoint from which knowledge is created should be enunciated together with any contribution to knowledge, that is, in terms of class, race, gender, sex, and so on.³ I therefore outline, here, the personal and contextual influences of this research.

I come from a cross-cultural background, between two countries and two religions.⁴ This everyday experience laid the ground for my implicit knowledge of both conflict and consensus, cultural integration and segregation. Through time my practice has developed as an attempt to bridging worlds and frontiers, but also to accept in myself and others as well as in design artefacts, what stands out of the ‘normal,’ what is off-beat or slightly dissonant. This became a crucial part of my experimental work (especially Chapters 5–8).

Moreover, conducting this study in the 21st century—with its share of societal challenges⁵ and an increasing environmental emergency—has not left my research journey unaffected. Even though political considerations were not deliberately set at the fore front of my research in 2012, it came to be central to this work when I realised that design fictions could be used as a relevant medium to enquire into political matters (beyond design and technology-centred issues). Indeed, my training was in graphic, web, and interaction design and my experience was in Web design agencies, R&D labs, and an interaction design studio for architecture. Most of them were frustratingly oriented toward ‘problem-solving,’ regarding technological applications. Yet, I was more interested in ‘problem-finding’ regarding the possible implications of technology. This laid the ground for the encounters with key practitioners of Critical Design and Design Fiction during my Master studies in 2009–2011. Design Fiction has been my main professional and academic activity since. My first experiences—and frustrations—became the trigger for beginning the Ph.D. in late 2012. I will come back to this in Chapter 3.

2 Bruno Latour, Jonas Salk, and Steve Woolgar, *Laboratory Life: The Construction of Scientific Facts*, 1986: Reprinted in a revised paperback edition, Introd. by Jonas Salk. Princeton Univ. Press, Princeton, NJ (Los Angeles: Sage, 1979), [www/](#) | Isabelle Stengers, ‘Fabriquer de l’espoir au bord du gouffre,’ [www/](#) | Please note, the shortened URLs are provided for digital reading, they can be found in their full form in the bibliography section.

3 Kilomba is a Portuguese psychologist, writer and contemporary artist. She works on the decolonisation of knowledge. She lectured at the Humbolt University in Berlin and ran, nearby in the Maxim Gorki Theatre, the acclaimed independent seminar *KOSMOS*² (2015–2017).

4 I am half-rooted in a Middle-Eastern country ‘formerly’ at war, and born in the country-side of France to a middle-class nuclear family which has a complex relation to the French colonial past.

5 The 2009 financial crisis, the war in Syria, the welcoming of refugees (the Calais jungle), mass terrorism marking Parisians memories, the rise of political extremes, the crisis of democratic participation (French election 2017), the Brexit, to name a few.

5.B A Host Discipline

In addition to my personal background, my training as a designer has a major influence on my research. Hence, this thesis does not only take design as an object, it also employs the practice of design as a means to conduct research. This was made possible thanks to a doctoral programme that supports art and design practice-led Ph.Ds—the *SACRe programme* (Science Art Creation Research). This thesis was partly conducted in a design school—EnsadLab, with fellow designers⁶ and Emmanuel Mahé, my co-director. And, partly, in the humanities research department of an engineering school—Telecom ParisTech, with my supervisor Annie Gentès and the Codesign lab research team.

Internationally, practitioners of design join research communities and their ongoing effort to question the scope of what designing means. As a result, a number of academic discussions emerged. Some of them punctuated the fields of art⁷ and architecture⁸ alike. They include:

- The definition of design as an object of study⁹ or a discipline.¹⁰
- The balance of methodological emancipation against the inhibiting rigour of academic customs.¹¹
- The creation of a theoretical core specific to the practice of design and not only borrowed from other disciplines.¹²
- Various self-critical speeches, including the critique of design as the actual answer to all problems, the decolonisation of design, or more recent debates about design research failures.¹³

⁶ The first two years were conducted within Remy Bourganell's sociablemedia.ensadlab.fr/ research group.

⁷ **Henk Borgdorff, Nina Malterud, and Søren Kjørup**, *The Debate on Research in the Arts*, vol. 2, Senuous Knowledge Series, (Bergen National Academy of the Arts, 2006).

⁸ **Marc Belderbos and Johan Verbeke, eds.**, *Proceedings of the Colloquium 'The Unthinkable Doctorate' at Sint-Lucas, 14–16 April 2005* (Brussels: School of Architecture Sint-Lucas, 2008).

⁹ **Richard Buchanan**, 'Declaration by Design: Rhetoric, Argument, and Demonstration in Design Practice,' *Design Issues* 2, no. 1 (1985): 4–22, doi.org/ | **Simon**, *The Sciences of the Artificial*. | **Nigel Cross**, 'Designerly Ways of Knowing,' *Design Studies*, Special Issue Design Education, 3, no. 4 (1 October 1982): 221–27, doi.org/

¹⁰ Simon and Cross brought two major steps to the establishment of Design as an 'academic discipline,' while Buchanan rather understand design as a 'research object.'

¹¹ **Sabine Geldof and Joannes Vandermeulen**, 'A Practitioner's View of Human–Computer Interaction Research and Practice,' *Artifact* 1, no. 3 (2007): 134–41, doi.org/ | **Joyce S. R. Yee**, 'Methodological Innovation in Practice-Based Design Doctorates,' *Journal of Research Practice* 6, no. 2 (2010), [www/](http://www.) | **William Gaver**, 'What Should We Expect from Research Through Design?,' *Proceedings of CHI '12 Conference* (NYC: ACM, 2012), 937–946, doi.org/

¹² **Philippe Gauthier, Sébastien Proulx, and Fabienne Munch, eds.**, *Transformer Innover Dérégler: Proceedings of the 10th ARD Conference, 2015*, (Montréal, Québec), [www/](http://www.) | Page 10, Alain Findeli's bagel model (*la Couronne de pain*) represents how design research borrows and contributes to many peripheral disciplines without having its own epistemological core.

¹³ Respectively: **Eric P.S. Baumer and M. Six Silberman**, 'When the Implication Is Not to Design (Technology),' *Proceedings of CHI '11 Conference* (New York: ACM, 2011), 2271–2274, doi.org/ | **Tristan Schultz et al.**, 'What Is at Stake with Decolonizing Design? A Roundtable,' *Design and Culture* 10, no. 1 (2 January 2018): 81–101, doi.org/ | **Søren Rosenbak**, 'Design Research Failures,' designresearchfailures.com/ (accessed Sept 2019).

That said, in France, practitioners study design from the vantage point of a variety of scientific disciplines: philosophy and aesthetics;¹⁴ sciences of art¹⁵ and applied arts;¹⁶ anthropology and ethnology;¹⁷ psychology and ergonomics;¹⁸ Human-Computer Interaction (HCI);¹⁹ management sciences;²⁰ and so on.

In this research I have tried to bring together design research and Information and Communication Sciences, like others before me.²¹ This discipline supports my work in two ways.

First, it allows me to look at my phenomena (experiences related to designing for debate) through the lens of communication and media. Notably, the discipline provides concepts and methods to look at artefacts (human-made things) in terms of media carrying meaning. Hence, considering the various relations of mediations installed between artefacts and actors make it possible to ask about the discourses artefacts convey (i.e. in Chapter 6), and their effects on people (in Chapter 5, 7, 8). Information and Communication Sciences also helps to consider debating experiences in terms of situations of communication (Chapter 9 and 10) gathering institutions, medias, activities, people, things—where actors have their own agenda, dynamics, and weight on the situation.

Second, this discipline’s ability to construct its own approach, by drawing concepts and methods from various other fields, resonates with the approach of design research. This is described by Bruno Ollivier, Professor at the University of the Antilles and Professor at the Paris IV university:

“Communication sciences are thus an interdisciplinary field. They articulate concepts, knowledge and methods that come from other disciplines. They combine them in their own way to build their own approaches. Far from wanting to build a general theory of communication, an objective that is of the order of utopia, they have been developing knowledge over the past forty years that makes it possible to address the most burning issues in our society.”²²

- ¹⁴ **Pierre-Damien Huyghe**, *À quoi tient le design* (Paris: De l'incidence éditeur, 2014). | **Anthony Masure**, 'Le Design des programmes' (Ph.D. Dissertation, Paris 1, 2014), [www/](#)
- ¹⁵ **Samuel Bianchini, et al., eds.**, *Behavioral Objects*, (Sternberg Press, 2016). | **Emile De Visscher**, 'Manufactures Technophaniques' (Ph.D. Dissertation, Paris Sciences et Lettres, 2018), [www/](#)
- ¹⁶ **David Bihanic**, *Design en regards* (Art Book Magazine, 2019). | **Estelle Berger**, 'Poiétique Du Design, Entre l'expérience et Le Discours' (Ph.D. Dissertation, Toulouse 2, 2014), [www/](#)
- ¹⁷ **Sophie Pène and Franck Zenasni, eds.**, *Design et santé*, Sciences du design 06 (Paris: PUF, 2017). | **Nicolas Nova, ed.**, *Beyond Design Ethnography: How Designers Practice Ethnographic Research* (Berlin / Geneva: SHS / HEAD, 2014), [www/](#) | **Marine Royer**, 'De l'instrument à la prothèse.' (Ph.D. Dissertation, Paris, EHESS, 2015), [www/](#)
- ¹⁸ **Pauline Gourlet**, 'Montrer le faire, construire l'agir : une approche développementale de la conception mise en œuvre à l'école primaire' (Ph.D. Dissertation, Paris 8, 2018), [www/](#)
- ¹⁹ **Emeline Brulé and Gilles Bailly**, 'Taking into Account Sensory Knowledge,' in *Proceedings of CHI '18* (New York, NY, USA: ACM, 2018), 236:1–236:14, [doi.org/](#)
- ²⁰ **Pascal Le Masson, Benoit Weil, and Armand Hatchuel**, *Design Theory: Methods and Organization for Innovation* (Springer, 2017).
- ²¹ **Annie Gentès**, 'Arts et sciences du design : la place des sciences humaines,' *Sciences du Design*, n° 1 (27 May 2015): 94–107, [www/](#) | **Anne-France Kogan and Yanita Andonova, eds.**, *De l'injonction à la créativité à sa mise en œuvre*, Actes du colloque éponyme, 9–10 avril 2015, (MSH Ange-Guépin, Nantes, 2016), [www/](#) | **Emmanuel Mahé**, 'Pour une recherche combinatoire,' *Hermès*, n° 72, no. 2 (2015): 217–25, [www/](#) | **Manuel Zacklad**, 'Design, conception, création Vers une théorie interdisciplinaire du Design,' *[online] Wikicreation*, Nov. 7, 2017, [www/](#)
- ²² **Bruno Ollivier**, *Les sciences de la communication: théories et acquis*, Collection U., Communication (Paris: Armand Colin, 2007), 3. | My translation and my emphasis.

6 EPISTEMOLOGY Grounding in Situations

6.A Pragmatist Philosophy

This research is foremost constructed in the tradition of pragmatist philosophy. According to pragmatist thinking, knowledge is ‘situated.’ This term means that knowledge is rooted in specific places, at a specific time, and to specific people, that is, it depends on historical and geographical contexts and conditions. One of the consequences of this philosophy on academic research is to take into account how the settings, tools and context shape the research, and to support the participation of the public in research.²³

Pragmatist philosophy brings two things to the present research. First, it entices to think of the situation in which debates take place. This combines with Information and Communication Sciences and allows to observe design for debate as an actual ‘situation’ of communication.²⁴ In addition, contextual semiotic theory leads me to look at the meanings that an artefact (a discursive design) can have in a specific discussion situation.²⁵ But also, beyond the face-to-face interaction, pragmatism makes it possible to consider design for debate as a practice that generates public debate among publics that are context- and site-specific.²⁶ Pragmatist philosophy provides a ground of concepts and methods for my research.

Second, pragmatist philosophy brings the principle of situated knowledge according to which, understanding a human activity requires to practise it. Pragmatist philosophy proposes that action is not deduced from thought (I see, I interpret, I act accordingly) but rather has its own logic rooted in life situations.

²³ **Charlene Haddock Siegfried, ed.**, *Feminist Interpretations of John Dewey* (University Park, Pa.: The Pennsylvania State University Press, 2002). | This book challenges the myth of so-called scientific neutrality and detached observation enhancing a stance adopted early on by John Dewey’s pragmatism.

²⁴ Pragmatist communication theory allows to look at communication for its spatial (Edward T. Hall), temporal (Watzlawick), physical/sensory qualities, but also to look at norms (Garfinkel), stakes and goals (Husserl), positioning (Goffman) and relationships (Moréno, the Palo alto school). About this list of dimensions and a method for studying situations: ‘the panoramic table method,’ see pages 169–189 of: **Alex Mucchielli**, *Étude des communications: approche par la contextualisation* (Paris: Arman Colin, 2005).

²⁵ In addition to Charles Sanders Peirce’s semiotics, Roger Odin’s semio-pragmatics is a useful resource: **James Jakób Liszka**, *A General Introduction to the Semeiotic of Charles Sanders Peirce* (Bloomington: Indiana University Press, 1996). | **Roger Odin**, *De la fiction* (Bruxelles: De Boeck Université, 2000).

²⁶ To develop this, I may rely on John Dewey’s analysis of mass communication, ‘publics’ and democracy. **John Dewey**, *The Public and Its Problems*.

6.B Action Research

Pragmatism is one of the foundations of ‘action research.’

Action Research emerged in the 1930s mainly as a response to the social division that followed the development of rapid urban expansion, leading to the ghettoisation of immigrant workers in big cities. In line with the primarily British and American community-based practices, action research aimed at the emancipation and empowerment of segregated communities. In the 1950s these practices ranged from ‘community organising’ by Saul Alinsky²⁷ in the suburbs of the United States to adult training practices such as ‘radical pedagogy’ and ‘pedagogy of the oppressed’ by Paulo Freire in Brazil²⁸ and Augusto Boal’s ‘theatre of the oppressed’ in 1970s São Paulo.²⁹ This form of research was first named in 1944 by a German-American psychologist Kurt Lewin (known as one of the modern pioneers of social and applied psychology in North America) in the article entitled “Action Research and Minority Problems.”³⁰ He describes Action Research as a scientific experimentation in everyday life.³¹

Action Research has a number of epistemological specificities. First, research and action can both be unified within the same activity without compromising their respective aims. Second, the nature of the knowledge produced is adapted to changing ground realities. It does not aim at reaching ‘universal’ truths but at identifying and broadening the field of possible truths. Third, the researcher works in collaboration with the actors on the field so as to contribute to their project and tackle their problems. The knowledge produced can either deal with a subject that is disconnected from the actors’ project or can contribute to the sciences of project-making and management. This brief introduction³² points out a double objective of my approach. I aim not only to observe reality, but to transform it. I also aim at producing knowledge about these transformations.

²⁷ **Saul Alinsky**, *Rules for Radicals: A Pragmatic Primer for Realistic Radicals*. (New York: Random House, 1971). | Find an American perspective onto the history of community organising (also known as social agitation) since the 1880 in **Robert Fisher and Peter Romanofsky, eds.**, *Community Organization for Urban Social Change: A Historical Perspective* (London: Westport, Conn.: Greenwood Press, 1981).

²⁸ **Paulo Freire**, *Pedagogy of the Oppressed* (New York, NY: The Seabury Press, 1968).

²⁹ **Augusto Boal**, *Theater of the Oppressed* (Urizen Books, New York: Urizen Books, 1977). | First published in Spanish in 1974 as *Teatro del oprimido y otras poéticas políticas*, Ediciones de la Flor, Buenos Aires.

³⁰ **Kurt Lewin**, ‘Action Research and Minority Problems,’ *Journal of Social Issues* 2, no. 4 (1946): 34–46, doi.org/

³¹ **Kurt Lewin**, *Field Theory in Social Science*, ed. Dorwin Cartwright (Oxford, England: Harper & Bros., 1951).

³² **Michel Liu**, ‘La Validation Des Connaissances Au Cours de La Recherche-Action,’ *Études et Recherches Sur Les Systèmes Agraires et Le Développement*, 1997, 183–96, www/ | **René Barbier**, ‘Historique de La Recherche-Action Par René Barbier,’ [Online], 2006, www/ | **René Barbier**, *La recherche-action* (Economica, 1996). | Find an account of the methodological and epistemological details and disagreements of this field in Liu and Michel’s work. Barbier offers a historical perspective to action research.

6.C Project-Grounded Research

Akin to the researcher in action research, the designer intends to transform given situations through their research. Doing this through a ‘project,’ Alain Findeli argues, is a crucial element among the things that makes design research a discipline. Before to expand on Findeli—and to position my study in what he calls project-grounded research—I briefly set the frame of another approach to which I borrow, research through design.

The British design academic Christopher Frayling attempts to avoid the misleading divide put between theory and practice by conceiving three kinds of research: fundamental research, applied research and action research. Practice, laboratory work or workshops are horizontal approaches cutting across these three types of research. Frayling proposed that the practice of design can be taken as an object of study (research into design), a means to research a problem outside design (research through design), or the artefact itself can be thought as the embodiment of knowledge (design as research). In the 1990s, this terminology attempted to cope with the difficulties of the design sciences to deal with the study of the messiness of design activities.³³

Steven Dow, Wendy Ju, and Wendy Mackay³⁴ offer a perceptive view of research through design with the following example. In 2004 Bill Gaver and coauthors from the Royal College of Art and Goldsmith University, created the *Drift Table* (Fig. 13).³⁵ This electronic coffee table had a weight-sensitive table-top and displayed a screen where an aerial landscape view slowly drifted in different directions according to the distribution of weight on the table surface. The author and their colleagues were not aiming at commercialising this project. They used it as a means of investigation and creating knowledge on domestic technologies and non-utilitarian, ‘ludic’ values of design.³⁶ While traditional design practice aims at cultural or economic impacts,³⁷ designers who research through practising design make and deploy artefacts as a way to produce knowledge³⁸—such as learning about people, culture, interactions, and other aspects of human experience.

- ³³ **RTD Conference Series**, *RTD 2015 Provocation by Sir Christopher Frayling Part 1: Research Through Design Evolution*, 2015, vimeo.com/129775325/ | **Christopher Frayling**, ‘Research in Art and Design,’ *The Royal College of Art Research Papers* 1, no. 1 (1993): 1–9, www/
- ³⁴ **Steven Dow, Wendy Ju, and Wendy Mackay**, ‘Projection, Place and Point-of-View in Research through Design,’ in *The Sage Handbook of Digital Technology Research*, ed. Sara Price, Carey Jewitt, and Barry Brown (Los Angeles: Sage, 2013), 266–284.
- ³⁵ **William W. Gaver et al.**, ‘The Drift Table: Designing for Ludic Engagement,’ in *CHI '04 Extended Abstracts* (New York: ACM, 2004), 885–900, doi.org/
- ³⁶ **William W. Gaver**, ‘Designing for Homo Ludens,’ *I3 Magazine* 12, no. June (2002): 2–6.
- ³⁷ **Jon Kolko**, *Thoughts on Interaction Design* (Savannah, GA: Brown Bear, 2007). | *The Art of Innovation: Lessons in Creativity From IDEO, America’s Leading Design Firm*. By Tom Kelly and Jonathan Littman (Grand Haven, MI: Audio book by Brilliance Audio, 2000).
- ³⁸ **John M. Carroll and Wendy A. Kellogg**, ‘Artifact As Theory-Nexus: Hermeneutics Meets Theory-Based Design,’ in *Proceedings of the CHI '89 Conference* (New York, NY, USA: ACM, 1989), 7–14, doi.org/ | **John Zimmerman, Erik Stolterman, and Jodi Forlizzi**, ‘An Analysis and Critique of Research Through Design: Towards a Formalization of a Research Approach,’ in *Proceedings of the DIS '10 Conference* (New York, NY, USA: ACM, 2010), 310–319, doi.org/



Figure 13 | A user ‘playing’ with the Drift Table (2004) by placing weight on the table’s surface. Drawing on ethnography and photography, the author of this picture evidently took this living room moment as an observation situation. This picture can be seen as an example of how designers’ research can be conducted by delivering usable artefacts in people’s home. It can lead designers to participate to the users’ activities in everyday settings.
Image credit: research.gold.ac.uk/5526/

Various forms of research through design have been identified and discussed by design scholars.³⁹ In a 2008 paper, Findeli and coauthors report how research through design has been developing in a very dynamic way, leading to a variety of titles such as ‘practice-based research,’ ‘practice research,’ ‘action research in design,’ and ‘clinical research.’ Yet, this approach still struggles to achieve methodological soundness and scientific recognition.⁴⁰

On the one hand, the lack of definition of the research through design concept is an asset. Its flexibility allows to combine the approach with other methods and disciplines—in my case Information and Communication Sciences—in order to tackle methodological robustness.

On the other hand, the lack of definition of what practice brings to a scholarly endeavour is a limitation. For instance, the contribution of Frayling’s ‘design as research’ approach to a scientific enquiry can be hard to grasp. In my approach, and drawing on Pegley and Wormald’s 2007 article that stress the importance of research through *designing*.⁴¹ **I avoid ‘design as research.’ I rather conduct research through the activity of making and deploying artefacts and analysing their reception by users and stakeholders.**

Also, the context in which the research is developed can be a limitation. Following the typology of Ilpo Koskinen and coauthors from 2011, research through design can be conducted in the field, in a laboratory, or in the showroom.⁴²

³⁹ **Rosan Chow**, ‘What Should Be Done with the Different Versions of Research-Through-Design?’, in *Entwerfen. Wissen. Produzieren. Designforschung Im Anwendungskontext*, ed. Claudia Mareis, Gesche Joost, and Kora Kimpel (Bielefeld: DGTF, Transcript Verlag, 2010), 1–12, doi.org/

⁴⁰ **Alain Findeli et al.**, ‘Research Through Design and Transdisciplinarity: A Tentative Contribution to the Methodology of Design Research,’ in *Proceedings of the Swiss Design Network Symposium* (Berne, Switzerland, 2008), 67–91, www/

⁴¹ **Owain Pegley** and Paul Wormald, ‘Integration of Design Projects within a Ph.D.,’ *Design Issues* 23, no. 3 (21 June 2007): 70–85, doi.org/

⁴² **Ilpo Koskinen et al.**, *Design Research Through Practice: From the Lab, Field, and Showroom* (Elsevier Science, 2011).

In this research, **I operated almost exclusively in a field setting.** This choice stems from my pragmatist stance and an initial frustration with the showroom, presented in Chapter 3.

In order to further define how to conduct my research through an activity of designing (and in the field), I found in Findeli's work the central concept of my epistemological standpoint, that of *the project*. In a paper from 2008,⁴³ updated in 2010,⁴⁴ and translated in the French journal *Sciences du design* in 2015,⁴⁵ Findeli and coauthors introduced a refined definition of the design research discipline and coined the expression "project-grounded research." In order to introduce it, Findeli critically reacts upon common scholar agreements established in the field. He demonstrates how Bruce Archer's definition of design research does not grasp what is unique to design, as the word 'design' in Archer's definition could be replaced with any other one from other disciplines.⁴⁶ He also argues that Nigel Cross' concept of "designerly ways" of knowing is not specific enough to define the discipline, as it may refer to a variety of undefined 'way(s)'⁴⁷ of enquiring. He then forwards that, what is specific enough to consider design as a discipline is the role of the design project, from the making to the release of the artefact.

Indeed, as explained by the Germany-based design researcher Rosan Chow:

"Like others, Findeli sees that **design thinking and knowing are diagnostic, projective, and geared toward change.** The epistemological stance of design is therefore different from what is descriptive, explanatory, and predictive. Design knowing is pragmatist in nature in the sense that **it is situated in a project. A project has a beginning and an end and is aimed for some extrinsic goal.** A project implies practice and for [project-grounded research], it is design practice oriented toward future change."⁴⁸

Following Findeli's definition, I hence built my research as "a systematic search for and acquisition of knowledge related to general human ecology considered from a designerly way of thinking, i.e. project oriented perspective"⁴⁹

⁴³ Findeli et al., 'Research Through Design and Transdisciplinarity.'

⁴⁴ Alain Findeli, 'Searching For Design Research Questions: Some Conceptual Clarifications,' *Questions, Hypotheses & Conjectures: Discussions on Projects by Early Stage and Senior Design Researchers*, 12 November 2010, 286-303.

⁴⁵ Alain Findeli, 'La recherche-projet en design et la question de la question de recherche : essai de clarification conceptuelle,' *Sciences du Design* 1, no. 1 (27 May 2015): 45–57, [www/sciencesdudesign.org/](http://www.sciencesdudesign.org/)

⁴⁶ In Archer's definition, "Design Research is a systematic search for and acquisition of knowledge related to design and design activity." 'design' could be replaced with 'economics,' for instance: "Economic research is a systematic search for and acquisition of knowledge related to economics and economic activity." | Find the definition in: Bruce Archer, 'A View of the Nature of Design Research,' *Design: Science: Method* 1 (1981): 30–47.

⁴⁷ Cross, 'Designerly Ways of Knowing.'

⁴⁸ Rosan Chow, 'What Should Be Done with the Different Versions of Research-Through-Design?,' in *Entwerfen. Wissen. Produzieren. Designforschung Im Anwendungskontext*, ed. Claudia Mareis, Gesche Joost, and Kora Kimpel (Bielefeld: DGTF, Transcript Verlag, 2010), 3, [doi.org/](https://doi.org/10.1007/978-3-8380-2500-0_3) | My emphases.

⁴⁹ Findeli et al., 'Research Through Design and Transdisciplinarity,' 294.

In this definition Findeli is drawing the term design close to the field of human ecology. He formulates that, “the purpose of design is to improve or at least maintain the ‘habitability’ of the world in all its dimensions” (material, psychological, cultural, etc.), where habitability “refers to the interface and interactions between [...] ‘inhabitants’ [...] and the world in which we live.”⁵⁰

Finally, according to these definitions, what makes design research a proper discipline is that it looks at *specific areas* of the world with a *specific lens*. Respectively, design research looks at phenomena pertaining to general human ecology (the worlds’ habitability, the interactions between the human and non-human worlds, etc.). It looks at these phenomena within a designerly ‘way of thinking,’ which is, by **studying these phenomena in the frame of a design project.**

6.D Searching for a Research Question

Findeli points at several consequences of this definition. Among them, I note that interdisciplinary research seems necessary for such a systematic enquiry.⁵¹ I also note that one of the toughest challenge for a new Ph.D. candidate is to identify research questions. This is a complex task considering the overwhelming number of dimensions of human ecology.⁵² Regarding the search or research questions, Findeli distinguishes two kinds of situations. First, in a top-down manner, research avenues are identified among the research questions left unresolved by peer researchers. They are ‘endogenous’ to the discipline. This approach leads to the choosing of an appropriate terrain for exploring them through a relevant project.

Second, in a bottom-up manner, the designer comes up with design questions that often emerged from difficulties met in their own practice (professional or in education). The challenge is to problematise their design questions into a set of scientific research questions in order to contribute to the discipline. These questions stand as ‘exogenous’ to the body of unanswered questions identified by peers in academia.

Within my question formulation process, reported in Chapter 3, it seemed important to me to mix exogenous and endogenous questions. I thus started from a frustrating experience encountered in my practice in 2011, which I compared to the experience of other design researchers, through a review of the literature. In fact, in this project-grounded question identification process, the limitations of my design project served as basis to orient my literature review.

⁵⁰ Findeli, ‘Searching For Design Research Questions,’ 292. | Findeli suggests that the first use of the term ‘habitability’ in design research has no clear-cut origins (see the end-note n° 7).

⁵¹ I do not intend to develop here a discussion (which often turns into a debate) on inter-, trans-, pluri- or in-disciplinarity. Find an original historical perspective on the subject in Laurent Dubreuil, ‘Défauts de savoirs,’ *Labyrinthe 2* : La fin des disciplines ?, no. 27 (7 April 2007): 13–26, [doi.org/](https://doi.org/10.1017/S1373291707000000)

⁵² Findeli, ‘Searching For Design Research Questions,’ 292 (or 51 for the French version of the article) | According to Findeli, akin to the anthropological and social sciences, design research often addresses the mundane questions of the everyday life of people. Yet, in any human activity (working, learning, leisure, health, culture, food, hygiene) are mingled various independent dimensions (economic, societal, psychological, technological, historical, semiotic ones).

7 KEY LEARNINGS Researching Through Conducting Projects in the Field

In this chapter, I sought to define my epistemological framework and to introduce what is my position as a designer within an academic research project.

In short, my research is developed through conducting design projects led in the field, by making and releasing design artefacts, and involving users and stakeholders.

In order to formulate this I first presented how my personal influences especially, my growing interest for political and norm related issues—fed my choice of a research topic. I framed how my training in design—based on a way of thinking anchored in experience, practice, and pragmatism—influenced my epistemological position rooted in pragmatist philosophy, action research, and project-grounded research. I proposed that Information and Communication Sciences are a relevant disciplinary lens to look further my study because it makes it possible to consider design artefacts for their communicative qualities. It also allows to analyse debates as situations of communication. Altogether, this stance seems to be a relevant approach to study how design may better contribute to people's experience of *political* debates.

In Chapter 3, I will elaborate on this epistemological ground to identify my research questions.

« [L]e prétexte de prétendre ‘favoriser le débat et la discussion’ a toujours été un objet idéalisé mais remis à plus tard, dans le SCD [Design Critique et Spéculatif], une façon de justifier la production de belles images et de belles paroles, mais jamais quelque chose qui a été pris au sérieux. »¹

“[T]his pretense to be ‘fostering debate and discussion’ has always been an idealised but delayed object of SCD [Speculative and Critical Design], a way of justifying the production of nice looking images and gestural chatter, but never something that was taken seriously.”

— Matt Kiem

1 **Matthew Kiem**, 'Is a Decolonial SCD Possible? Comments and Questions in Reply to Luiza Prado and Pedro Oliveira,' Medium, 28 November 2014, medium.com/@mattkiem/is-a-decolonial-scd-possible-30db8675b82a/ (accessed Sept 2019). | Matt Kiem is an independent design researcher member of the decolonising design group. | This is my own translation to French.

CH3 *LITERATURE REVIEW* **Identifying Six Research Questions**

In the Chapter 3, I search for the limitations pertaining to existing practices of designing for debate, on which to focus my research questions. To this end, I review the related works, within academic literature. In order to choose these works, I start from the frustrations and difficulties encountered in my first design for debate project.

8 *AIMS & PROTOCOL* Turning Design Practice Difficulties into Research Questions

8.A Introduction

In the present chapter I ask: what should I research about the practising of design for debate in my upcoming experimental work (chapters 5–10)?

I ask this because the difficulties encountered in my own experience brought me to the Ph.D. research process. However, they left me with problems related to my design practice rather than with concrete research questions.

In order to identify my questions, I start this chapter by presenting my very first design for debate project (pre-dating the Ph.D.), through the means of a ‘pictorial’ format.²

Then, three analyses are provided, each of which is composed of four phases:

- I first review the difficulties met in my project.
- I then use these difficulties as a pointer to review the literature regarding researchers’ report of comparable experiences. In this phase, I try to pinpoint the ‘functions’ attributed to the practices of designing for debate.³
- I then continue my review so as to list the means developed by practitioners to achieve these functions.
- Finally, I list the limitations encountered by other scholars and I formulate a research question.

In the Discussion section I attempt to formulate two hypotheses to overcome some of these limitations.

My aim is not to provide a detailed analysis of my project. Rather I offer a project-grounded approach to reviewing the literature and identifying research questions. This way, I intend to combine research questions that are exogenous and endogenous to the ones existing in academic literature.⁴

² The rationales for using the pictorial format are given in Chapter 4. Notably, this format dedicates more room and attention to visuals and designerly intermediary knowledge.

³ The ‘function’ term is taken from my typology of research objects of the design for debate research field (Chapter 1).

⁴ I hence drawing on Alain Findeli’s work on research questions identification (Chapter 2).

8.B The Context of My First Experience with Designing for Debate

The starting context for this doctoral research is my very first design for debate project, *Dog & Bone* (2010–2011). Initially called *RingDog* in 2010, it was brought as a response to a Critical and Speculative Design workshop, given by James Auger and Jimmy Loizeau⁵ during my master studies. A year later, I further developed the proposal as a diploma project, under the direction of Auger and Loizeau again. While the workshop was on the topic of animals and technologies, the *Dog & Bone* project resonated with the writing of my master's thesis on remote interpersonal communication technologies, supervised by Nicolas Nova.⁶ Focusing on technologies ability to transmit non-verbal and emotional dimensions of human communication, I (re)initiated the *Dog & Bone* project. This is presented below. Working with Nova led me to conduct design ethnography phases, in search for design insights, to improve the design of my first prototypes, and for final user-testing. Supervised by Auger and Loizeau, I developed a whole communication material on the project (photographic portraits of users, user-tests video and two final prototypes) which I used to trigger debates during exhibitions and talks.

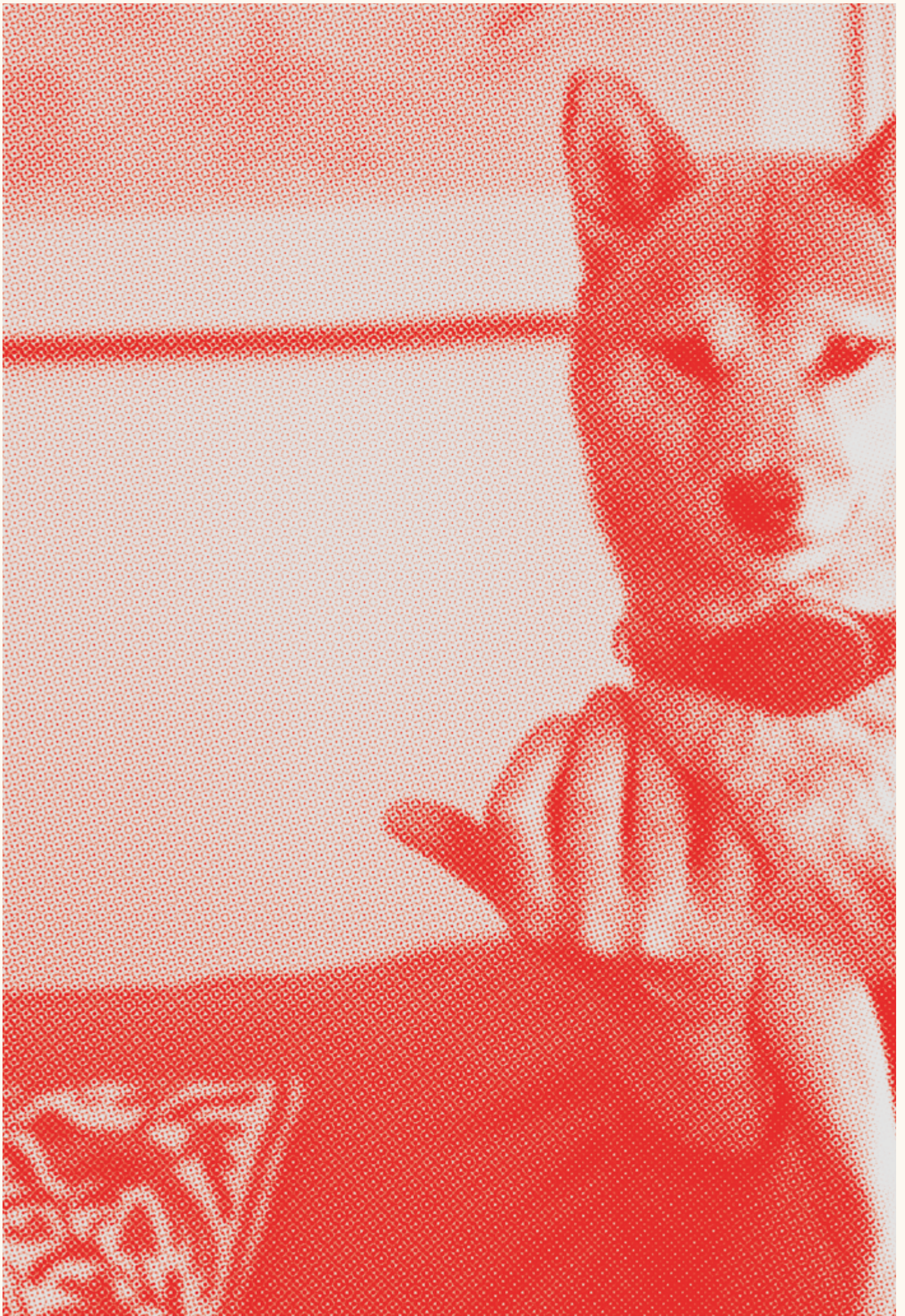
Detailing this context and my design process allows to get a sense of how the project fits into the canonical design for debate practices described in Chapter 1. This will be of particular interest in the rest of my chapter, when reflecting on the means set within the project so as to spark debate.

Please note, this project was not initially intended to be a scientific experiment, but a creative exploration and an attempt to spark debate. Also, the status of the textual and visual material presented below can be considered as pieces of data extracted to their original contexts. The material was used for the exhibition, during talks and on my personal website.⁷ I complemented and adjusted some of these texts to make them legible in a thesis format. Enough material is given to contextualise the project while avoiding the restriction of the range of possible interpretations.

⁵ James Auger and Jimmy Loizeau, duo of British designers, former students of Dunne & Raby, were respectively permanently teaching at the Royal College of Art and Goldsmith University in London at the time (2011). The workshop was given during the very first year of the Media Design Master programme (2009–2010) at HEAD-Geneva (*Haute École d'Art et de Design*, University of Art and Design).

⁶ French-Swiss ethnographer and academic in human-computer interaction and ethnography, Nova is a co-founder of the Near Future Laboratory where Julian Bleeker wrote the essay *Design Fiction* in 2009.

⁷ cargocollective.com/alternative-communication/ (accessed Sept 2019).





Dog & Bone
The Empathetic Telephone

9 FIELD EXPERIENCE & DATA **Dog & Bone: My First Experience with Exhibiting a Provocative Design to Spark Debate**

9.A Context and Issues

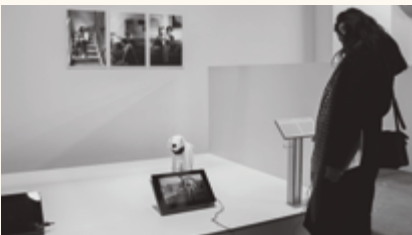
Abstract

What if our telephones could be sensitive to the non-verbal part of communication? What if they could even express their own agency, character, and role in the conversation?

Drawing from a personal dissatisfaction with the state of existing communication devices, *Dog & Bone* was developed as an alternative to video-conferencing and similar innovations. Face-to-face communication mechanisms inspire all such technologies allowing us to interact more emotionally and instinctively when time and distance are at play. Yet, from telepresence robots to Video-call, face-to-face remains most of the time a face-to-screen.

In order to address this very personal intuition, a design ethnography study was conducted to identify the limitations of interpersonal video-conferencing. This informed the design of an unconventional alternative to long-distance 'presence' and non-verbal communication. Below, the study is presented together with a working prototype, tested (in 2011) and exhibited (in 2013). It intended to question and feed debate on cutting-edge research on telepresence technologies—predominantly focused on telepresence social robots, at that time.

The project was exhibited at the Biennale Internationale Du Design in St-Étienne, France in an exhibition on animals & technology called *Do Androids Dream of Electric Pig* (2013) curated by Marie-Haude Caraës. It was presented as a talk, three times in 2012, 2014 and 2015.⁸



Project release context:
 a Critical Design artefact in a design Biennale exhibition

⁸ The three talks are: *Designing to trigger reflection: state of my telepresence researches*. In Cécile Martin (Associate Professor). Presented at Université Paris-8, Master 2 Numérique : enjeux & technologies (NET), Paris. (Dec. 15th 2015). | *Design for debate, applied to the case of Telepresence*. Presented at The 2nd Summer University of the ICCA Excellence Laboratory, Moulin d'Andé, Andé, France (Sept. 19th 2014). | *Living together despite distance*. Presented at the PSL/ SACRe's Doctorate Kick-Off exhibition, ENSAD, Paris (Nov 09, 2012). bit.ly/SACReKoff (Event photos, accessed May 2019).

About the Project

In | 2010–2011

At | Exhibited initially as a Master's graduation project at HEAD – Geneva (June 2011), and at the *Biennale Internationale Du Design* in St-Étienne (2013) as part of the exhibition *Do Androids Dream of Electric Pig* curated by Marie-Haude Caraës.

For | Self-initiated

By | Max Mollon

Material | Leather collar, Bluetooth connection, anti-echoing speakers.

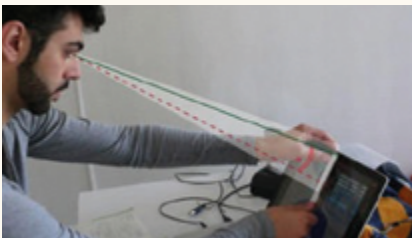
With | Théo Reichel (Electronic engineering), Christiane Murner (Leather craftwork). James Auger, Jimmy Loizeau and Nicolas Nova (Tutors). Yukiko, Elliott, Ginko and their masters, including Daniel Pinkas (Testers).

Thanks | Daniel Sciboz, Douglas Edric Stanley, Cedric Brunel, Alexandre Burdin and Matthieu Cherubini (HEAD – Geneva).

Licence | All images of artefacts made for the project are placed under a licence: CC BY-NC-SA 4.0 Max Mollon (2013). Please feel free to re-use them to organise debates on similar topics.



Project supervision team
(from right to left—James Auger, Nicolas Nova, Jimmy Loizeau)
reviewing the work of two students
(right to left—Nicolas Rivet and Clovis Duran)
at HEAD (March 2011).

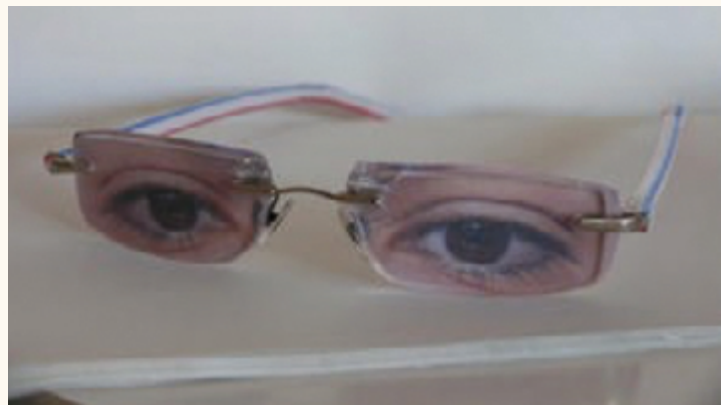


Formulating a Question to Debate on Telepresence Technologies

Why *Dog & Bone*? This telecommunication research project started from a simple observation—Skype or video-conferencing is frustrating. Although asserted as being similar to face-to-face conversations, non-verbal and multi-sensorial empathetic mechanisms that underpin human social links vanish in mediated communication because of physical absence (gestures, bodily distances, and so on). This is put to light in the course of the subsequent explorations.

The first exploration is entitled *Straight Into The Eyes*. It started from this question: Did you ever notice that you never have a true eye-contact through (computer-based) video-chatting? This is unequivocal when comparing screenshots of an inbuilt webcam and one of the TV-news.

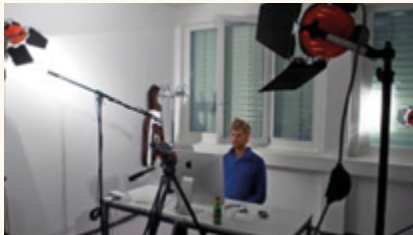
Drawing upon the simple fact that the location of inbuilt webcams does not allow such eye contact, two options were developed to allow the sensation of empathy and dedicated attention, which rely on this non-verbal cue. The first was a pair of glasses displaying a printed version of the user's eyes in the exact right position to make eye-contact. The second was simply the placing of an external webcam, taped on the screen, where the interlocutor's eyes usually appear. [Update from July 3rd 2019, Apple just implemented in their latest iPhones the relevantly called "attention correction" feature.]⁹

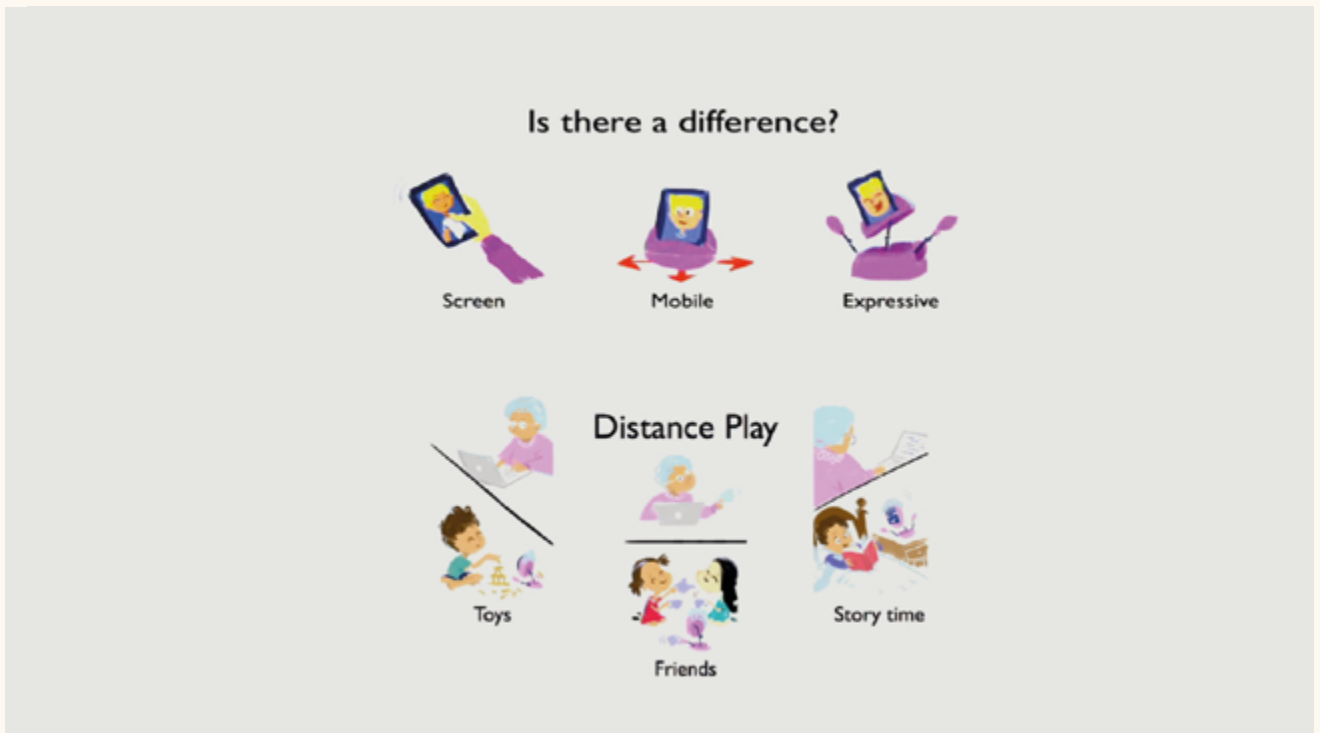


⁹ Jon Porter, 'iOS 13 will fix the FaceTime eye contact problem,' The Verge, Jul 3, 2019, [theverge.com/2019/7/3/20680681/ios-13-beta-3-facetime-attention-correction-eye-contact/](https://www.theverge.com/2019/7/3/20680681/ios-13-beta-3-facetime-attention-correction-eye-contact/) (accessed Sept 2019).



The second exploration, *Empathetic Skype*, starts by comparing again two screenshots, between a cinema movie and a video-chat. The difference is (indeed obvious, and) astonishing. The craft spent to design an image that enhances the actor's emotions on screen is often impressive. Drawing inspiration from a cinema set, this exploration attempted to bring cinema-like image quality to video-chatting, enhancing emotional expression as well as empathy with respect to the user's mood.





Cynthia Breazeal's *Mebot*, use-case scenario



Mebot (left), *Dog & Bone* (right).

9.B Deliverables of an Empathetic Telepresence Device

Artefact

Dog & Bone turns man most faithful companion into a sensitive tool of communication. It is a dog collar, made of leather, which embeds a microphone and a speaker, connected to your phone via Bluetooth (no harm for the dog). Once back from work, the dog's collar connects to your mobile phone, allowing every next phone conversation to be held through the loyal poosh.

The expression 'dog and bone' is a play on words that sets the project well into British popular culture where it means 'telephone' in Cockney rhyming slang (East London slang).

Dog & Bone in use (this is the official narrative picture that represents the project).



The collar is made to connect automatically to the owner's phone (left on a table or inside a pocket) relaying phone calls as a hands-free headset would.

User Tests

The results of a user-testing phase are now presented.

It allowed to confirm that the usual phone experience was drastically challenged:

- The phone would become alive, tactile, affective, and free to make its own decisions;
- Talking to a dog seemed normal and natural;
- The phone function was quickly and easily attributed to the dog.



The collar hosts an echo-cancelling microphone, a directional speaker (keeping the dog's ears safe), a Bluetooth connection to the owners' phone (low-frequency radio waves, safe for the animal), an ON/OFF button (pick up/hang up), and a mini USB plug for battery recharges. Prototypes were developed for two dog sizes (small and medium). The device functions better indoors.

Deciding on which breed of dog to use is an important consideration. A Cocker Spaniel can be more empathetic when talking to an ill parent. Talking into the eyes of a playful Carlin can diminish fear when arguing with one's boss, the Carlin's overexcitement can even distract you from the conversation. Finally, a wild Shiba Inu, running away from an angry chat can result in less tension (From left to right: Yukiko, Ginko, and Eliot, the three impartial testers).







The rationale behind *Dog & Bone* relied on the fact that owners and dogs already have a strong bond between them. The dog is definitely not a 'tool.'

The dog did not merely carry the phone. A series of new 'on-the-phone' postures appeared. Tests showed that the device is a rare example of artefacts that retrieves proxemics behaviour—social proximity expressed in physical distance between two people face-to-face. The variation in distances between interlocutors was particularly visible on the phone in the case of the subject's spouse or boss. The device also enabled empathy regulation. The dog felt the emotional states of the interlocutors and reacted to them—being tender if the interlocutor was sad, running away or barking if they was angry—acting, that is, as a mediator more than a medium.





Two user-test videos were shot to demonstrate the *Dog & Bone* in use. The first one showcases Ginko, a very calm and empathetic companion who patiently listens to the conversation between their master and his mother. The second one features Yukiko, whose independent character forced her master to conduct a 3 way phone conversation.



Please find the two user-test videos at:

- vimeo.com/maxmollon/dogandbone/
- vimeo.com/maxmollon/dogandbone-yukiko/



Finally, *Dog & Bone* aims to return proprioception, proxemics, affection, and unexpectedness to conversations. It substitutes 'face-to-face' conditions of empathetic conversation with 'face-to-dog.' This project attempts to provoke and to discuss the best option—which one will you leave to your kids, an 'empathetic grandma robot' or a dog?

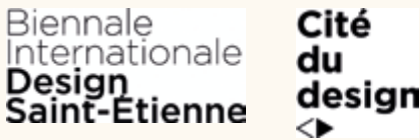
Note: A couple of years later, the *Mebot* project (2010) was stopped. Cynthia Breazeal and her team developed the *Jibo* project (2014) a family companion (not an interpersonal communication device anymore).

9.C Release Situation

Dog & Bone was invited to participate in an exhibition on animals and technologies.

Marie-Haude Caraës, curator and (at the time) Head of the Art & Design research department at the School of Fine Arts in St-Étienne (France), explored the relationships between man, technology, and animals through her exhibition *Do Androids Dream of Electric Pigs*.

Dog & Bone was presented alongside various kinds of projects (such as critical design, communication, classic design, art). Other exhibitors included Auger-Loizeau, Patrick M. Brown, Stéphane Bureaux, Bill Burns, Michael Burton (Burton-Nitta), Philippe Decouflé, Yona Friedman, John O'Shea, and Ernesto Oroza, to name a few. The exhibition took place in 2013 and was part of a larger event, the *Biennale Internationale du Design de St-Étienne*.



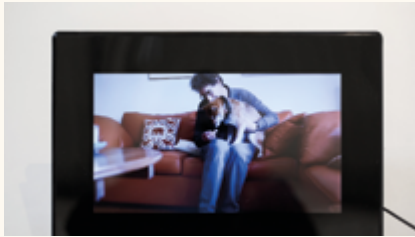
View of the exhibition location, the Cité du design of St-Étienne city.



A visitor interacting with the exhibited version of *Dog & Bone*.



Once exhibited, a selection of the earlier visuals was presented together with the video, the actual prototype, and a textual description.



9.D Project's Outcomes

Note, the following reflections are added in the manuscript only and were not part of the project's communication.

Visitor Feedback

The Biennale gathered around 140,000 visitors over 17 days. The audience included other designers from France and abroad, as well as curious visitors from St-Étienne and the rest of France.

I observed that visitors spent an average time of one minute in front of the piece. They often simply read the introduction label of the piece, or stopped by to watch the user-test video. The piece triggered eyebrow-raising, smiles, slight laughter or frowned mimics on the visitors' faces.

Outcomes on the Telepresence Topic

In retrospect, the following questions and issues challenging the telepresence sector were identified through the process of making and testing the artefact.

- On the one hand, as robot designs were invested with increasingly anthropomorphic characteristics, the project showed how robot scientists must consider questions of the complete spectrum of human communication (including proxemics), the 'presence' of telepresence devices, and possibly, their own agency.
- On the other hand, *Dog & Bone* remained a face-to-face placebo as non-verbal emotions sensed by 'the device' (the dog) were not transmitted. This was a reminder of how non-verbal cues find different means of expression over a distance (such as in letters). This also open the way to create non-verbal modalities of expression that are specific to technology (e.g. sending ephemeral messages in the future, geo-locking, and so on).
- Finally, separate from a stream of HCI research—substituting interlocutors with robots and more and more screens—this project challenged the assumption whereby face-to-face conditions of communication were believed to constitute the 'golden model.' It criticised the awkward gaps that can emerge between science and society when driven by 'technological fantasy' and encouraged the exploration of alternatives.



10

ANALYSIS & RESULTS

Challenging Canonical Means to Design for Debate (Crafting Artefacts, Choosing Issues and Circulating the Project)

In late 2012, I looked at *Dog & Bone* as the initial trigger for my doctoral enquiry. I considered two different research projects. I could either conduct research on the means of designing for debate, or on how technology mediates social relationships (though, researching this by using design fiction explorations). At first, I attempted the second option from 2011 to early 2013 through 3 more design projects.¹⁰ Yet, I met a recurrent difficulty. The initial aim of the provocative, paradoxical, and quite humorous approach of *Dog & Bone* was not met in my several projects. My aim was to, “provoke curiosity and concern, and invite people to debate about how interpersonal media shape our social lives.”¹¹ But I had the feeling that debate did not actually happen through the exhibition and public media. Hence, my attention drew to what did *not* work with the *Dog & Bone* project.

I now analyse, in retrospect, three of the difficulties I met regarding *Dog & Bone*'s outcomes. They are related to the provocative nature of my artefact, to my choice of a debate topic and to the way the project encountered the public—namely the exhibition. Respectively, three analyses are unfolded in the present section. Two further limitations are addressed in the upcoming Discussion section. Together, these sections aim to review the literature in order to convert my design problems into a set of research questions.

¹⁰ These self-initiated enquiries can be found at: cargocollective.com/alternative-communication/ or maxmollon.com/ (Accessed May 2019).

¹¹ According to my design research notebook from 2011.

10.A Feeding Critical Reflection Through Provocation: A Misleading Terminology?

10.A.1 Difficulties to Stimulate Critical Thinking Through *Dog & Bone*

The first difficulty I encountered came from the fact I was hoping that viewers—the visitors to the exhibition, or the people to whom I have presented this project in other contexts—would be able to take a critical distance from their known experience of telephone and video-chatting. In order to feed such a critical reflection, an essential part of my strategy was to poke, disturb or upset people—with the unconventional idea of a face-to-dog device. It seemed important to not reveal this strategy to the audience (e.g. in the textual material provided earlier). In fact, the provocation was intended to come from offering an absurd proposal of an empathetic telecommunication experience that is, actually, a frustrating placebo to genuine mutual presence. With this form of provocation, I thought the viewer would be enticed to critically discuss how contemporary trends in technological innovation are continually developing ever frustrating illusions of face-to-face communication, which is seen as a standard. While some of the pieces of feedback I collected included amusement and acceptance (‘why not?!’). Another part of the feedback I received was strong feelings of rejection—which often led to discussions on animal rights rather than on technology and innovation. For instance, I observed one strong outrage from a Swiss dog breeder that refused her name and image to be associated with the project, regarding the interview I made of her.

In short, I struggled to stimulate critical thinking through provocation.

10.A.2 The Function of Feeding Critical Reflection

Following the clue given by the *Dog & Bone* project, I now review the literature to reflect on the objective of feeding critical thinking.

The strategy of triggering critical reflection via provocation has been studied by the design scholars Showen and Jeffrey Bardzell. In a first paper from 2012, they forward this approach to be essential to Dunne and Raby’s work.

“In short, critical design proposes an approach to provocation, rather than design as rearranging surface features according to the latest fashion while obfuscating the norms and conventions inscribed in the designs and their use.”¹²

¹² Shaowen Bardzell et al., ‘Critical Design and Critical Theory: The Challenge of Designing for Provocation,’ in *Proceedings of the DIS ’12 Conference* (New York, NY, USA: ACM, 2012), 288–297, 289, doi.org/

In a paper published with coauthors a year later, they highlight one of the explicit intents of such design,

“In short, critical design uses design as a strategy to **cultivate in the public a critical sensibility**, which they [Dunne and Raby] define as follows: ‘The critical sensibility, at its most basic, is simply about not taking things for granted, to question and look beneath the surface. This is not new and is common in other fields; what is new is trying to use design as a tool for doing this.’^{13>>14}

In Anthony Dunne’s own words, the link between these means and ends is indeed primordial. He underlines it in an interview from 2009,

“Things have to be not-quite-right; this awkwardness is a way into the object, an invitation to explain why it is the way it is, why it’s not quite right.”¹⁵

I suggest to understand the previous quotes as attributing a ‘function’ to the practices of designing for debate (in Findeli and Bousbaci’s terms, given in Chapter 1). Dunne and Raby frame this function in terms of ‘cultivating critical sensibility.’

In the current manuscript, I will rather refer to this function in terms of triggering ‘critical reflection’ as a reference to Phoebe Sengers and coauthors’ work on Reflective Design¹⁶ which draws on Critical Theory. Feeding **critical reflection** therefore means to engage people with setting a distance towards something they know, in order to question its overlooked implications (causes and consequences).

10.A.3 Provocation Is a Means Shared by Practitioners

Now that my initial difficulties, and the function attributed to design for debate, has been reframed I review the literature again. I would like to know if other practitioners have used similar means, and have experienced limitations similar to mine.

Using provocation to feed critical reflection is not limited to Dunne and Raby’s work. Such play with ‘disturbance’ appears to be a means shared by Julian Bleeker, Bruce Sterling, and James Auger.

¹³ **Anthony Dunne**, Interpretation, Collaboration, and Critique, interview by Raoul Rickenberg, 2009, dunneandraby.co.uk/content/bydandr/465/0/ (accessed June 2018).

¹⁴ **Jeffrey Bardzell and Shaowen Bardzell**, ‘What Is “Critical” About Critical Design?’, in *Proceedings of CHI ’13 Conference* (New York: ACM, 2013), 3,298, doi.org/ | My emphases.

¹⁵ **Dunne**, Interpretation, Collaboration, and Critique.

¹⁶ While Dunne & Raby, distance their work from the Frankfurt School’s critical theory (in the previously quoted interview from 2009 and in their book from 2013), both Bardzell et. al. and Sengers et. al. stress the connection between critical theory and design. In fact, Dunne’s aim to stimulate ‘critical sensibility’ pretty much corresponds to the definition of critical theory’s stimulation of ‘scepticism.’

In an essay from 2009, Bleecker describes how his practice allows:

“[...] a reflection on the current state of affairs that serves to, as Frederic Jameson describes it, ‘defamiliarize and restructure our experience of our own present’¹⁷. In the context of design fiction, this defamiliarization serves the purpose of **upsetting things in a productive way**, to examine new possible forms, styles and experiences – new rituals and their attendant object materializations.”¹⁸

In a 2011 blog post from wired.com, Sterling observes:

“Design Fiction as she-actually-exists, as exemplified in Dunne + Raby ‘critical design’ or the weirder tech musings in NEXT NATURE, isn’t about world improvement. They are media interventions meant to delicately poise the viewer on **the verge of future shock and moral freakout**. But they’re plenty ‘diegetic’ in the sense that they imply new worlds that surround and support them, so the term still stands [...]”¹⁹

Similarly, in his Ph.D. thesis Auger notes:

“In order to elicit audience engagement and contemplation on a subject, it is sometimes helpful for a speculation **to provoke**. If a design proposal is too familiar it is easily assimilated into the normative progression of products and would pass unnoticed.”²⁰

Within akin terms, Tony Dunne and Fiona Raby, give clues on their means to stimulate reflection and debate in several books, including their latest, *Speculative Everything* from 2013,

“Critical design needs to be closer to the everyday; that’s where its power to **disturb lies**. [...] if it is too weird, it will be dismissed as art, and if too normal, it will be effortlessly assimilated.”²¹

One recurrent strategy can be discerned. It deals with the emotional state of mind of the beholders. I here briefly review the word choices of the different authors.

Dunne talks about ‘disturbing.’ Similarly, Auger employs the term ‘provoke’ which is about causing a sudden reaction, often an unpleasant one. To ‘upset’—as formulated by Bleecker—and to elicit a ‘shock and moral freakout’—in Sterling’s words—push the provocation a step further by working with morals or anger.

Reviewing these different expressions shows how provocation seems to be a shared means to engage people with reflection. But also, it highlights how the vocabulary employed by authors connotes a brutal managing of the viewer’s emotions.

¹⁷ Cited in Bleecker’s text: **Fredric Jameson**, ‘Progress versus Utopia; Or, Can We Imagine the Future?’, *Science Fiction Studies* 9, no. 2 (1982): 147–58, [www/](#)

¹⁸ **Julian Bleecker**, ‘Design Fiction: A Short Essay on Design, Science, Fact and Fiction’ (18 March 2009), 9, [www/](#)

¹⁹ [wired.com/2011/02/design-fiction-diegetic-prototypes/](#)

²⁰ **James H Auger**, ‘Why Robot?: Speculative Design, the Domestication of Technology and the Considered Future’ (Ph.D. Dissertation, Royal College of Art, 2012), 145–150, [www/](#)

²¹ **Anthony Dunne and Fiona Raby**, *Speculative Everything: Design, Fiction, and Social Dreaming* (Cambridge, MA: The MIT Press, 2013), 43.

10.A.4 Limitations of a Misleading Terminology

This idea of provocation was in a way tempting but considering what I wanted to achieve—a thoughtful reflective discussion about a given issue—was it the best strategy?

Other scholars studied the strategy of disturbing an audience as a means to engage them in reflection. However, in the absence of a theoretical background and a methodological clarity to achieve this, they have formulated attempts,²² failures,²³ and critiques.²⁴ This is the case of Bardzell and their coauthors who explain how in their experiment, “both design teams had problems making artifacts that were found to be provocative by participants.”²⁵ They seemed to have encountered difficulties that were opposite to the ones I faced with the *Dog & Bone* project. *Dog & Bone* was too provocative while Bardzell and others’ projects were not found provocative enough. Nonetheless, crafting an overwhelming provocation is a very recurrent case.



Figure 14 | Agi (Agatha) Haines' *Transfiguration* (2013) offers hyper-realist models of infants that have been engineered to survive in a future where health or social conditions are harsher. It intends to feed reflection on, “How far might parents go to give their child an advantage?” And also in the potential future of body modification “what is a valid enough reason to change our bodies?”²⁶ Ai Hasegawa's *I Want to Deliver a Salmon* (2012) asks “would a woman consider incubating and giving birth to an endangered species such as a shark, tuna or dolphin?”²⁷ In a future where food shortage and earth's population are both rising, Hasegawa proposes a video (deleted from the Internet, only a less shocking one is available)²⁸ of a mother, giving birth to a salmon, before seeing it cooked by a chef, and savouring it herself. (Image from aihasegawa.info, before 2014) | Image © Hasigawa and Haines.

22 Simon John Bowen, ‘Crazy Ideas or Creative Probes?: Presenting Critical Artefacts to Stakeholders to Develop Innovative Product Ideas,’ in *Proceedings of the International Conference of the European Academy of Design (EAD)* (Izmir, Turkey, 2007), 17, www/ | Trine Vu, ‘Critical Design as Constructive Provocation,’ (Blog), dcd.dk, Danish Centre for Design Research, *Mind Design* #36, February 2011, dcd.dk/uk/Menu/Update/Webzine/Articles/Critical+Design+as+%C2%ADConstructive+Provocation/ (inaccessible in 2019), link to personal archive: www/

23 Bardzell et al., ‘Critical Design and Critical Theory.

24 Bardzell and Bardzell, ‘What Is “Critical” About Critical Design?’

25 Bardzell et al., ‘Critical Design and Critical Theory. 295.

26 v2.nl/archive/works/transfiguration/ (accessed June 2018).

27 youtube.com/watch?v=PV7sYqocxGw/ (accessed June 2018).

28 The video can be found (but not played) here: bit.ly/deliversalmon (Web archive).

Two straightforward examples that raise the level of provocation to a particularly high level are given, in Figure 14, as illustrations of my previous argument. Their authors, both former students from the RCA Design Interactions programme, demonstrate a very powerful play on the viewer’s emotions, causing revulsion and shock.

The way Bardzell and coauthors reflect on their difficulties actually opens a lead to reframe the notion of provocation. While investigating for evaluation criteria of designing for debate, they give a subtler interpretation of this tactic,

“The concept of provocation is central to characterizations of critical design throughout Dunne’s and Raby’s works. They define a **successfully provocative design as occupying a fecund middle ground.**”²⁹

Once paying attention to this expression, it seems evident that the quotes given earlier call on similar strategies. On the one hand, Dunne and Raby suggest crafting an artefact that is both ‘weird’ and ‘normal.’ Auger too, while aiming to provoke, he warns how the artefacts must also seem ‘familiar.’ On the other hand, Bleecker, proposes to upset things, ‘in a productive way.’ Last, this is in a ‘delicate’ and ‘poised’ manner that Sterling recommends shocking and freaking out the audience. There is, first, a shared attention to craft an ambivalent or an equivocal artefact, and second, a concern for provoking with delicacy, in a ‘poised’ manner. Bardzell and coauthors, in the previous research papers report difficulties to reach, “just the right ‘slight strangeness’ to be productive.” They did not succeed in reaching this level of complexity—because of focusing on the terms provocation, I argue.

Drawing onto other scholars’ experience, I point at a **main limitation pertaining to employing provocation so as to achieve the function of feeding critical reflection.** Mere ‘provocation’ may be a means relevant to specific ends, but in the case of stimulating critical reflection, I suggest that this semantic field is not the most suited to describe, understand, replicate and improve the practices of designing for debate. In addition, these terms seem to be an oversimplified vision of what is actually achieved by the designers with such approach. In short, **provocation is a misleading term regarding the complexity and subtlety of the design tactic at stake.**

In this thesis, I therefore ask: how to describe the way an artefact feeds critical reflection, but not using the ‘provocation’ lexical field?

10.B Prompting Recognition for an Issue Chosen via an Authorial Posture: Facing the Designer's Own Blind Spot?

10.B.1 Difficulties to Elicit the Viewer's Interest Through *Dog & Bone*

The subject on which *Dog & Bone* tried to initiate a reflection is the very definition of being together with regard to interpersonal mediated communication. One of my objectives was to get viewers to recognise the importance of debating these issues for the future of remote social and emotional life. In this regard, in addition to the exhibition, I gave three talks on this project to different audiences where a few spectators either participated in questions and answers sessions or came to chat privately. However, the topics I chose—telepresence, mutual presence, frustration of the imitation of face-to-face communication, etc.—were seldom discussed with the audience, compared to the one of animals and technology.

I met difficulties to elicit viewers' interest on a chosen issue.

10.B.2 The Function of Prompting the Recognition of an Issue

The difficulties I encountered entice to review key works of the literature regarding the way designers choose issues.

Clues can be found in a special issue of the *Design Issues* research journal from 2018, which was initially an academic conference workshop from 2016.³⁰ The special issue was dedicated to how design may “creat[e] awareness for political issues and as part of social processes.”³¹ This is what Carl DiSalvo phrases, in his 2012 book *Adversarial Design*, as the way design is able “to prompt recognition of political issues.”³² DiSalvo stresses how the issues addressed by design may not seem *political* at first, “In fact, revealing and articulating the contestable aspects of situations often perceived as non-political is a central goal of agonism.”³³ In a 2009 paper the author also underlines how design for debate contributes to ‘prompting awareness of and reflection on’ under-discussed issues.³⁴ The relation set between the under-discussed issues and the audiences is framed in various terms, depending on the authors. Dunne and Raby talk about “exposing assumptions.”³⁵

30 Karin Hansson et al., ‘Ting: Making Publics Through Provocation, Conflict and Appropriation,’ in *Proceedings of the 14th Participatory Design Conference: Short Papers, Interactive Exhibitions, Workshops - Volume 2*, PDC '16 (New York, NY, USA: ACM, 2016), 109–110, [doi.org/](#)

31 “The idea of design as provocation – creating awareness for political issues and as part of social processes – has come to prominence especially since the 1990’s (DiSalvo, 2012).” Karin Hansson et al., ‘Provocation, Conflict, and Appropriation: The Role of the Designer in Making Publics,’ *Design Issues* 34, no. 4 (25 September 2018): 3, [www/](#) | I truncated this extract in the manuscript’s body to avoid the ‘provocation’ formulation, in respect of the argumentation provided earlier.

32 Carl DiSalvo, *Adversarial Design* (Cambridge, MA: The MIT Press, 2012), 13.

33 DiSalvo, *Adversarial Design*, 84.

34 “[P]rompting awareness of and reflection on what might be considered in Dewey’s terms the ‘indirect consequences’ of an issue.” Carl DiSalvo, ‘Design and the Construction of Publics,’ *Design Issues* 25, no. 1 (January 2009): 55, [doi.org/](#)

35 “[W]hat we are interested in more is the idea of thought experiments—imaginative exercises that help us understand something, expose assumptions, and challenge us to think differently about what is possible.” Dunne, *Interpretation, Collaboration, and Critique*, paragraph 39.

In his Ph.D. thesis, James Auger explains that his artefacts attempt “to elicit audience engagement and contemplation on a subject.”³⁶ ‘Audience engagement’ with specific issues is also the phrasing chosen by Tobie Kerridge who dedicated his Ph.D. thesis to public engagement with science.

In short, prompting the recognition of an issue—in other words, audience engagement with chosen issues—is regarded as a key function of designing for debate.

10.B.3 The Authorial Posture is a Means Shared by Practitioners

In *Dog & Bone* I identified a subject that seemed, in my opinion, under-discussed and with which I wanted to engage the audience. This is a kind of approach that the researchers also reported.

In his 2008 paper, Fallman refers to issues identification as a work that,

“[Donald] Schön calls ‘problem-setting,’³⁷ [...] Yet another sign of recognition [of this type of design exploration practices] is the fact that the typical client in this activity area is the researcher’s own research agenda. These projects often are self-initiated.”³⁸

Falman points at one sub-function of design for debate and at one means to achieve it.

First, the sub-function stands within the larger function of prompting recognition of an issue. It is “less about ‘problem-solving’ than ‘problem-finding’ within disciplinary and societal discourse,” according to Ramia Mazé’s Ph.D. thesis.³⁹ This is an observation Matthew Malpass also makes in his 2017 book, which reviews common qualities among various critical design practices.⁴⁰ Here, I rather refer to this sub-function in terms of ‘issues finding’ or issues identification—which are terms that better suit the endeavour of sparking debate.

Second, considering the means to achieve issues finding, Falman underlines the authorial posture of the designer. Designers’ choice of an issue to explore is deliberate. This authorial posture appears in several books of Dunne and Raby within the expression “designer as author.”⁴¹ Seldom information is available on Dunne’s inspirations when coining this expression.

³⁶ Auger, ‘Why Robot?’, 145–150.

³⁷ Referenced in the original quote: Donald A. Schön, ‘Designing as Reflective Conversation with the Materials of a Design Situation,’ *Knowledge-Based Systems, Artificial Intelligence in Design Conference 1991*, 5, no. 1 (1 March 1992): 3–14, [doi.org/](https://doi.org/10.1016/0950-4230(92)90001-1) | Schön, *The Reflective Practitioner*.

³⁸ Daniel Fallman, ‘The Interaction Design Research Triangle of Design Practice, Design Studies, and Design Exploration,’ *Design Issues* 24, no. 3 (July 2008): 7, [doi.org/](https://doi.org/10.1016/j.di.2008.07.001)

³⁹ Ramia Mazé, ‘Occupying Time: Design, Technology, and the Form of Interaction’ (Ph.D. Dissertation, School of Arts and Communication, Malmö University, Sweden and Department of Interaction and System Design, School of Engineering, Blekinge Institute of Technology, Sweden. Published by Axl Books, Stockholm, 2007).

⁴⁰ Matthew Malpass, *Critical Design in Context: History, Theory, and Practices* (London, New York, NY: Bloomsbury Academic, an imprint of Bloomsbury Publishing, 2017), 88.

⁴¹ Anthony Dunne, *Hertzian Tales: Electronic Products, Aesthetic Experience and Critical Design* (Cambridge, MA: The MIT Press, 2005), 75. | Anthony Dunne and Fiona Raby, *Design Noir* (Basel, London: Springer, Birkhäuser, 2001), 57–65.

The designer as author expression could borrow from that of the philosopher Walter Benjamin “the author as producer”⁴² or that of the artist Joseph Kosuth “the artist as an anthropologist.”⁴³ Despite the blur origins of the expression, Dunne’s rationale for this posture of author is clearly provided. It aims to emancipate designers from their position of respondent to a client’s request. It aims to free designers from the market’s imperatives so as to develop a (self)-critical look on their productions.

Malpass extends the description of this means by drawing on Elizabeth Sanders and Pieter Jan Stappers’s work.⁴⁴ The North American and Dutch design researchers position critical practices of design against other forms of social design (or socially responsible design) because Critical Design, according to Malpass, is “a ‘top-down’ practice where the user is seen as a reactive participant, rather than an active participant in a project.”⁴⁵ Malpass therefore qualifies these practices as “authoring”⁴⁶ ones, or as, “an authoritative form of practice. The designer performs as author and critic.” He continues by describing the role of the author in the identification of an under-discussed issue. These practices are ones, “where a problematic commentary is directed at a user audience to address concerns that may not be overtly apparent, or perhaps may not yet exist, in order to engage and enlist that audience in debate.”⁴⁷

The authoring posture, like the one adopted in the *Dog & Bone* project, is one of the most employed means to achieve the function of issue finding and audience engagement.

10.B.4 The Limitations of the Designer’s Self-Criticality

In the early 2000s, the authorial posture supported by Anthony Dunne was a relevant way to question the role and conventional missions of the industrial designer. But was it a relevant stance to achieve the function of prompting recognition of an under-discussed issue?

The authoring posture (especially, the one adopted within Critical Design projects) has been radically critiqued in the 2009 Ph.D. thesis of Simon Bowen. The British design scholar drew on the critiques made to the Frankfurt School’s Critical Theory,⁴⁸ which has been

⁴² **Walter Benjamin**, ‘L’auteur comme producteur, Allocution à l’institut pour l’étude du fascisme à paris, le 27 avril 1934,’ in *Essais sur Brecht*, ed. Rolf Tiedemann and Philippe Ivernel (Paris: La Fabrique, 2003), 122–44, [www/](#)

⁴³ **Joseph Kosuth**, ‘The Artist as Anthropologist, 1975,’ in *Art after Philosophy and after: Collected Writings, 1966–1990* (Cambridge, MA: MIT Press, 1993), 118–119.

⁴⁴ **Elizabeth B.-N. Sanders**, ‘Design Research in 2006,’ *Design Research Quarterly* 1, no. 1 (2006): 1–8 | **Elizabeth B.-N. Sanders and Pieter Jan Stappers**, ‘Co-Creation and the New Landscapes of Design,’ *CoDesign* 4, no. 1 (1 March 2008): 5–18, [doi.org/](#)

⁴⁵ **Malpass**, *Critical Design in Context*, 87.

⁴⁶ **Malpass**, 61.

⁴⁷ **Malpass**, 88. | This quote extract and the previous one are taken from the same page.

⁴⁸ **Max Horkheimer and Theodor W. Adorno**, *Dialectic of Enlightenment*, trans. John Cumming, (New York, NY: The Seabury Press, 1969). | **Craig Calhoun**, *Critical Social Theory: Culture, History, and the Challenge of Difference* (Cambridge, MA: Wiley-Blackwell, 1995). | **Michael Crotty**, ‘Chapter 7: Critical Inquiry: Contemporary Critics and Contemporary Critique,’ in *The Foundations of Social Research: Meaning and Perspective in the Research Process* (London: Sage, 1998), 113–59.

qualified as elitist⁴⁹ and as taking “an intellectually and morally superior position” through tasking itself with the “enlightenment and emancipation” of oppressed subjects.⁵⁰ By arguing that Critical Design is “promoting elitist views of a ‘better world’ that society should aspire towards,”⁵¹ Bowen frames a question similar to the one I asked in this manuscript’s introduction, “‘better’ according to whom?”⁵²

In late 2013, this critique was extended to Speculative and Critical Design (and, to design for debate at large) because the vast majority of these projects is based on authoring postures. A lively online debate started from the online comments thread of the Museum of Modern Art (MoMA)’s website, called Design And Violence.⁵³ The conversation sparked from a dystopian futurist design project presented as a reflection-triggering ‘fiction,’ while actually resembling (and ignoring) the contemporary presents of millions.



Figure 15 | *Republic of Salvation* (2011), part of the *After Agri* project (2010), by former RCA students Michael Burton and Michiko Nitta, explores what happens after the end of agriculture. Here, because of future food shortages the government is forced to implement a strict food-rationing policy. In this future, citizens receive types of food (or nutrients) according to their needs. For instance, an industrial worker’s diet is designed on modified starch, enabling the body to work for longer on fewer nutrients. The project represents (as in the image above) how a worker used his very high sugar secretion rate—which increased sharply in their own saliva because of their starch-based diet—to create an illegal distillery. The project was presented and reviewed on MoMA’s blog by the American design critic John Thackara in December 2013—as a result, fuelling a thread of critical comments.⁵⁴

- 49** The Frankfurt School was mostly critiqued for their approach in formulating critique of society, “not because of the suffering it imposes on some oppressed group but because it fails to satisfy the neurasthenic sensibilities of a cultural elite.” **Raymond Geuss**, *The Idea of a Critical Theory: Habermas and the Frankfurt School* (Cambridge University Press, 1981), 82.
- 50** **Simon John Bowen**, ‘A Critical Artefact Methodology: Using Provocative Conceptual Designs to Foster Human-Centred Innovation,’ (Ph.D. Thesis, Sheffield Hallam University, 2009), 121, www/
- 51** **Simon John Bowen**, ‘Critical Theory and Participatory Design,’ in *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, CHI ’10* (Atlanta, Georgia, USA, 2010), 4.
- 52** **Bowen**, ‘A Critical Artefact Methodology’, 196.
- 53** Starting in October 2013, the MoMA blog regularly published “a wide range of design projects, and concepts that have an ambiguous relationship with violence,” it invited thinkers “to respond to selected design objects and spark a conversation with all readers”—according to the blog ‘About page.’ The blog was led by Paola Antonelli, Jamer Hunt, Kate Carmody and Michelle Millar Fisher, respectively Curator at MoMA, program director at Parsons The New School for Design, Curatorial Assistant, and Exhibition Coordinator at MoMA. Initial bog article: moma.org/interactives/exhibitions/2013/designandviolence/republic-of-salvation-michael-burton-and-michiko-nitta/ (accessed June 2018).
- 54** In case the reader of this thesis is not familiar with these practices and criticisms, we gave an introductory talk to this topic, in French, in the third sessions of the Design Fiction Club seminar. Video: youtu.be/vMM10H1j_E8?t=2008 or designfictionclub.com (accessed Sept 2019).

Taking this project as an example, the MoMA website’s comment thread brought to the light Critical Design as a self-serving and occidental-centred practice, which addresses first-world problems, thereby maintaining the colonial matrix of power.⁵⁵ The critique quickly expanded to design in general, as entitled by the Pakistani design scholar Ahmed Ansari’s talk title, for the occasion of a debate in 2015 at MIT-Boston—*Design must fill current human needs before imagining new futures*. The critique added to others already expressed in the academic community⁵⁶ and was further developed through blog articles,⁵⁷ research papers,⁵⁸ conferences⁵⁹ and as a special issues of the *Design and Culture* journal.⁶⁰

The different threads of critiques can be gathered in 5 groups:⁶¹

- Lack of critical radicalism. These practices are called and described as ‘critical,’ but clearly lack robustness and critical foundation.
- Lack of political commitment. These practices do not take a firm stand against the state of things, nor do they firmly support futures that the state of things makes a priori impossible.
- They maintain the capitalist culture. By using attractive forms of design to convey their messages, these practices maintain market mentality, while claiming to extricate themselves from these constraints as a way to question them.⁶²
- They maintain the discourse of dominant classes and societies. These practices address issues that mainly concern (and give to see) first worlds, white, upper and ‘technologised’ class issues—thereby distracting us from the most pressing issues of our time.⁶³
- These practices are elitist. They claim to engage the general public in social issues, but they do so through elitist means and reach elitist publics alike.

⁵⁵ The critique was strongly fed by many design researchers including the ones that later assembled together as the Decolonising Design group: decolonisingdesign.com/ (accessed 2018).

⁵⁶ **Ramia Mazé**, ‘Critical of What? / Kritiska Mot Vad?’, in *Iaspis Forum on Design and Critical Practice: The Reader*, ed. Magnus Ericson et al. (Stockholm / Berlin: Iaspis / Sternberg Press, 2009), 378–398, www/ | **Carl DiSalvo**, ‘Is There a Post-Critical Design?’ (Moderation of a Feature Discussion, 31 August 2011), bit.ly/BeforeAfterCriticalDesign (accessed June 2018). | **Bardzell and Bardzell**, ‘What Is “Critical” About Critical Design?’ | **Cameron Tonkinwise**, ‘How We Intend to Future: Review of Anthony Dunne and Fiona Raby, *Speculative Everything*,’ *Design Philosophy Papers* 12, no. 2 (1 December 2014): 169–187, doi.org/

⁵⁷ **Luiza Prado de O. Martins and Pedro J. S. Vieira de Oliveira**, ‘Questioning the “Critical” in Speculative & Critical Design,’ Medium, 4 February 2014, bit.ly/questioningSCD. **Pedro J. S. Vieira de Oliveira and Luiza Prado de O. Martins**, ‘Cheat Sheet for a Non- (or Less-) Colonialist Speculative Design,’ Medium, 10 September 2014, bit.ly/cheatSheet_decolo.

⁵⁸ **Danah Abdulla**, ‘A Manifesto of Change or Design Imperialism? A Look at the Purpose of the Social Design Practice,’ in *Proceedings of the 5th STS Italia Conference* (Milan, 2014), www/ | **Pedro J. S. Vieira de Oliveira**, ‘Design at the Earview (2016) doi.org/

⁵⁹ decolonisingdesign.com/intersectionality-malmo-nov-2016/ (Nov 2016). | swissdesignnetwork.ch/symposia/beyond-change/ (March 2018) | dilemmadilemma.ch/ (May 2019).

⁶⁰ **T. Schultz, D. Abdulla, A. Ansari, E. Canli, M. Keshavarz, M. Kiem, L. Prado de O. M., and P. J. S. V. de Oliveira**, ‘What Is at Stake with Decolonizing Design? A Roundtable,’ *Design and Culture* 10, no. 1 (2 January 2018): 81–101, doi.org/

⁶¹ This typology is based on a similar gathering made by James Pierce, in his 2014 Ph.D. thesis.

⁶² This remark is rooted in critiques based on Guy Debord’s and situationists recuperation, and Gramsci’s cultural hegemony.

⁶³ This is rooted in Marxist, intersectional, feminist and decolonial critiques. See for instance, Luiza Prado de O. Martins’s work referenced earlier.

As for the present work's relation to this list, I found myself guilty of these accusations throughout the *Dog & Bone* project. I experienced difficulties to anticipate the audience's point of view, and to realise that animal rights issues will have more potential to be recognised as a matter of concern than issues related to the technological mediation of remote living.

The previous critiques therefore frame the way I would like to move on to different ways of designing. They highlight **the limitations of adopting an authorial posture of issues finding**. Indeed, the five previous threads of critiques indicate how the choice of a debate issue is crucial. The issues chosen by the mainstream of design for debate projects throughout the years drastically **lacked relevance regarding the most pressing issues of contemporary societies, because they were chosen in an authorial self-centred way**. The audience's perception of an issue's relevance is indeed relative to designers' ability to **take in consideration the viewers' standpoint**. Critique through design is therefore subject to the limitations of **the designers own blind spot and lack of self-criticality regarding their privileges**.

In this thesis I therefore ask: how to engage audiences with a chosen under-discussed issue? And how to do this otherwise than by choosing issues in a top-down way? Consequently, an additional question can be raised since the issue chosen will be carried via a design artefact. How to do this? How to make, and how to describe the way discursive designs convey issues?

10.C Reaching Viewers Through Exhibition, Online and Mass Media: Dissemination Means Are Not Suited for Debate?

10.C.1 Difficulties to Have a Proper Debate Through *Dog & Bone*

Dog & Bone's ultimate objective was to initiate a debate with members of the public. For this, I focused on the exhibition context which set an informal dialogue between the pieces exhibited on the topic of animals and technologies. But also, the exhibition format allows the journalists to grasp and relay the subject of the works presented in the public discourse.

At first, I observed that the number of visitors attending the exhibition that featured *Dog & Bone* was, in some respects, comparable to some of the MoMA's exhibitions like *Design and the Elastic Mind* (2008).⁶⁴

I then realised that, despite the high number of exhibition visitors, I did not actually meet anybody. I did not observe people talking with each other. I had the feeling that this setting did not create a situation suitable for debate and did not trigger a specific media coverage on the exhibition's topic (animals and technologies). It was even less the case on the theme of telepresence—via the dissemination means of the mass media or the design exhibition.

10.C.2 The Function of Contributing to Public Discourse and Reaching Audiences

Following the previous observations, I now review the literature to identify how other design researchers phrase an objective similar to the one I pursued—namely, setting a situation favourable to spark debate.

Behind the expression sparking debate, the intent of providing material to journalists so as to contribute to public discourse appears recurrently and explicitly in practitioners' and scholars' writing. According to Kerridge,

“Auger and Loizeau contend that their design brings about a public discussion, and to accomplish this the design is optimised to encourage journalism, as this is assumed to be equivalent to an expanded public debate.”⁶⁵

According to Bruce Sterling,

“Design Fiction as she-actually-exists, as exemplified in Dunne + Raby ‘critical design’ or the weirder tech musings in NEXT NATURE, isn't about world improvement. They are media interventions [...]”⁶⁶.

⁶⁴ MoMA's annual attendance for 2008 was 2.8 million visitors (over 317 open days) according to the Wall Street Journal. In comparison, the *Biennale de Saint-Étienne*, counted 140,000 visitors in 2014 (over 17 days) according to their website. Which respectively gives 8,800 VS 8,200 visitors per day. | bit.ly/stEtienneAttendance, bit.ly/WSJmomaAttendance (web archives).

⁶⁵ Kerridge, 'Designing Debate,' 2015, 39. | Here Kerridge reports Auger and Loizeau's declarations from: Régine Debatty, 'Interview with James Auger,' We Make Money Not Art (Blog), 15 January 2007, we-make-money-not-art.com/interview_with_6/ | My emphases.

⁶⁶ Bruce Sterling, 'Design Fiction: Diegetic Prototypes,' Wired (Blog), 5 February 2011, wired.com/2011/02/design-fiction-diegetic-prototypes/

With time passing,⁶⁷ Anthony Dunne came to consider the exhibition as a media, therefore favourable to the dissemination of their research to a large audience. In an interview from 2009, Dunne observes,

“In fact, museums are very interesting as they are more public than galleries and in some cases, MoMA for example, many thousands of people get to see the work and **it is almost a form of mass media.**”⁶⁸

The previous quotes attribute a function to the practices of designing for debate, the one of contributing to public discourse and ultimately, the one of reaching an audience. That said, what means are used by designers to achieve these functions? Are these means restricted to the one I used—exhibition?

10.C.3 Exhibition, Online and Mass Media are Means Shared by Practitioners

Reviewing the literature may help reply these questions.

Dunne and Raby—who confirm in this quote that reaching viewers is an essential aim of designing for debate practices—list a number of means to reach an audience,

“a 30-minute **presentation** at a design or robot **conference**; objects and supporting material in a **gallery or exhibition**; **an article** in a journal, popular magazine or design book; an Internet forum or **website**. [...] In all forms **the first objective is to engage the audience**⁶⁹ – only then may the viewer have the inclination to investigate the deeper subject or question.”⁷⁰

Rather than being exhaustive, I would like to focus on the **circulation**⁷¹ means that have been the most used by practitioners. For instance, conferences and oral communications have been a means that very often consisted in presenting a body of projects or the overall design approach developed by a practitioner. Talks are given to crowds of peers (designers)⁷² or to non-designers.

⁶⁷ In the interview referenced below, Dunne recalls how Dunne & Raby studio was resolutely against displaying their work in white cube galleries, in their early days. They experimented with several settings (shop windows, cafes, streets, gardens, and so on) and later accepted that galleries constituted ‘reporting spaces’ for research results.

⁶⁸ **Anthony Dunne**, Interpretation, Collaboration, and Critique, interview by Raoul Rickenberg, 2009, dunneandraby.co.uk/content/bydandr/465/0/

⁶⁹ In this quote, Dunne and Raby refer to the aim of reaching viewers in terms of audience engagement ‘with an artefact.’ Please note that my understanding of the term ‘engagement’ rather refers to involving the audience ‘with the issue’ raised by the artefact.

⁷⁰ **Dunne and Raby**, *Speculative Everything*, 202–203. | My emphases

⁷¹ I borrow the term ‘Circulation’ to Tobie Kerridge, who proposed to talk about projects’ dissemination using this term in order to describe encounters “where materials and processes that are unfinished, and where the format of the event is planned and where participation is ostensibly open.” | **Kerridge**, ‘Designing Debate,’ 2015, 157.

⁷² **Design Indaba Conference**, *Sputniko! On Designing Objects That Trigger Debate and Discussion* (Cape Town, 2012), [youtube.com/watch?v=7X2xCbukQMw/](https://www.youtube.com/watch?v=7X2xCbukQMw/) | **z33.be (gallery)**, *Z33 Debates: Designing Futures - Future Thinking with Tobias Revell and Jan Boelen* (Designweek, Milan, 2014), [youtube.com/watch?v=6vd4VZUS5VI/](https://www.youtube.com/watch?v=6vd4VZUS5VI/) | **IXDA Association Interaction Design**, *Tatiana Toutikian - Speculative Needs XOXO*, 2018, vimeo.com/255014348/ (three URLs and the following ones in this page were accessed in June 2018).

This includes the general public (e.g. public engagement with science events) or professionals from related fields (innovation, forecasting, technology, economics and investment, etc.).⁷³

The Web has been used to disseminate projects in several ways, through personal portfolio websites,⁷⁴ through dedicated websites (often impersonating a fictional entity/company),⁷⁵ on video-hosting platforms,⁷⁶ or by featuring the project's visual and textual content on a platform taking as a focus: design,⁷⁷ a specific topic resonating with the project,⁷⁸ or a broader focus like a news website.⁷⁹ That said, using online platforms to showcasing design work is a considerable space that is not at all specific to design for debate.

What is more specific is the use of mass media to disseminate design for debate projects, combined with online media to collect feedback. This approach has particularly been developed through a viral communication strategy. It has been notably used early in the history of these practices,⁸⁰ in a recurrent manner,⁸¹ and it is still a contemporary approach.⁸² It consists of creating a hoax (making it look like the project is not a fiction) and hoping that a journalist, for example, will take the bait—and that a media snowball effect will follow.

Last is the exhibition which has often been taking as a focus societal issue or the design practice itself. According to Kerridge's paper from 2006,

“Exhibitions are seen to be a core activity for speculative designers, conceived as being the final stage of a designer's work, and considered as the settings where the public encounter speculative designs in the flesh, and **where debates happen.**”⁸³

The exhibition is regarded as a standard means to organise the encounter of the public with designs for debate—and to achieve the function of reaching audiences—as I reported in Chapter 1. But, like Kerridge, I doubt it is a relevant setting, ‘where debates happen.’

- 73** World Economic Forum, *Design-Led Speculation on the Future of Technology - Hiromi 'Sputniko!' Ozaki* (Davos, 2018), [youtube.com/watch?v=CnxK2XxD3yg/](https://www.youtube.com/watch?v=CnxK2XxD3yg/) | **La Mandarina de Newton**, *Speculative Design: Lisa Ma (2 / 3)* (Image Science, Design Science Conference, Barcelona, 2013), [youtube.com/watch?v=PI1BGLXuIGI/](https://www.youtube.com/watch?v=PI1BGLXuIGI/)
- 74** automato.farm/ | design-friction.com/ | veronicaranner.com/ | mchrbn.net/ | lewchristine.com/
- 75** thenophone.com/ | socialturkers.com/ | unitedmicrokingdoms.org/
- 76** **objectsolutions.net**, *Morning Panic Pajamas*, 2015, vimeo.com/120526209/ | **Keiichi Matsuda**, *Hyper-Reality*, 2016, vimeo.com/166807261/ | **Ani Liu**, *Grab Them by the *: Mind-Controlled Spermatozoa*, 2017, vimeo.com/216902917/
- 77** designawards.core77.com/2019/speculative-design/ | fastcompany.com/search?q=speculative-products/
- 78** Especially blogs related to new technology like motherboard.vice.com/ or nextnature.net when it was still a blog: bit.ly/nextnatureblog (web archive).
- 79** *Victimless Leather* (2004) by Oron Catts and Ionat Zurr: [nytimes.com/2008/05/13/science/13coat.html/](https://www.nytimes.com/2008/05/13/science/13coat.html/)
- 80** *Audio Tooth Implant* (2001) by Auger-Loizeau: bit.ly/theTimeAudioTooth.
- 81** *Rayfish footwear* (May 2012) by nextNature: bit.ly/dailymailRayfish.
- 82** *Treepex* (Sept 2017) by Treepex: bit.ly/inc-Treepex | *Slaughterbots* (Nov 2017) by autonomousweapons.org: bit.ly/businessinsiderSlaughterB | *Orizon.immo* (Nov 2017) by Greenpeace: bit.ly/UR-greenP.
- 83** **Kerridge**, 'Designing Debate,' 2016, 6.

10.C.4 The Limitations of Dissemination Means

I now look at the limitations reported by scholars regarding the use of the previous means. With this, I reframe my initial understanding of the function of reaching audiences. In particular, I wonder if the means of the exhibition, online and mass media are actually compatible with the endeavour of sparking debate.

Exhibition Limitations

I first review the literature regarding the means that is related to the *Dog & Bone* project—the exhibition.

In proportion to the great number of projects that employ this means, Kerridge’s Ph.D. points out that “accounts of what goes into exhibitions and what happens there are so sparse.”⁸⁴ Especially seldom are the projects assessing how exhibitions actually reach viewers.

In his fieldwork study—the *Material Beliefs* project—Kerridge challenged the common success evaluation criteria of exhibitions. That is, metrics related to visitor numbers and readership figures regarding news items generated by the event.⁸⁵ To stimulate debate, Kerridge experienced different public-facing activities that were complementary to two exhibitions—two workshops a book and a website—which intended to make the project visible to less immediate audiences, compared to exhibitions.⁸⁶ The author also proposes these formats as valid modes of publication regarding public engagement with science.

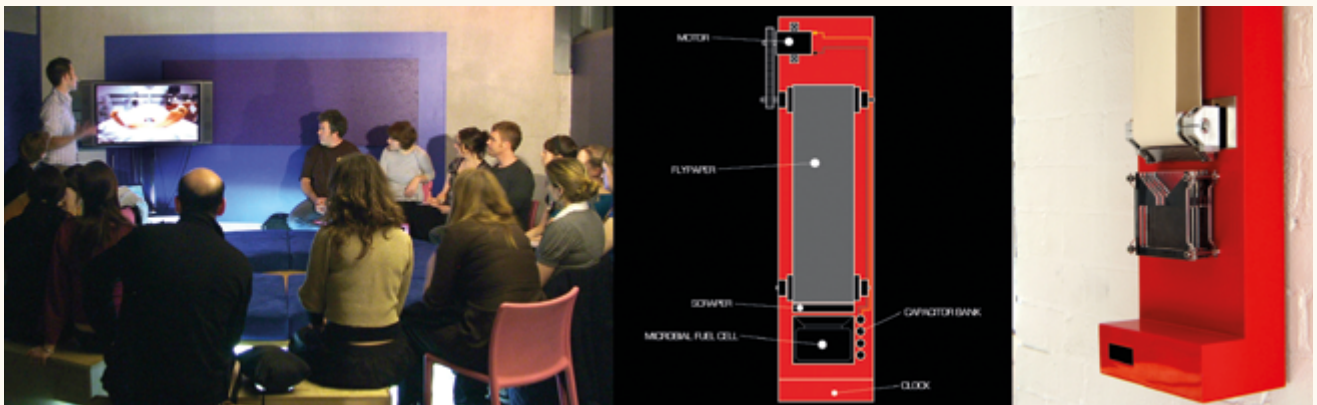


Figure 16 | The *Material Beliefs* project. Left: View of the first public workshop—conducted before the design work has started—with the public, scientists, engineers and designers. It was held on 22nd January 2008 at the Dana Centre, London, and titled “Techno Bodies; Hybrid Life?” | Centre: Schematic view of the *Fly-paper robotic clock* given to see to the public on materialbeliefs.co.uk. It is part of Auger-Loizeau’s *Carnivorous Domestic Entertainment Robots* series (2009). | Right: View of the final design. “This robot uses flypaper on a roller mechanism to entrap insects. As the flypaper passes over a blade, captured insects are scraped into a microbial fuel cell. Electricity is generated to turn the rollers and power a small LCD clock.” Quote and image from: materialbeliefs.co.uk/process/cder.php

⁸⁴ Kerridge, ‘Designing Debate,’ 2015, 172.

⁸⁵ Kerridge, ‘Designing Debate,’ 2015, 146.

⁸⁶ Kerridge, ‘Designing Debate,’ 2015, 104. | *Nowhere/Now/Here* at LABoral in Gijón (Spain) was a contemporary design show about the role of designers in driving cultural change. *Crossing Over* at the Royal Institution in London was a contemporary art exhibition about the way artists rearticulate the characteristics of biomedicine. | The exhibitions were associated with a pair of evening workshops conducted with 20 people organised at the Dana Centre (London). The workshops were part of the centre’s adult training program, which happens to use group discussions based on the *Café Scientifique* format. | According to Kerridge, the book and the website both contained similar material (i.e. interviews with biomedical researchers, the artefacts and exhibition making-of processes, previews of the public events). The book can be downloaded here: materialbeliefs.co.uk/pdfs/materialbeliefs-book.pdf/ (Accessed sept 2018).

Kerridge’s study focuses less on the audience’s experience than on the stakeholders’ and designers.’ He reviewed how the actors of the project perceived the various circulation means employed. He collected feedback of the book’s dissemination, which is reported to have had impacts on design pedagogy contexts. It is also considered by the author himself as the core textual restitution for the project.⁸⁷ The website—while designed to make speculative design’s methods and making processes accessible to the public—seems to have been a useful resource of text and images for journalists, editors and curators.⁸⁸ The two workshops were not organised in the exhibition’s location. They nonetheless allowed the authors of the exhibited design proposals, the scientific partners and the public (visitors to the cultural centre) to meet. At first perceived as a peripheral task, the workshop activity has been empirically considered by some project participants as better-suited for debating and audience engagement.⁸⁹ Finally, the absence of the project’s actors during the exhibition was seen as the major impediment for public engagement and debate, in this setting.⁹⁰ In addition, Kerridge reports a downside of the exhibition format. The curator’s agendas sometimes required transformations of the design artefact.⁹¹

James Auger, involved as a designer within the *Material Beliefs* project, formulates additional and subjective critiques about the exhibition format. In a recent interview I conducted, he reflects on other experiences and evokes how, “[i]n the museum, like at the MoMA exhibition,⁹² the projects were contextually disrupted and impenetrable. It is hard to get tangible feedback, unless curating very actively your own events.”⁹³

Hence, a number of **limitations** could be listed. The most relevant one to my study are that the exhibition tends to **decontextualise the work** and make it impenetrable for visitors. It requires additional efforts (or other formats) to get tangible feedback. Exhibitions—on their own, in their conventional shape—are **a dissemination format, they do not encourage people to meet each other, or to meet the author(s), nor do they encourage debate.**

⁸⁷ Kerridge, ‘Designing Debate,’ 2015, 155.

⁸⁸ Kerridge, 156.

⁸⁹ Kerridge, ‘Designing Debate,’ 2016, 7.

⁹⁰ Kerridge, 7.

⁹¹ Kerridge, ‘Designing Debate,’ 2015, 173.

⁹² *Afterlife* (2001–2009) by Auger–Loizeau, participated to the *Design and the Elastic Mind* exhibition curated by Paola Antonelli in 2008.

⁹³ James Auger, Personal communication, interview at Sully Café, Paris, Nov 17, 2017. | See [Appendix | CH3 | Auger.](#)

Online and Mass Media Limitations

Dog & Bone and the literature on the subject showed me that traditional exhibition format did not fit the goals that I wanted to pursue. I therefore looked into the literature that reports limitations pertaining to other circulation means, so as to be more precise on why I wanted to reach out to people and how.

Considering mass media circulation, in his thesis, James Auger notably reviewed his master degree diploma project developed with Jimmy Loizeau.⁹⁴ The *Audio Tooth Implant* (2001) met important media coverage⁹⁵ and was punctuated by a number of anecdotes that indicate, according to Auger, that the project reached people.⁹⁶



Figure 17 | *Audio Tooth Implant* (2001) | “The Audio Tooth Implant is a radical new concept in personal communication. A miniature audio output device and receiver are implanted into the tooth during routine dental surgery. These offer a form of electronic telepathy as the sound information resonates directly into the consciousness.” | Quote and image from: auger-loizeau.com/projects/toothimplant/

Auger compared the *Audio Tooth Implant* to different projects made with Loizeau throughout the years, and he reports the limitations they encountered. According to Auger, reaching a larger number of viewers through mass media and collecting reactions through the Web often generates ‘superficial and frivolous’⁹⁷ online feedback except when the project reaches niche audiences of experts⁹⁸ (e.g. an art curator’s blog, a scientist’s email). According to Auger’s experiments, quantity does not mean feedback quality.

⁹⁴ The project is a giant plastic-made molar, containing a computer chip, photographed as if it were a life-size tooth. It is affixed with the MIBEC logo making it look like a real product, the *Audio Tooth Implant* a kind of telephone tooth invented by the Micro-In-Body-Electronics-Corporation.

⁹⁵ Auger mentions Wired, CNN, and The Sun (UK) covered the project together with other news reports and magazines in Australia, Canada, and Brazil. He reports The Sun newspaper average daily readership of 7,733,000 people, and the 437 online comments on: slashdot.org/index2.pl?filter=tooth+implant/ (accessed June 2018). | Auger, ‘Why Robot?’, 159.

⁹⁶ Examples: Emails from 2002, accessible in his Ph.D. thesis, testify of people’s alarmist reactions; Auger would still receive investors propositions 10 years after the project’s release. James Auger, personal communication at HEAD university, Geneva, April 12, 2011.

⁹⁷ Auger, ‘Why Robot?’, 231.

⁹⁸ The three comments Auger reports are taken from the blogs of the Principal Design Manager for Microsoft Research in Cambridge, an educator, writer and practitioner in film-making, and a design fiction, HCI and ethnography scholar. | Auger, ‘Why Robot?’, 231–232.

An Unaddressed Work of Mediation

How can mass media circulation means be used to achieve the function of reaching audiences and sparking debate altogether?

Here, I looked at another key project. It does not claim to be an approach to design for debate. Yet, it uses related means, which led it to appear in the *EP / Volume 2: Design Fiction* book.⁹⁹ In this volume, I would like to draw on a paper by Carrie Lambert-Beatty, Professor of History of Art and Architecture at Harvard University, about the Yes Men.¹⁰⁰ It brings material to better understand how the Yes Men's project moved from being an imitation of the Dow Chemicals Company official website¹⁰¹ lost in the World Wide Web, to being a comedian performance live on television's breaking news, two years later. According to Lambert-Betty¹⁰² the work of finding the website, contacting the authors and setting up an interview on live TV was done by a BBC journalist.¹⁰³



Figure 18 | In their hoax entitled *Dow Does the Right Thing* (2002–2004) one of the Yes Men members posed as Dow Chemicals' spokesman, live on the news on American television. He told the BBC that the company accepted full responsibility for the Bhopal disaster (India): the 1983 explosion of a pesticide factory owned by the company. It is reported that the news spread through all media for two hours, the company's share price fell instantly on the stock market. See: theyesmen.org/project/dow-does-right-thing/

Informed by Lambert-Betty's paper, I interviewed design for debate practitioners—Nicolas Nova, his Near Future Lab colleague Fabien Girardin, but also James Auger and his former colleague from the Royal College of Art (London) Elliott P. Montgomery, between the autumn of 2017 and the spring of 2018.

⁹⁹ **Carrie Lambert-Beatty**, 'Believing in Parafiction,' in *Design Fiction*, ed. Alex Coles, EP Vol.2 (Berlin: Sternberg Press, 2016), 69–86.

¹⁰⁰ gor Vamos and Jacques Servin (aka Mike Bonanno and Andy Bichlbaum, aka @TMark, and now aka the Yes Men) are two American artists which have been highly publicised in the internet culture and art world, for a practice called 'Tactical Media.' This term encompasses diverse practices that aim to critique contemporary society through manipulating technology. | **Rita Raley**, *Tactical Media*, Electronic Mediations 28 (Minneapolis: University of Minnesota Press, 2009).

¹⁰¹ This is a strategy the Yes Men call "funhouse-mirror" websites, and the result is what the researcher calls "parafictions" which came to exist as fact on TV, for two hours.

¹⁰² **Carrie Lambert-Beatty**, 'Believing in Parafiction,' 76.

¹⁰³ Employing the exact same means would be harder nowadays, in a fake-news era.

Hereafter, I focus on quotes extracted from Auger’s replies because he gave particularly relevant insights about Auger-Loizeau’s telephonic tooth project (see the full interview in [Appendix | CH3 | Auger](#)).

Auger recalls how the *Audio Tooth Implant* (2001) was presented at the RCA degree show as a graduation project of the Design Interactions MA programme. It won a prize—being exhibited at the Science Museum in London. Auger further explains how,

“The Press Officer of the Science Museum did just a ridiculously good job. [...] For us it was pure luck, to be very honest.”

He adds,

“The evaluation of impact is one of the big problems with this kind of design projects: as a designer, when you finish an object, the project is finished...”¹⁰⁴

In this case, journalists also did the work of publishing about the project, but according to Auger, it is the cultural institution that presented their diploma project (i.e. the curator of the Science Museum’s exhibition) whose work was decisive for its dissemination in the media. The limitation is not about the feasibility of reaching a large number of people. **The limitations related to circulating a design for debate project through mass media, as well as through an exhibition, is the following. It is highly dependent on a third actor in charge of the mediation work.** If this collaboration is non-intentional or chosen by-default, its efficiency depends on luck, the motivation of the third party, their network or relations, and so on.

As to these limitations’ connection with the present research. The *Dog & Bone* project exemplified how the exhibition setting did not entice visitors to discuss with each other. Kerridge and Auger’s feedback corroborate that exhibition, the web and mass media are suited for dissemination, but not for starting the kind of discussions I am looking for. Thus, I would like to reformulate the function attributed to design for debate initially pinpointed throughout my literature review. ‘Contributing to public discourse’ may be seen as one among other elements part of a larger function that is, **‘setting the conditions to reach an audience.’** Within that function, some means are suitable to dissemination within public discourse and others are more suitable to **organise a debate situation**. I am interested in the second type. While waiting to find a better term during my research, I will refer to the conditions set to reach an audience in terms of **a situation in which an artefacts and audiences meet**, or in terms of **the project’s release situation**.

In addition to this last limitations, I wonder if ending the design task once the making of an artefact is complete can be considered as leaving half of the design for debate work unaddressed. I thus ask: how to reach audiences and set a situation favourable to debate? How to do this otherwise than through communication means made for dissemination?

11 DISCUSSION

Setting Two Overarching Hypotheses: Sparking Debate, Choosing a public

My Analysis & Results Section addressed functions of designing for debate that are related to the artefact (and its provocative nature), the issue (and how to choose it), and the circulation means (the setting of a debate situation). I now review two functions related to the audience itself (who composes it) and to the experience of the audience (the actual debating activity). It will be necessary to overcome the limitations related to these functions for the development of my study, and of my practice. My goal is therefore to formulate two hypotheses to achieve this.

11.A 'Inserting' Into Existing Publics May Avoid Aiming at Unidentified Ones

The audience itself is an important component of the design for debate experience. I therefore want to know how to deal with it.

11.A.1 The Function of Prompting a Public to Come Together and its Limitations

One function that can be identified in the literature is interlinked to the one of prompting recognition of an issue, addressed earlier. It is the function of prompting people to come together as a public. Pragmatist thinking and Dewey's work is essential to address this question. In the 1920s, Dewey's positions were opposed to those of Walter Lippmann. The controversy dealt with the management (and the manipulation) of public opinion. Lippman highlighted both the public's incapability to intervene in public affairs as well as the newspaper's dependence on advertising and groups of interests. Dewey agreed with these observations. But he stressed the importance of considering a multitude of publics, and of reforming the press in order to restore the formation and support of their construction. What Dewey calls 'publics' do not magically appear. They construct around a problem when left on their own to deal with it, and when the media relay an issue.¹⁰⁵

Nearly a century later, a highly complex network of media exposes people to an overload of information every day. Design takes part to these mechanisms, as pointed in Chapter 1.

¹⁰⁵ At the time, Lippmann is a 20-year-old journalist and social commentator, close to presidents and elites who believe democracy rules should be written by expert scientists; whereas Dewey is a 60-year-old philosopher from Columbia University who believes scientific knowledge was human-made knowledge. | [Lippmann, *The Phantom Public*](#). | [Dewey, *The Public and Its Problems*](#).

DiSalvo's 2009 paper phrases one of design for debate's functions as artefacts contribution to "prompt publics into being."¹⁰⁶ By allowing publics to construct around an issue, design thereby participates of an object-oriented conception of making democracy.¹⁰⁷

I now ask how do designers attempt to reach audiences in order to stimulate the construction of publics?

Drawing again on Carrie Lambert-Beatty's work allows to understand the rationale behind the use of mass media dissemination means, addressed earlier. She reports how the Yes Men as well, "tend to justify their actions in terms of their effectiveness in 'drawing attention' – they can count more than eight hundred articles worldwide about their prank."¹⁰⁸ This line of argumentation, in favour of a great number of viewers, is recurrent among designers for debate. It was the case in Dunne's quote about the MoMA being a mass media and it is the case in James Auger's Ph.D. thesis,

"We assumed that due to **the extremely large numbers** of individuals reached, a percentage would be induced into contemplating a subject they had not consciously considered before."¹⁰⁹

We saw earlier that a wider media coverage often results in fewer qualitative comments. Hence, why may designers want to reach a large amount of people?

The logic according to which the increasing number of media coverage about an issue increases the presence of that subject in the public agenda is based on the theory of agenda-setting.¹¹⁰ Designers may attempt to be agenda-setters when they try to have their issues massively relayed by the media. To my knowledge, this is not a theory that designers for debate call upon (as few of which are academically linked to the field of Information and Communication Sciences). This theory does, however, give credit to the idea of nurturing media as a way to influence public debate because the media can prompt interest on subjects that a minority of people cares for. They are a way to entice publics formation.

Still, a first **limitation** is related to this kind of construction of publics. **It is hard to control what issues the public will construct upon**, once a project is released in the media.

¹⁰⁶ DiSalvo, 'Design and the Construction of Publics,' 62.

¹⁰⁷ Noortje Marres, 'Issues Spark a Public Into Being. A Key but Often Forgotten Point of the Lippmann-Dewey Debate,' in *Making Things Public: Atmospheres of Democracy*, ed. Peter Weibel and Bruno Latour (ZKM / The MIT Press, 2005), [www/](#) | Noortje Marres, *Material Participation: Technology, the Environment and Everyday Publics* (Basingstoke, Hampshire (UK): Palgrave Macmillan, 2012), [www/](#)

¹⁰⁸ Carrie Lambert-Beatty, 'Believing in Parafiction,' 84.

¹⁰⁹ Auger, 'Why Robot?,' 159.

¹¹⁰ The American pragmatist social scientists Max McCombs and Donald Shaw describe the "ability (of the news media) to influence the importance placed on the topics of the public agenda." Maxwell E. McCombs and Amy Reynolds, 'News Influence on Our Pictures of the World,' in *Media Effects: Advances in Theory and Research*, ed. Jennings Bryant and Dolf Zillmann, 2002 Routledge, NY (Mahwah, N.J.: Lawrence Erlbaum Associates, 1994), 1–18. | The initial study: Maxwell E. McCombs and Donald L. Shaw, 'The Agenda-Setting Function of Mass Media,' *Public Opinion Quarterly* 36, no. 2 (January 1, 1972): 176–87, [www/](#)

Auger specifically reported on this regarding the *Audio Tooth Implant* (2001)'s viral media dissemination where “concepts quickly mutate and facts become embellished,”¹¹¹ he says. While he targeted a debate on the sociocultural impacts of biotechnology, the project eventually became a material supporting conspiracy theory in a YouTube video (about the insertion of spyware-microphones into the teeth of Vietnam's former military personnel).¹¹² This is due to the fact the design piece is open to various interpretations from the viewers (as well as from the journalists and curators).¹¹³

A second limitation is linked to the choice of issues, in a participatory manner. It extends the limitations related to authoring postures. Taking the authoring posture (and especially Simon Bowen's critiques) into account, the *Material Beliefs* team developed a participatory approach to issues finding through two co-creation workshops with several teams of designers, engineers and scientists.¹¹⁴ Participation was reported to bring a trade-off and challenged “designer's control of the representations of a design, and the role of a designer as sole arbiter of the terms of debate.”¹¹⁵ Kerridge also reported how non-designers' point of view benefited the project's complexity. He advocates for the designer loss of control and authorship.¹¹⁶ Nonetheless, the *Material Beliefs* attempt did not solve the limitation pointed from the MoMA's Design and Violence controversy. Actually, on MoMA's website, what appeared as an issue—in the Deweyan sense—that prompted people strongly enough to recognise each other and come together as a ‘public,’ was design for debate's very choices of issues. It was especially the privileged, occidental, white, middle-class, male, mind-sets in which they were chosen. Despite being participatory amongst designers, engineers and scientists, participants to the issues finding process were exclusively experts. Within *Dog & Bone* too, my ability to question the status quo was dependent on my ability to realise I am part of it. Accordingly, Dunne and Raby's ability to question the preferable, probable, plausible and possible (following their recurrent use the Futures Cone diagram, see [Appendix | CH3 | Futures Cone Diagram](#)) is conditioned by their own point of view.

¹¹¹ Auger, ‘Why Robot?,’ 159.

¹¹² youtu.be/CZw1pJ_VspM/

¹¹³ E.g. *Dog & Bone* (2010–2011) ended up juxtaposed to Auger-Loizeau's *Carnivorous Domestic Entertainment Robots* (2009) in an exhibition on animals and technologies in St-Étienne. Notwithstanding, the two projects respectively aimed to spark debate on telecommunication means and on energy production and robots' ethics.

¹¹⁴ Kerridge, ‘Designing Debate,’ 2016. | Two participation postures were analysed: the collaborator was either a provider of material for the designer or a co-author with whom to collaborate during brainstorming sessions.

¹¹⁵ Kerridge, ‘Designing Debate,’ 175.

¹¹⁶ “I have argued that rather than talking about creating debate, designers could admit to a less authoritative and central role, accept the proliferation and indeterminacy of their concepts, and commit to providing an account of this variety.” Kerridge, ‘Designing Debate,’ x.

It is restrained by their ability to realise that the ‘preferable’ worth being debated may “in fact lie outside the plausible, and even outside the possible. Many utopias, as highly preferable, are deliberately implausible.”¹¹⁷ In short, choosing a relevant debate issue is a matter of standpoint, as depicted in the following diagram.

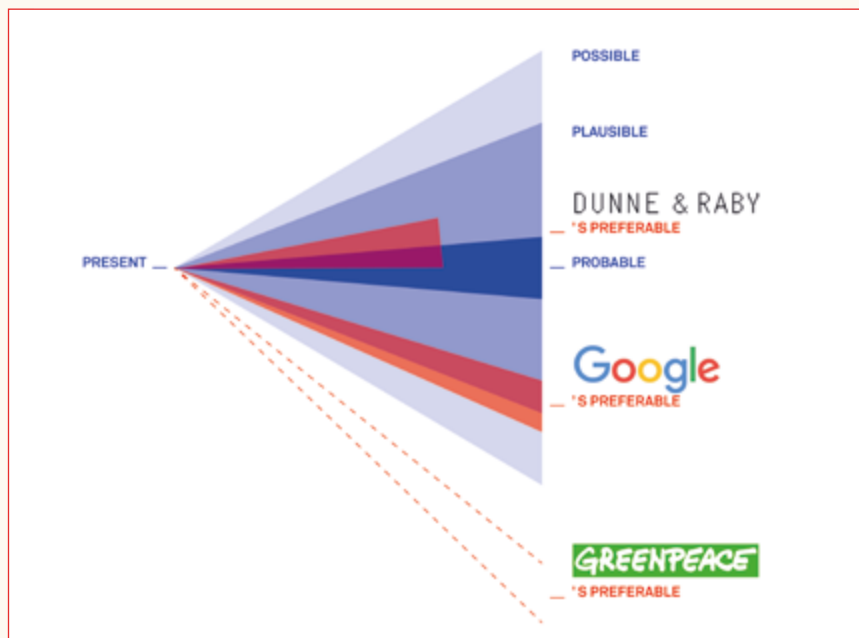


Figure 19 | The Futures Cone Diagram is common in strategic foresight literature. It represents the potential alternatives ahead of us as a series of spaces, more or less drifting from the line continuing the present in a straight direction. Foresight experts use this representation to locate specific visions of ‘preferable futures,’ the one of their clients. They often work to make it acceptable to a larger audience, rather than debatable. Yet, what if the ‘preferable’ is actually invisible from the designer’s point of view? This figure is my reworkd version of the diagram, called *PPPPreferable for whom?* (2017). It is inspired from Dunne and Raby’s version of the futures cone, known as ‘PPPP.’ It was itself inspired by Hancock & Bezold (1994) and Voros (2000).

The controversy opposing Dewey to Lippman is again significant for our matter of concern. In the 1920s, instead of turning to elites and experts to deal with public affairs like Lippman did, Dewey’s reply turned to a defence of the public and of the democratic ideal. A century later, this **separation between elite and the people**, or between **experts and non-experts** seems like an **inevitable limitation** to address, when designing for debate. How do we do this? From now on, in order to tackle this matter of blurring boundaries between so-called ‘official experts’ and ‘profanes,’ I will rather borrow the terms “**issue experts**” to Paris, Sciences Po-based Italian design researchers Tommaso Venturini, Donato Ricci and coauthors. These terms make it possible to refer to “all persons having a relevant experience of a given controversy. By definition, all actors engaged in a controversy are also experts of it.”¹¹⁸

¹¹⁷ Cameron Tonkinwise, ‘How We Intend to Future: Review of Anthony Dunne and Fiona Raby, *Speculative Everything: Design, Fiction, and Social Dreaming*,’ *Design Philosophy Papers* 12, no. 2 (December 1, 2014): 6, [doi.org/](https://doi.org/10.1080/17513758.2014.988888)

¹¹⁸ Tommaso Venturini et al., ‘Designing Controversies and Their Publics,’ *Design Issues* 31, no. 3 (July 1, 2015): 75, [doi.org/](https://doi.org/10.1080/08927614.2015.1055555)

11.A.2 The 'Insertion' Hypothesis Bypasses the Construction of Publics

I will now propose a hypothesis to overcome the three previous limitation, in order to further conduct my research.

It is, first, important to make the difference between participatory approaches and inclusive ones. An inclusive posture includes rather than excludes, from a design process, the needs of people that are sometimes overseen within conventional design processes, because they are too specific or marginal.¹¹⁹ An inclusive approach to design for debate raises two questions.

First, who should look for and decide of a debate issue?

An inclusive approach to designing for debate could follow the work of the Berlin-based Brazilian design researcher Luiza Prado de O. Martins. The author argues for a feminist Speculative and Critical Design and underlines how, “The problem lies in how difficult it is for the privileged to understand their own privilege, for privilege exists precisely because it is invisible to those who benefit from it.”¹²⁰ In order to tackle this in my own research, I turn to the work of Sandra Harding.¹²¹ In the 1960s, the American feminist theorist developed the “standpoint theory” to argue that people from an oppressed class have special access to knowledge, which is not accessible to those from a privileged class. She applied the previous argument to the scientific production of knowledge and suggested that people at the bottom of social hierarchies have a unique perspective that is a better starting point for scholarship. But the argument also applies outside academia and feminism. It stands as a frame from which developing a participatory and inclusive design for debate practice that overcomes the authorial posture. One that makes room for the expression of marginal points of view, which may lie in the blind-spot of stakeholders and designers.

Second, how to achieve this? Do we start from scratch with an unidentified audience? How to prompt the construction of a public that is (or should be) genuinely concerned by (or relevant to) a given under-discussed issue?

Dewey underlines that the public is plural and versatile. Hence, Kerridge relevantly admits that, in an exhibition context for instance,

“it might be more useful to think of publics, as being a series of constituencies coming together in particular settings and also as being an effect of those contexts rather than **an existent entity to be dipped into.**”¹²²

¹¹⁹ John Clarkson et al., eds., *Inclusive Design: Design for the Whole Population* (London: Springer, 2003), doi.org/

¹²⁰ Luiza Prado de Oliveira Martins, 'Privilege and Oppression: Towards a Feminist Speculative Design,' in *Proceedings of DRS Conference* (Umeå, Sweden, 2014), 987, www/

¹²¹ Sandra G Harding, *Whose Science? Whose Knowledge?: Thinking from Women's Lives* (Ithaca (New York): Cornell University Press, 1991).

¹²² Kerridge, 'Designing Debate,' 2015, 157.

Yet, what if the designer could actually ‘dip into’ existing publics? Dewey indeed highlights that publics come together in specific situations, they are (and the issues are) ‘situated.’ In some contexts, publics are pre-established. As phrased by Donato Ricci, “It has to be stated that design interventions are not to be imagined as the only and essential trigger for the formation of the public.”¹²³ Ricci draws onto the Danish design researchers Andreas Birkbak and coauthors to stress how issues are often already in place. In these contexts, the publics are often already ‘busy’—that is, engaged in addressing the issues before any design intervention.¹²⁴ My goal is therefore to find out: how to engage a chosen audience with an issue, while avoiding aiming at an unidentified public constructing from scratch?

For the present research I will combine a feminist and pragmatist approach. **My hypothesis** is that **designers may ‘insert’ themselves into situations where identified audiences are pre-constructed** around matters of concern. It may allow **to get informed of the publics’ standpoint regarding the issues** that matter to them—in a participatory and inclusive manner.

This means that I will work on the field with stakeholders and with the contextual audiences that are already interacting with them on pre-existing topics. Consequently, I suggest to turn away from the function attributed to design for debate of ‘prompting the construction of publics,’ and especially constructing unidentified publics from scratch.¹²⁵ This function can be understood otherwise as the **‘engagement of a chosen audience with an issue.’** It is intimately linked to the function of engaging an audience with a *chosen issue*.

From this, a number of questions arise: how will the author-designer’s point of view still be expressed in an inclusive approach? Is it completely erased? Do they take on the role of editor, curator of points of view, researchers of under-discussed speeches? In short, I ask: how to engage chosen audiences with an issue, otherwise than aiming to prompt an unidentified public into coming together?

¹²³ Donato Ricci, ‘Tensing the Present: An Annotated Anthology of Design Techniques to Inquire into Public Issues,’ *Diseña*, no. 14 (31 January 2019): 68–99, [doi.org/](https://doi.org/10.1080/17513758.2019.1611111)

¹²⁴ Andreas Birkbak, Morten K. Petersen, and Tobias B. Jørgensen, ‘Designing with Publics That Are Already Busy: A Case from Denmark,’ *Design Issues* 34, no. 4 (25 Sept 2018): 8–20, [doi.org/](https://doi.org/10.1080/00140139.2018.1531111)

¹²⁵ That said, it is not excluded that the results of my research find applications for audience construction.

11.B Avoiding Persuasion, from Sparking Debate to Fostering Mutual Contestation

All the functions I reviewed in this chapter are linked to the one of ‘sparking debate,’ that remained an ill-defined expression up to this point.

11.B.1 The Function of Sparking Debate

Debate is ill-defined in the literature because it is one among many other functions attributed to the practices I study. Dunne and Raby recurrently listed these functions while giving a peculiar attention to the one of debate. This is the case in their 2001 book *Design Noir*.

“Critical design is related to haute couture, concept cars, design propaganda, and visions of the future, but its purpose is not to present the dreams of industry, attract new business, anticipate new trends or test the market. Its purpose is to stimulate discussion and debate amongst designers, industry and the public [...].”¹²⁶

It is also ill-defined because, as argued by Kerridge, debate is often associated to the mere encounter of designs and a public.¹²⁷ In contrast, in Chapter 1 I defined debate as referring to the process and outcome of collective contestation—public debate—and to the confrontational nature of mutual contestation—interpersonal debate. Yet, this notion of contestation and the scope of my study can be refined. I now review the literature in search for a theoretical ground through on which to further my study and my practice. I draw on theoretical works from political philosophy that focused essentially on disagreement.

Conflict is a negatively connoted term. For this reason, it is regarded as the symptom of a failure of some kind, which should be avoided to the favour of consensus, at the end of each (personal or collective) human interaction.¹²⁸ Consensus has therefore been privileged for decades by social sciences while conflict was rather interpreted as the start of a dialogue (leading to consensus, the ideal regulator of human interactions). This is the perspective of the German philosopher Jürgen Habermas, one of the best-known representatives of deliberative democracy.

For Habermas, democracy—living together in a horizon of common values—is obtained through deliberation—a public dialogue allowing to resolve conflicts. His idealised practice of argumentation¹²⁹ relies on the committing of participants to overcome their subjective views by justifying their claims with rational and objective arguments, which have to be mutually and subjectively accepted.¹³⁰

¹²⁶ Dunne and Raby, *Design Noir*, 58.

¹²⁷ “[T]he idea of discussion and debate is largely associated with general expectations regarding public encounters of a design.” Kerridge, ‘Designing Debate,’ 2015, 143.

¹²⁸ Ruth Amossy, *Apologie de la polémique*, L’interrogation philosophique (Paris: Presses universitaires de France, 2014), [www/](#)

¹²⁹ Jürgen Habermas, *De l’éthique de la discussion* (Paris: Les Éditions du CERF, 1992).

¹³⁰ Juergen Habermas, *Theory of Communicative Action. Vol. 1: Reason and the Rationalization of Society*, Beacon Press (Boston, MA, 1981).

Habermas is obviously aware that, in reality, consensus is, more often than not, obtained by turning a deaf ear to disagreeing voices and by minimising divergences.¹³¹

Yet, would consensus be actually stronger if parties would reach it by genuinely acknowledging the persistence of real and enduring disagreement? In John Rawls' theory of liberal and pluralistic democracy, the expression of conflict through discourse is not due to subjective personal interests but to the very nature of an open society. In such a society, disagreement is accepted as persistent even after long and reasoned discussions. Rawls therefore promotes the achievement of pluralism through “reasonable disagreement” and “overlapping consensus” as a way out of the binary opposition between agreement and conflict, which is a sign of mutual trust.¹³²

Andrew Knops thwarts the opposition between agreement and conflict by arguing that one can follow the other. For the British lecturer in political sociology from the University of Birmingham, disagreement can be a step before consensus. Thus, they are two complementary facets of the same project.¹³³ He actually sees “agonism as a theory of the moment of difference within a broader deliberative dialectic.”¹³⁴

On the other hand, the harmonisation of agreement and disagreement seems more nuanced for Christian Kock, Professor of Rhetoric at the University of Copenhagen. For him, two types of arguments are to be distinguished as irreconcilable. It is the domain of ‘episteme’—what a discussant considers true and intangible—and the ‘praxis’—of the order of choice, of what to do in a specific practical case.¹³⁵ Christian Kock upholds that mutual understanding, reasoned dispute and consensus is attainable, but not for practical issues that contain strong elements of subjectivity that cannot be ignored. That is why, he says, “even reason people arguing reasonably cannot be expected to reach consensus in the domain of practical reasoning.”¹³⁶

I suggest that design is particularly well positioned to foster debate about praxis (about practical choices) and for praxis (towards the implementation of practical decisions).

A step closer to ‘praxis’ is Jacques Rancière, contemporary French philosopher. For him, conflict is not expressed as much in discourse as in practice. For Rancière, what motivates the need for conflict is at the very heart of politics—this activity of organising human collectives—it is the inequality between people.¹³⁷

131 Marc Angenot, *Dialogues de sourds: traité de rhétorique antilogique* (Paris: Mille et une nuits, 2008).

132 John Rawls, *Political Liberalism*, John Dewey Essays in Philosophy (New York: Columbia University Press, 1996), 137.

133 Andrew Knops, ‘Integrating Agonism With Deliberation: Realising the Benefits,’ *Filozofija i Društvo* 23, no. 4 (2012): 125, doi.org/

134 Knops, ‘Integrating Agonism With Deliberation,’ 153.

135 Christian Kock, ‘Norms of Legitimate Dissensus,’ *Informal Logic* 27, no. 2 (2007): 182, doi.org/

136 Kock, ‘Norms of Legitimate Dissensus,’ 190.

137 About inequality, find an extensive reading of Rancière in: David Schreiber, ‘L’avenir de l’égalité (remarques sur La Mésentente),’ *Labyrinthe* [En ligne], no. 17 (15 April 2004): 13–19, doi.org/

In Rancière’s words, “There is politics because the common is divided.”¹³⁸ In his thinking, aesthetics and politics have in common their ability to disrupt the normal distribution of things and people as an agglomeration of groups (what he calls the distribution of the sensible). Disrupting these modes of perception and belonging is what he calls the redistribution of the sensible.

One way to create this upheaval is through “dissensus.” It is an emancipation process where people take action, upset the order in place imposed on them, and trigger a conflict (litigation).¹³⁹ It is a polemical intervention (e.g. doing a siting to block the entrance of the Wall Street buildings.¹⁴⁰ This inadmissible¹⁴¹ element creates a disorder, a breach in the sensible, in the perceptible, in the established order of things and of ways of thinking. This breach becomes a new scene of enunciation from which to show, hear and value other ways of being in the world—as a third person, a minority, an oppressed person, someone marginalised from the consensus reached between majority groups. Dissent is not to be sought between people who do not agree, but between those who speak and those who don’t (or are not heard). Dissent thus opens up the possibility of equality, it guarantees real pluralism in a democracy that is, by definition, unfinished because it is unequal in the distribution of power and wealth. Rancière’s dissensus¹⁴² horizon is reasonableness and deliberation.

For Chantal Mouffe, it is also necessary to emancipate oneself from consensus. She, as well, proposes a concept called *dissensus*¹⁴³, which is not the opposite of consensus and which is more particularly conducive to situations of debating—which is why I will focus on her concepts. Since Mouffe’s concepts and thinking are foundational and transversal to this study, I would like to introduce them in context.¹⁴⁴ Mouffe is a professor of political theory at Westminster University in London. Neo-Marxist by political affiliation, she is close to far-left parties such as the Podemos movement in Spain and *Les Insoumis* in France (especially during the French presidential elections of 2017).

138 Jacques Rancière, ‘The Thinking of Dissensus: Politics and Aesthetics,’ in *Reading Rancière*, ed. Paul Bowman and Richard Stamp (London; New York: Continuum International Publishing Group Ltd, 2011), 1.

139 Jacques Rancière, *La méésentente: politique et philosophie* (Paris: Galilée, 1995).

140 occupywallst.org/ or settling in an open-air camp in Notre-Dame-des-Landes (France), to prevent the construction of an airport zad.nadir.org/

141 Jacques Rancière, *Et tant pis pour les gens fatigués* (Paris: Éditions Amsterdam, 2009), 187.

142 Rancière introduces the concepts of dissensus, politics, police and the distribution of the sensible (*partage du sensible*) in his theses n° 6, 7 and 8: Jacques Rancière, ‘Ten Theses on Politics,’ in *Dissensus: On Politics and Aesthetics*, trans. Steve Corcoran, 2015, 35–39, www/ | For a brief, clear and broader introduction to Rancière, see: critical-theory.com/who-the-fuck-is-jacques-ranciere/ (accessed June 2018).

143 This concept will now be italicised to make the difference from the common understanding of this word as the opposite of consensus, or between Rancière’s dissensus and Mouffe’s *dissensus*. It has to be noted that Jacques Rancière’s dissensus is similar to Mouffe’s in which it seeks an emancipation from the consensus and from the unquestioned state of order of things and thinking. Its differences is not to be concealed to discourse—it is a situation or action taken by people—and it specifically understands the ‘third’ as a marginal or oppressed voice (or action, or being) to be made hearable and visible.

144 These short biographical facts are taken from bit.ly/leMonde-Mouffe and bit.ly/FranceCultureFM-Mouffe (accessed June 2018).

Married to Ernesto Laclau, the late Argentine philosopher regarded as the theorist of the new left-wing ideas in South-America, she is known internationally for her work on left populism and advocates going beyond the pejorative perception often attached to this term in her book *L'illusion du consensus*.¹⁴⁵

With this background to her theories, she argues that since centre-right and centre-left parties agreed there was no alternative to neoliberalism, the divide between contemporary political ideologies (left-right) faded and led to a “political identity crisis” in Western societies, a condition she calls “post-politics.” What she calls the “political frontier” must be recreated further left, she argues, between populist (the people) politics and neoliberal finance-based capitalism-driven politics (most of other parties).¹⁴⁶

From this perspective, she considers ‘deliberative democracy’—and its principles of reasoned exchange of arguments as the route to an inclusive, rational, universal consensus—as an illusion and as one of the many disguises of hegemony¹⁴⁷ (the domination of the structure of power in place). Consensus is an illusion because it either requires the reaching of an agreement among a majority (thereby implying the hegemony of dominant actors) or the discarding and discrimination of minor visions and actors.¹⁴⁸ There is no consensus without exclusion of a ‘third.’¹⁴⁹ She therefore advocates we must get away from the consensus-obsession that is slowly killing democracy.

As an escape from ‘deliberative democracy,’ she proposes *agonistic pluralism*—a democracy where plurality is insured by a recurrent state of contestation. Mouffe promotes the return of the *agôn logôn* (the contest of speeches), and underlines the respect for the opponent who is not seen as the enemy but as an adversary, a contestant (*agon* in Greek). The philosopher borrows, from the thinker Carl Schmitt,¹⁵⁰ the difference between “*politics*” (living together in a society and the means by which this can be arranged and governed) and the *political* (confronting opinions which is, according to her thinking, an inherent condition to living together).¹⁵¹ She hence proposes the concept of ‘*agonism*’ as a state of forever ongoing (or looping) contestation. An ‘agonistic pluralist democracy’ therefore allows to regularly put to question the immovable power structures between dominants and servants. It implies that established power relations are being avoided or at the very least constantly being taken into account.

145 Chantal Mouffe, *L'illusion du consensus*, trans. Pauline Colonna d'Istria, 2016. | Original in English: Chantal Mouffe, *On the Political*, (London; New York: Routledge, 2005).

146 Chantal Mouffe, *Vive le dissensus !* in Caroline Broué (ed.)'s *La Grande Table*, Radio France Culture, interview by Mathieu Potte-Bonneville, Radio show, 7 April 2016, [www/](#)

147 Ernesto Laclau and Chantal Mouffe, *Hegemony & Socialist Strategy* (London: Verso, 1985).

148 Chantal Mouffe, *Agonistique: penser politiquement le monde*, ed. Eliane Chiron, trans. Denyse Beaulieu, *D'art en questions* (Paris: Beaux-arts de Paris, 2014).

149 Chantal Mouffe, ‘Deliberative Democracy or Agonistic Pluralism?’, *Social Research* 66, no. 3, *Prospects for Democracy* (Fall 1999): 755, [www/](#)

150 She borrows the concept of *the political* from Carl Schmitt. Controversial for his political affiliations, Schmitt was a German jurist (constitutionalist, theorist and professor of law) and philosopher, of Catholic faith. He joined the Nazi party in 1933 and was dismissed from the same party in 1936. | Carl Schmitt, *The Concept of the Political*, trans. George Schwab, 1st German edition from 1932 (New Brunswick, N.J., USA: Rutgers University Press, 1976).

151 Chantal Mouffe, *The Democratic Paradox*, Phronesis (London: Verso, 2000).

In short, **allowing an agonistic relationship to others is to allow the emergence of the ‘political,’ allowing one to contest** and to be an adversary rather than an enemy. Agonism also implies **fostering the questioning, challenging, and reframing of the hegemonies underpinning the state of things.**

Last, in order to define Mouffe’s concept of *dissensus*, I briefly clarify semantic questions relative to the vocabulary I employ. In this manuscript, disagreeing is understood as a feeling of contentious affects and opinions, not yet expressed. Contestation refers to their expression. Dissent or **disagreement** is the state reached once contestation is expressed, which is the discursive expression of conflict, this is the opposite of a consensus. Hence, I understand Mouffe’s *dissensus* as a state of conflict that is reached when something or someone challenges an established consensus—thereby challenging the state of power relations in place. In short, in the present research Mouffe’s concept of *dissensus* **is understood as the disruption of an existing consensus (through discourse), so as to emancipate under-discussed opinions.** Therefore, aiming at dissensus is a stance that necessarily does the work of agonism, because it challenges the established state of things.

As for Mouffe’s work and its resonance with design research, Mouffe’s ideas had a notable influence on art and design as she claimed artists and designers to be especially well-armed for deconstructing contemporary hegemonies and to make these power structures visible to a larger audience.¹⁵²

DiSalvo’s mobilisation of Mouffe’s political theory within Design enables an appreciation of the value of design-triggered conflict and disagreement as essential to construct democracy (a pluralistic agonistic one), and for debate. This thinking was popularised in DiSalvo 2012 seminal book, *Adversarial Design*. In Chapter 1, I presented how the terms Adversarial Design can be used to describe a kind of cultural production that “does the work of agonism,” which, “means that designed objects can function to prompt recognition of political issues and relations, express dissensus, and enable contestational claims and arguments.”¹⁵³ By arousing relations and experiences of contestation and contributing to public discourses, these artefacts’ qualities open spaces for the expression of dissent, for Mouffe’s *dissensus* and for agonistic relations to flourish¹⁵⁴.

Elaborating on Adversarial Design, I want to explore and develop the roles that designers may play to foster agonistic pluralist experiences, debates and democracies. But how to achieve this considering the limitations listed until now in the chapter?

¹⁵² She advocates that in a post-Fordist era—occidental societies are in majority based on service economy saturated with advertising and visual culture—art and design are especially well armed to formulate and circulate forms of contestation. | See for instance: **Chantal Mouffe**, ‘Artistic Activism and Agonistic Spaces,’ *Art & Research* 1, no. 2 (2007): 1–5, [www/](#)

¹⁵³ **DiSalvo**, *Adversarial Design*, 13.

¹⁵⁴ This paragraph draws on **DiSalvo**, *Adversarial Design*, 2, 7 and 125.

11.B.2 Three Limitations Leading to the Function of Enabling Mutual Contestation

In his 2012 book, DiSalvo underlines one of the commitment of the agonistic endeavour, that is, to engage an audience with *contestation*.¹⁵⁵ Yet, I see four ways to understand the term contestation.

The first way to understand ‘contestation’ is public debate and mass protest, which can be expressed through a demonstration, a vote, the massive expression of support for an online video, etc. **Here, the limitations previously listed may apply.**¹⁵⁶

Once media issues set aside, I also understand the notion of contestation in terms of ‘collective contestation’ (regardless of the scale of a local or massive group) as defined in Chapter 1. Such a contestation can be expressed through a company’s union, a neighbourhood petition, or any coalition. Nonetheless, in light of Mouffe’s work on the illusion of consensus, the main **limitation** of a design that would promote coalition and collective contestation would be the tendency of **consensus to marginalise minorities within that group.**

Contestation can be understood at the level of the artefact itself. According to DiSalvo, when design does the work of agonism it, “proffers implicit [disagreeing] judgements” and “prompt[s] debate and serve[s] as a kind of material evidence in political discourse”¹⁵⁷ or in short, the artefact itself can express a form of contestation. For example, the flyer of a demonstration, a website revealing abusive state practices and expenditures in relation to home detention,¹⁵⁸ a bank note annotated with a stamp to convey messages of propaganda and popular revolt,¹⁵⁹ and so on. The use of a design to support a cause, and to influence opinions as an activist, is a widespread objective. But it is sometimes difficult to distinguish the intents of opinion influence, the ones of feeding critical reflection, and the ones of sparking debate. This is the case in this quotation taken from the editorial of the *Design Issues* referenced earlier:

“Speculative and critical design approaches share the idea of design as a way to encourage discussion, rather than being a result of discussion, thus accentuating the designer’s role as an artist or activist for a cause.”¹⁶⁰

¹⁵⁵ The author observes that “Perhaps the most basic purpose of adversarial design is to make these spaces of confrontation and provide resources and opportunities for others to participate in contestation.” DiSalvo, 5.

¹⁵⁶ Reminder: The media used (e.g. online or mass media) to circulate the design project and encourage contestation is often: more suitable for dissemination; a greater amount of media coverage often results in superficial feedback; dissemination depends on a third party; and there is no control over the interpretation made of the project by this third party and the reached public.

¹⁵⁷ DiSalvo, *Adversarial Design*, 13.

¹⁵⁸ See Laura Kurgan and colleagues’ *Million Dollar Blocks* (2008) project, given by DiSalvo: spatial-informationdesignlab.org/projects/million-dollar-blocks/ (accessed July 2018).

¹⁵⁹ John E Sandrock, ‘The Use of Bank Notes as an Instrument of Propaganda, Part I,’ *The Currency Collector* (Personal Website), 2007, thecurrencycollector.com/

¹⁶⁰ Hansson et al., ‘Provocation, Conflict, and Appropriation,’ 4.

Activists definitely want to influence the agenda setting of mass media so that their cause become a widely shared interest. For this, the designer activist could attempt to avoid face the limitations related to taking an authorial posture and working through mass media (by taking an inclusive posture of supporter of the others' voices and through working on a local interpersonal scale). But, knowing the history of disseminating information, with the intention of manipulating opinions (from agitprop to Greenpeace's design fictions hoax evoked in Chapter 1), do we feel comfortable in trying to influence people? Furthermore, this is a counter-intuitive option considering the reviewed literature on agonism and the disruption of consensus. This approach is therefore **limited because it leads to collective contestation and manipulation of opinion**.

Finally, collective contestation can be distinguished from mutual contestation, regardless of the massive or interpersonal scale. It seems that targeting the enabling of mutual disagreement is the option that could avoid the other limitations—the ones pertaining to the massive scale, that of collective consensus, and the issue of persuasion through a contesting artefact. Moreover, mutual contestation is one of the aspects of agonism that is least explored by design research. I therefore propose to understand the sparking debate function in terms of **enabling mutual contestation**.

11.B.3 Hypotheses to Overcome an Unclear Understanding of Sparking Debate

To summarise, in this thesis the term 'debate' does not imply public debate in the press, or a debate on a TV set, for instance. Debate topics addressed are of politic nature (they engage collective questions) and are *political* in the way the debating activity fosters the mutual expression of disagreement. Additionally, the design-driven debate situations that I study may be organised by any actors, without restriction of duration (an hour, several days) or place (a town hall, a fab-lab, a meeting room) as long as they involve the presentation of a design artefact in a situation dedicated to participatory debate. Throughout this section I refined my understanding of the expression 'sparking debate,' which does not imply a massive scale, a collective consensus, or a contestary artefact. This allows me to consider that a design artefact may be able to spark debate while:

- Nurturing an actual (local) interpersonal debating activity—before any attempts to reach a debate at a larger public scale through mass media.
- Enabling mutual disagreement rather than collective contestation—in order to avoid consensus in the group.
- Avoiding to craft artefacts that express disagreement or that intend a form of persuasion—thereby maintaining a boundary between the nurturing of debate and influence of opinion.

These three elements compose my second hypothesis, that will inform my experimental strategy defined in Chapter 4.

A final element can be added. As said earlier, mutual contestation appears to be one of the facets of agonism that is the less explored by design researchers. However, on this point, the practice of design for debate, like that of enabling mutual contestation, suffers from a **theoretical and methodological lack**. This **limitation** has often been raised by scholars. Indeed, Dunne argues that these practices are, “a form of social research to integrate critical aesthetic experience with everyday life.”¹⁶¹ Nonetheless, Bardzell and coauthors concluded their 2012 paper by quoting and replying to Dunne’s affirmation:

“If critical design is a form of design research and not only a form of design practice, then one might expect it to feature a set of described methods and practices that allow others to pursue a similar approach.”¹⁶²

Being a form of social research (e.g. researching how people debate) and a professional design practice (e.g. consulting, citizen assembly facilitation) are two more functions that can be attributed to designing for debate. I will hence try to develop methodological guidelines for social research and for professional design practice.

The research questions that arise from this last development are given in the next pages.

¹⁶¹ Dunne, *Hertzian Tales*, 20 and 147.

¹⁶² Bardzell et al., ‘Critical Design and Critical Theory,’ 289. | This is also a strong criticism made in Tonkinwise’s review of dunne and Raby’s book: **Cameron Tonkinwise**, ‘How We Intend to Future,’ 3.

12

KEY LEARNINGS AND RESEARCH QUESTIONS

Six Steps to Research How to Design for Debate

In this chapter, I was confronted to design difficulties regarding *Dog and Bone*, my first empirical experience to design for debate. It followed the canonical approach that emerged during the 2000s. I wondered: What is *not* covered by my research?¹⁶³

This research will attempt to search for a way out from the limitations of the following paradigm: where a ‘catchy and provocative’ artefact addressing an ‘author-chosen issue’ is circulated through a ‘media made for dissemination,’ so as to prompt the gathering of an ‘unidentified public.’

I have gradually come to be convinced of the need to emancipate this study—and designing for debate practices—from canonical approaches. When reviewing my very first design for debate experience in retrospect, I realised that: I struggled to stimulate critical thinking through provocation; I met difficulties to elicit viewers’ interest on a chosen issue; the exhibition, online and mass media setting did not create a situation suitable for debate. Then, using these difficulties as a pointer to review the literature of related works, I realised that my experience pointed at six functions attributed to design for debate, and to a series of means to achieve them. However, some of these functions needed to be rephrased and the most part of these means implied limitations. Finally, elaborating on these, I have set two main hypotheses. They intent to overcome the listed limitations during my experimental work. Also, I now formulate a list of research questions.

163 This question is inspired by the philosopher of sciences Karl Popper’s critical rationalist approach—i.e. testing indirect scientific statements. It was evoked in his 1959 book, and is also similar to a process essential to designerly approaches, abductive thinking. | **Karl Popper**, *Popper: The Logic of Scientific Discovery*, 1st ed. 1959 (London: Routledge Classics, 2002). | **Jon Kolko**, ‘Abductive Thinking and Sensemaking: The Drivers of Design Synthesis,’ *Design Issues* 26, no. 1 (9 December 2009): 15–28, [doi.org/](#) | These two references were respectively indicated to me by Emmanuel Mahé and Remy Bourganel, which I would like to thank.

Said otherwise, I initially wondered: what should I research about the practising of design for debate? The resulting research questions will be addressed in my six main experimental chapters:

- (CH5) How to describe the way a design for debate artefact unsettles audiences so as to feed critical reflection, but not using the ‘provocation’ lexical field?
- (CH6) How to engage audiences with a chosen under-discussed issue? And how to do this otherwise than by choosing issues in a top-down way?
Also, how to make, and how to describe the way discursive designs convey these issues?
- (CH7) How to enable mutual contestation through design (‘mutual,’ in opposition to collective contestation)? Also, how to employ design for debate as a means for social research?
- (CH8) Same question (how to enable mutual contestation), but also, how to employ design for debate as a means for a professional design practice? What may be design for debate’s inputs for a stakeholder?
- (CH9) How to reach audiences and set a situation favourable to debate? How to do this otherwise than through communication means made for dissemination?
- (CH10) How to engage chosen audiences with an issue, otherwise than aiming to prompt an unidentified public into coming together?

The contributions of Chapter 3 to the present research are:

- A list of functions attributed to designing for debate.
- A list of limitation pertaining to existing means of achieving these functions (extracted from a critical review of design research literature).
- A list of research questions.

Please, report to the next page table at anytime during the reading of the thesis to re-contextualise singular chapters within the larger scope of the study. In this table, I summarised my conclusions and the process through which I came to them.

EXTRACTED FROM	FORMER FUNCTIONS Design researchers attempted to use design for debate to: Cultivate critical sensibility	FUNCTIONS I will study how design for debate is used so as to:	THE EXISTING MEANS I WILL AVOID But I will achieve these functions otherwise than via:	LIMITATIONS I avoid these means because:	WILL BE ADDRESSED IN
CH3 | SECTION 09.A	Design researchers attempted to use design for debate to: Cultivate critical sensibility	I will study how design for debate is used so as to: Feed critical reflection	But I will achieve these functions otherwise than via: Open provocation	I avoid these means because: Provocation is a misleading term regarding the complexity and subtlety of the design tactic at stake. It is not the most suited to describe, understand, replicate and improve the practices of designing for debate.	CH5
CH3 | SECTION 09.B	Prompt recognition of an issue	Engage audiences with a chosen issue (Or prompt recognition of an under-discussed issue. Also, convey chosen issues)	Top-down issues choice	Authorial postures of issues finding lack relevance regarding the most pressing issues of contemporary societies. They are subject to the designers' own blind-spot regarding their privileges. Relevance is relative to designers' ability to take in consideration the viewers' standpoint.	CH6
CH3 | SECTION 10.B	Spark debate	Enable mutual contestation (Also, being a form of social research and a form of professional design practice)	Collective contestation, Persuasive artefacts	Persuasive artefacts that express disagreement are close to opinion manipulation and lead to collective contestation (rather than mutual contestation). They foster consensus in the group, which marginalises minority opinions.	CH7+8
CH3 | SECTION 09.C	Contribute to public discourse	Reach audiences (Set a situation favourable to debate, with the audiences)	Media made for dissemination, Public debate	The exhibition tends to decontextualise the work and make it impenetrable for the visitors. Viral web dissemination often generates superficial and frivolous online feedback. They are dissemination formats that does not encourage the audience to meet people and debate. They are highly dependent on a third actor in charge of the mediation work that is not addressed by the designer.	CH9
CH3 | SECTION 10.A	Prompt a public into being	Engage chosen audience with an issue	Aiming at the construction of an unidentified public, Public debate	It is hard to control what issues the public (including curators or journalists) will construct upon. When combined to an authorial posture, the previous limitations apply and an elitist separation is made between experts and non-experts.	CH10
CH3 | SECTION 10.A+B	<ul style="list-style-type: none"> • Spark debate • Prompt a public into being 	<ul style="list-style-type: none"> • Enable mutual contestation • Engage chosen audience with an issue 	<ul style="list-style-type: none"> • Persuasive artefacts • Unidentified public construction 	<ul style="list-style-type: none"> • See above • See above 	ALL CHAPTERS

Table 1 | Table of functions attributed to design for debate, in the literature; of existing means to implement these functions; and of their limitations. Chapter 3 brings us to this table by formulating a methodological critique of "provocation" (inspired by Bardzell and Bardzell); an intersectional and decolonial critique of the privileges of designers (originally formulated by the Decolonising Design group, Tonkinwise and many academics); a critique of the construction of "publics" and the manipulation of opinions (taking DiSalvo's work, among others, as an example); and a critique of exhibition as a medium for the diffusion of design (developed from Kerridge's work).

« [Les critiques formulées à l'égard du design pour débattre font valoir que cette pratique] semble souvent radicale, mais se fait plutôt passer pour radicale en raison de la violence et du choc que suscite la proposition faite par les designers [...]. Le débat s'est fait l'écho des chercheurs en design qui ont critiqué le manque d'engagement du design critique à l'égard de tout discours au-delà de l'art et du design. Et de la façon dont, dans la pratique, les designers s'adressent pour la plupart à eux-mêmes et à leurs pairs et ne parviennent souvent pas à cerner la source des problèmes et, à la place, ils projettent des conséquences fictionnelles sophistiquées. »

“[Critiques made to design for debate argue that it] often appears radical, but simply maybe masquerading as radical because of the violence and shock in the proposition that the designers make [...]. The debate echoed design scholars who have targeted critique at critical design's lack of engagement with discourse beyond art and design and how in within the practice designers are for the most part talking to themselves and peers and often fail to engage the root of problems and rather elaborately project fictional consequence.”¹⁶⁴

— Matthew Malpass

CH4 *STRATEGY, METHODOLOGY* **Stepping into Fields of Tensions**

Informed by the literature review of Chapter 3, I now present the criteria that led me to choose specific terrains of investigation. I then describe my research methodology for data generation and interpretation. I notably outline the means used to make sense of the ‘designerly’ nature of my fieldwork.

13 STRATEGY Selecting Terrains Suitable for Debate

Thanks to Chapter 3's review of the literature, I now refine my overall research question and my specific research object.

Agonism, as the central concept of my enquiry, is a human experience (to understand), before being a design problem (to solve). The phenomena I study in relation to this concept are hence mutual contestation and critical reflection. I want to contribute to the intelligibility and understanding of the experience of opposing the opinions of others in response to a design artefact, and the experience of designing such artefacts. I therefore ask: *how can a design artefact may be used to deliberately engage people with (mutual) contestation situations and debate?*

Below, I detail how I chose the relevant terrains in which to address this question.

13.A Terrain's Relevance to the Research Object

A key step of project-grounded research is to set the context in which relevant projects may start. Throughout Chapter 3, I have learnt from the limitations met by other design researchers and I formulated hypotheses and questions. I now take them as conditions to define my experimental work. I thus aim to find project situations that enable:

- Starting an actual (local) interpersonal debating activity (before any attempts to reach a larger public scale).
- Joining publics that are already busy, or concerned by latent issues (in order to avoid choosing debate issues and constructing unidentified publics within an authorial posture).¹
- Collaborating with these people to create the artefact and the debate situation.

I found three situations that seemed to meet these criteria.

First, INRA (*Institut National de la Recherche Agronomique*) the National Institute of Agronomic Research, is a French agricultural research organisation founded in 1946. Their website describes it as the first agricultural research institute in Europe and the second in the world in terms of the number of publications in agricultural sciences and plant and animal sciences. It was created in 1946, after the Second World War as the food shortage spread across the country. In 2014, I met three people, Muriel Mambrini-Doudet, the former head of one of the INRA research campuses surrounding Paris and Corinne Cotinot and Claire Rogel-Gaillard, the heads of one of INRA research departments. They became the stakeholders of three of my projects. According to them, scientists, their research topics, their funding, and their communication practices (and personal memories) had been affected by the GMO citizen outcry of the 2000s. While critical reflection was not a new practice to them, they emphasised the fact researchers need more time to pause and debate about the potential future consequences of their own research.

¹ Birkbak, Petersen, and Jørgensen, 'Designing with Publics That Are Already Busy.'

The future application and implications of recent technological advances—such as predictive algorithms and DNA microbiology—were proposed by the stakeholders as debatable matters of concern. Within this context, along the years, we developed three projects together.² Participatory debates were organised with the stakeholders (location, participants, etc.), and scientists were available, on their workplace in the research campus to provide information and assistance.

Second, *Espace Éthique* (which can be translated as the ‘space for ethical reflection’) is an independent ethics commission dedicated to addressing health-related issues. It stands as a think-tank, a conference organiser and a pedagogic programme. Their main mission is to serve as community managers, and to deliver knowledge on good practices, between scientists, professionals and users of the health-care system. The Commission was founded in 1995 in the St-Louis Hospital in Paris, by the actual Director of the commission. I spent a year-long ‘design residency’ at the hospital, as part of the commission’s team.

A first debate topic was suggested on Motor Neuron Diseases. A second one was technological advances in the health sector, including DNA analysis and disease prediction algorithms. Debate could take place among their usual activities (internal meetings, expert meetings, public seminar, annual conferences) and be disseminated throughout their publication means (research journal, booklet, official Website, etc.). The commission members and their audience made themselves available to establish punctual collaborations.

In this context, we finally conducted four consecutive design projects. The first one was organised at the heart of the Commission annual conference in Nantes (France). Then, they organised a series of participatory debates in their offices, three months in a row.³

While these two fields complied with most of my research criteria, I found that I wanted to offer a counterpoint to my study. I attempted to experiment a larger audience on a wider range of subjects. My last experimental situation therefore focused on the French presidential elections of 2017. I was not able to create a collaboration setting with actual candidates. Instead, their election programmes proved to be very suited to inform the design process. The publics were vast and unidentified, but they were already constructed and active around specific issues relayed in the national news. Hence, a participatory debate was organised in a public venue, before the final round of the elections opposing an extreme-right candidate (Marine Le Pen) to the current president (Emmanuel Macron).⁴

² These projects were developed in 2014, 2016 and 2017. Two of them, named *OneHealth* (2015) and *#Hack.My.Cafeteria* (2017), are addressed in my chapters 9 and 10.

³ These four different projects (and four debates) were developed in September, October, November and December 2015. Two of them are presented in the manuscript: *L'Éphéméride* (chapters 5 to 8); and *Epicure.app* (chapters 9 and 10).

⁴ This project, named *Politique-Fiction.fr / Présidentielles* (2017), is addressed in the chapters 9 and 10.

These three fieldwork contexts met, in different ways, the experimental criteria that I undertook to follow. They therefore had every chance to allow relevant design projects to emerge.

In total, I developed a series of ten projects between November 2014 and June 2018. I selected and analyse five of these projects in this dissertation. Two of them were developed with INRA, two were developed with the Commission and the last is a self-initiated one, related to the elections.

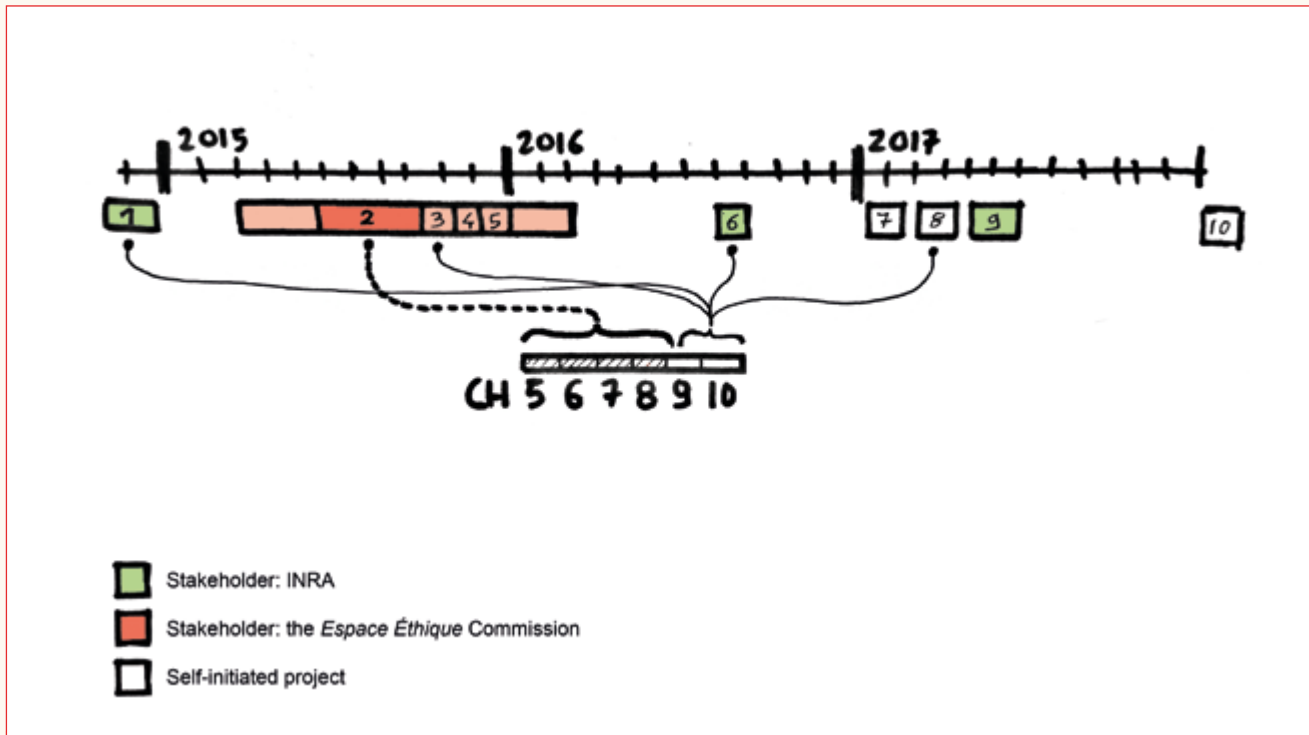


Figure 20 | Timeline and list of the 10 projects I developed for my research between Nov. 2014 (start of the Ph.D. third year) and June 2018. (Greyed projects are not analysed in this dissertation.):

1. *OneHealth* (Oct. 2014) with the INRA agronomy research lab
2. *L'Éphéméride* (Sept. 2015) with the *Espace Éthique* Commission
3. *Épicure.app* (Oct. 2015) with *Espace Éthique*
4. *MonConseiller & MaPharmacie* (Nov. 2015) *Espace Éthique*
5. *Google Groom* (Dec. 2015) with *Espace Éthique*
6. *#Hack.My.Cafeteria* (2016) with INRA
7. *Enough is Enough! – On en A-gro !* (2017) with INRA
8. *Politique-Fiction.fr / Présidentielles* (2017) (self-initiated)
9. *Politique-Fiction.fr / Nos voix/es 2* (2017) (self-initiated)
10. *Crisprfood.eu* (2018) (self-initiated)

13.B Articulation Between Empirical and Analytical Work

Design projects are a key component of my research strategy. Yet, as Findeli recalls in his 2015 paper, “The doctoral student should remember that in project-grounded research, they wear two hats: that of designer and that of researcher.”⁵ Dealing with these two hats is a complex enterprise because it requires to answer different imperatives. The project often implies a ‘client–designer–end-user’ relation in which research ‘limitations’ are not seen positively and are rather synonymous of project ‘failure.’ By answering these imperatives, designers may get carried away with design practice—losing research objectives from sight. I therefore ask, along my projects, how to avoid being carried away with practice? How to guarantee that the empirical work actually contributes to the analytical one?

A way to answer this is to draw on Wendy Mackay and Anne-Laure Fayard’s 1997 article.⁶ The authors presented Human Computer Interaction (HCI) research as appropriately positioned at the intersection of the disciplines enquiring into the natural and the artificial worlds. The authors offer the following diagram:

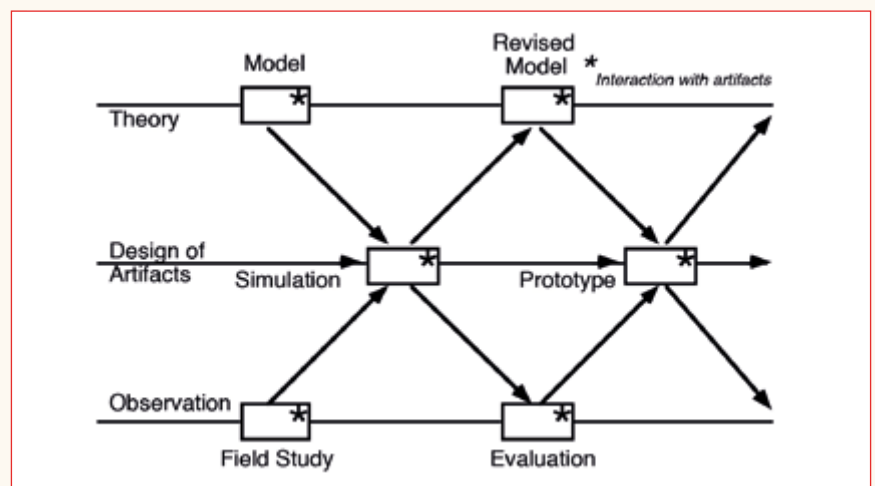


Figure 21 | This diagram explains how HCI artefacts (middle line) can inform and be informed by empirical observation (bottom line) and theory (top line).

Although the article originally applies to HCI and draws a questionable opposition between the natural and the artificial, the diagram is particularly useful to the question at stake. It makes it possible to visually position the contributions of a research project to the fields of theory (indicated on the upper line), observation (lower line), and design creation (middle line). The diagram is also useful as a methodological basis to plan the most suitable trajectories to take between the three levels. It also allows to visualise strategies in retrospect.

This diagram is sometimes used for such purposes and transformed by design researchers to better suit their research process.

⁵ Findeli, ‘La recherche-projet en design et la question de la question de recherche,’ 56. | Findeli adds this precision in the 2015 French translation of his 2010 paper. My translation from French.

⁶ Wendy E. Mackay and Anne-Laure Fayard, ‘HCI, Natural Science and Design: A Framework for Triangulation Across Disciplines,’ in *Proceedings of DIS ’97 Conference* (Amsterdam, The Netherlands. ACM Press, 1997), 223–34, doi.org/

This is the case of the Paris-based HCI researcher Samuel Huron who split the “Design of Artifacts” line in two to make a distinction between ideation and implementation phases.⁷

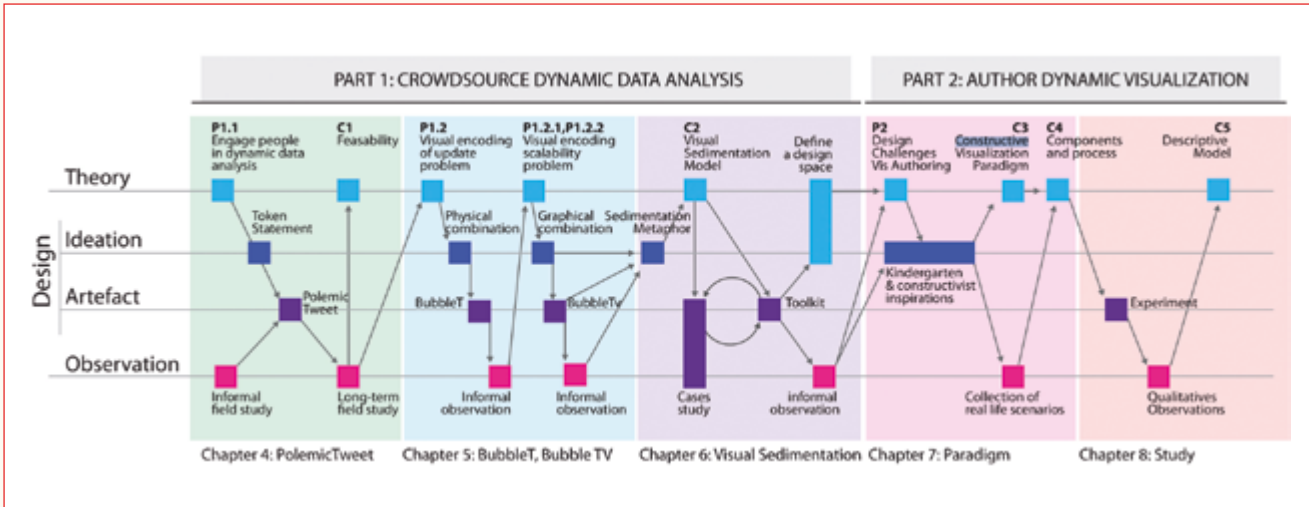


Figure 22 | Overview of Huron's research trajectory, through a modified version of the MacKay and Fayard diagram. Each step in the research is represented by a square.

Following my pragmatist positioning described in Chapter 2, I propose a different modification of MacKay and Fayard's diagram—splitting the “Observation” line into two. This makes a distinction between ‘laboratory’ and ‘field’ observations. It also stresses the difference pointed by Koskinen and coauthors, between forms of research through design, conducted “from the lab” or “from the field.”⁸

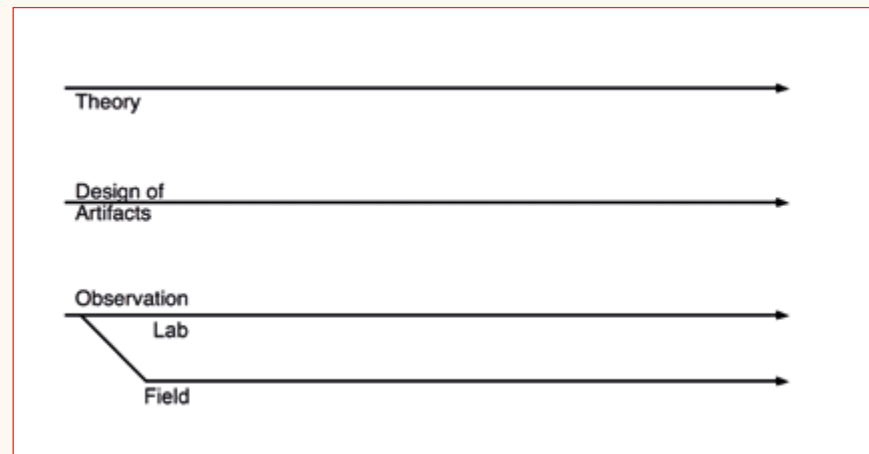


Figure 23 | These lines represent different planes on which research can deliver contributions. From top to bottom: theory, artefact, and observation (laboratory conditions or field conditions).

Elaborating on Mackay, Fayard and Huron, I use the previous diagram in an attempt to tackle the complex articulation of empirical work with theoretical reflection. I especially organised my experiments along a series of iterations. These cycles of empirical and analytical phases allowed to step back from practice. It allowed to move back and forth among different types of work (and different lines on the diagram).

⁷ Samuel Huron, 'Constructive Visualization: A Token-Based Paradigm Allowing to Assemble Dynamic Visual Representation for Non-Experts.' (Ph.D. Dissertation, University Paris-Saclay, Paris Sud, Paris XI, INRIA, 2015), 9, [www/](#)

⁸ Koskinen et al., *Design Research Through Practice*.

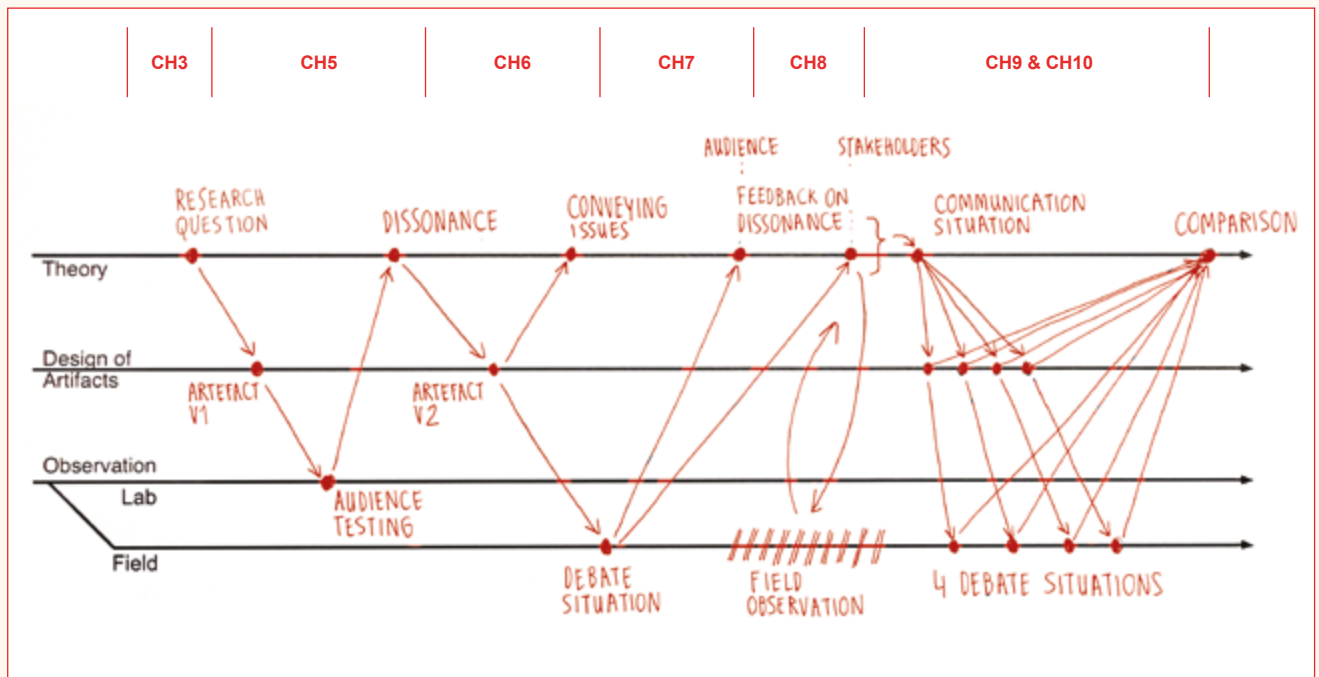


Figure 24 | Overview of my research trajectory between analytical work (theory), empirical work (artefact), and observation (lab observation and field observation).

Above is the content organisation of my upcoming experimental chapters. I use the following diagram to describe the paths taken between empirical and theoretical work. **Chapter 3** left me with a series of six research question (top-line). I hence addressed my first four questions through the chapters 5 to 8, built on the same design project called (*L'Éphéméride*, 2015), developed within a year-long 'design residency' at the *Espace Éthique* office.

Experiments on dissonance:

Chapter 5: I here explore how artefacts unsettle publics. I hence present the design of a first prototype (middle-line of the diagram), the feedback collected (bottom line), and the conceptual clarifications it provided (top-line of the diagram).

Chapter 6: I then question how artefacts convey chosen issues towards audiences. I thus start from the previous conceptual clarification to progress through the making of a final artefact (not yet tested at this point), eventually reaching back to theory.

Chapter 7: I also look at my final artefact, put in an observation situation (a participatory debate). This way, I draw theoretical contributions (including methodological learnings) on how to enable mutual contestation so as to foster debate and as a means of social research.

Chapter 8: In addition to social research, I look at the project as a professional design practice. I draw theoretical insights from the same observation data (bottom line), to which I add longitudinal observations of the stakeholder's practices—made prior to, and after our collaboration.

Experiments on the communication situation:⁹

CH 9 & 10: I finally address my last two questions about the ways to reach and to engage chosen audiences with issues. Here, I collect from my fieldwork and I compare four projects to examine the situations in which artefacts and publics meet. The comparison process delivers theoretical and methodological contributions.

⁹ The concepts of 'dissonance' and 'communication situation' are introduced in chapters 5 and 8.

14 METHODOLOGY A Set of Methods to Tackles the Terrains' Complexity

14.A A Systemic Approach for Data Generation, Interpretation and Restitution

Design residency is the way I term one of my main approaches for data collection and generation.

I understand the design residency as the immersion of a designer in life situations so as to meet people (end-users, stakeholders, audiences), letting emerge design project opportunities, and conducting them (often) in a participatory way. Akin to action-research, the designer takes part in people's activities in order to contribute to their goals, often (but not necessarily, at first) through a design project. The length and conditions of the residency is chosen with the stakeholder (when relevant). Residencies can be extremely short and extremely intense—it draws on the RAID (*Recherche Action Immersion Design*) format developed in the *Cité du Design*, Saint-Étienne (France).¹⁰ Nevertheless, 'longitudinal residency studies' may allow a better integration of the designer in the field. The immersive nature of the residency entices the practitioner to become a full part of the terrain's activities and its network of relations (e.g. as an activist, as a team member, as a friend). Hence, the researcher's departure from the field may have an impact on the observation situation. Accounting for this impact may be as important as conducting and analysing design projects.

I conducted all my projects within this format (except with the self-initiated one, related to the French elections). Two short residencies with INRA and a year-long longitudinal residency with *Espace Éthique* are reported in this thesis.¹¹

¹⁰ “Based on a presupposition, an intuition (sometimes erroneous, always to be verified), the research format consists in conducting an on-site study to understand its mechanisms and specificities. It is about studying-participating in a social organisation at the heart of its own ecology, using your own tools and resources. Over a period of only a few days of immersion in the explored environment, [akin to a] mini-research-action design research, the RAID gives rise to a production (image, film, device) [...]. The rule of the RAID is to produce the restitution of the study over the same duration as the study itself.” citedudesign.com/fr/la-recherche/230218-module-raid (accessed Oct 2018). | My translation from French.

¹¹ Residency duration of projects conducted with INRA are 1 month (*OneHealth*, 2014) and 1 week (*#Hack.My.Cafeteria*, 2016), presented in chapters 9–10. The projects conducted with the Commission were 1 month- to 4 months-long, part of a year-long residency.

A first question emerges from adopting the design residency approach, as it seems peculiarly relevant to conducting an empirical and pragmatist enquiry. If, from a pragmatic point of view, knowledge is anchored in situation and action, how can we manage the restitution of this knowledge once it is disembodied from the situation? Sensitive to these questions, research communities in design and Human Computer Interaction (HCI) express a growing interest for experimenting with various publication formats (i.e. ones that are more ‘designerly’ than mere text). They manifest the importance to upgrade some of these formats—videos and demos—in academic status.¹² These formats include the submission of both an artefact and an article exhibited at a scientific conference venue,¹³ a video summarising a research,¹⁴ a collection of annotated visuals called the “pictorials,”¹⁵ corpuses of compared pictures called “annotated portfolios”¹⁶ and so on. They address the designerly nature of project-grounded research by innovating on the ways to externalise, and make legible, what the Swedish interaction design researcher Jonas Löfgren calls “intermediary knowledge.”¹⁷ Here, I use the pictorial and annotated portfolio formats—as detailed below.

The second question that stems from employing a design residency approach is: how to cope with the complexity of an overwhelming amount of data generated on a daily basis?

My answer was to organise my methods following the four facets of the design situation I observe. Drawing on my literature review in Chapter 1, I look at: (A) the *artefact* itself and its aesthetic qualities; (B) the project’s *making process*, and its actual use (including its *release situation*); (C) the *issue* chosen for the debate, and the *audiences’ experience* (e.g. reflecting, commenting, debating, etc.); and (D) the *project’s ground* and *outcomes* (see [CH1 | Section 3.C](#)). The methods I used are now listed following these four categories.

- ¹² According to Kia Höök, technical program chair of the CHI 2012 conference: **Kristina Höök**, ‘A Cry for More Tech at CHI!’, *Interactions* 19, no. 2 (2012): 10–11.
- ¹³ **Bruce Brown et al.**, ‘Introduction,’ *Design Issues, Special Issue: Research Through Design: Twenty-First Century Makers and Materialities*, 33, no. 3 (1 July 2017): 1–2, [doi.org/](#) | See also: [researchthroughdesign.org/experiences/](#) (accessed Oct 2018).
- ¹⁴ **Jonas Löfgren**, ‘The Need for Video in Scientific Communication,’ *Interactions* 18, no. 1 (2011): 22–25, [www/](#) | See the “Video Showcase” format: [chi2014.acm.org/authors/video-showcase/](#) | See also: “Video Preview” [chi2013.acm.org/authors/video-previews/](#) (links accessed Oct 2018).
- ¹⁵ **Sabrina Hauser et al.**, ‘DIS 2014 Pictorials,’ Conference Website, DIS 2014, 2014, [dis2014.iat.sfu.ca/index.php/pictorials/](#) (accessed Oct 2018).
- ¹⁶ **John Bowers**, ‘The Logic of Annotated Portfolios: Communicating the Value of “Research Through Design,”’ in *Proceedings of the DIS ’12 Conference* (New York, NY, USA: ACM, 2012), 68–77, [doi.org/](#) | **William W. Gaver and John Bowers**, ‘Annotated Portfolios,’ *Interactions* 19, no. 4 (July 2012): 40–49, [doi.org/](#)
- ¹⁷ **Jonas Löfgren**, ‘Annotated Portfolios and Other Forms of Intermediate-Level Knowledge,’ *Interactions* 20, no. 1 (2013): 30–34, [www/](#)

In order to collect data on (A) *the design artefacts* and (B) their *making process*, I employed three methods:

- *Autoethnography* is a data collection approach which allows to consider all the traces produced during the making of a project as actual pieces of data. It requires sustained attention to document the creation processes.¹⁸
- *Semio-pragmatic analysis* is a data interpretation method which draws on Information and Communication sciences. It allows to analyse the semiotic qualities of an artefact related to a context of interpretation (e.g. a context of dissemination).¹⁹
- *Pictorials* are data-restitution formats that are highly visual. They allow a better retrieval of tacit and empirical knowledge.

In my methodology, autoethnography goes hand-in-hand with the design residency approach. It was used in every project of the study. The collected material include pictures of design prototypes, sketches and quotes from my design research journals, self-audio-recording, pictures, video or audio-recording of working situations. This material directly fed semio-pragmatic analyses and pictorial restitutions. Notably, the semio-pragmatic analysis was extensively used to deconstruct the design choices made when crafting the final artefact of my first experiment (*L'Éphéméride* (2015) in Chapter 6). The pictorials format is used along the dissertation to present each project. It was already used to introduce the *Dog & Bone* (2010–2011) project in Chapter 3.

To analyse (B) the project' *release situation* I used the annotated portfolio format:

- *Annotated portfolios* are data interpretation and restitution formats, allowing to juxtapose and compare a corpus of pictures taken from different projects.

In Chapter 10, I compare four of my design projects. In that case, this method allowed me to contrast not only the design of the artefact, but the design of the situations in which it was released.

¹⁸ **Carolyn Ellis**, *The Ethnographic I: A Methodological Novel about Autoethnography* (Walnut Creek, CA, USA: AltaMira Press, 2003). | For other design ethnographic approaches see **Nicolas Nova**, ed., *Beyond Design Ethnography: How Designers Practice Ethnographic Research* (Berlin / Geneva: SHS / HEAD, 2014), [www/](http://www.head.unige.ch/) | Through a review of case studies and interviews, the book proposes a model of different ethnographic approaches used by practitioners, ranging from independent or corporate designers to ones taking unconventional approaches such as design fiction or unpleasant design. I consider auto-ethnography as another means to move 'beyond design ethnography.'

¹⁹ About semio-pragmatics: **Roger Odin**, *De la fiction* (Bruxelles: De Boeck Université, 2000).

Data was collected on (C) the *debate issue* and the *audiences' experience* (e.g. debating feedback) via three methods. They draw on action-research and ethnography:

- *Participant observation* with videotaping, photography, audio recording, and note taking.
- *Semi-structured, informal interviews* and *questionnaires*.
- *Linguistic data collection*—this method draws on Grounded-Theory²⁰ to analyse the material recorded during debate sessions, using ‘open-coding.’ Open coding allows to come up with statistics regarding recurring terms in conversations.

These means were essentially used to document and analyse the debating sessions fuelled by my artefacts. Yet, while questionnaires and Grounded Theory was appropriate to evaluate the recurrence of agreement and disagreement among debate participants’ feedback, they were not used for each projects. Projects conducted with the Commission were developed and studied over a longer period of time. They hence provided more relevant occasions to use these methods.

Regarding (D) the project’s *ground* and *outcomes*, I examined the stakeholder’s influence on the project and the influence of the project on their practice. For this I drew on action research and ethnographic practices again:

- *Archival and document collection* (focused on documents produced by the stakeholders, such as emails, leaflets, books, website, talks recording, and so on).
- *Semi-structured interviews*, informal interviews, oral histories (one-on-one interviews or dyads).
- *Participant observation*.

Participant observation was a essential to document my main field-work—the year-long design residency.

I had to adjust my approach for each experiment, drawing on this set of methods and according to the facet of the design situation I observe. The description of these adjustments are given in the Aims and Protocol section of each experimental chapter.

²⁰ **Barney G. Glaser and Anselm L. Strauss**, *The Discovery of Grounded Theory: Strategies for Qualitative Research* (Chicago: Aldine, 1967). | **Anselm Strauss and Juliet M. Corbin**, *Grounded Theory in Practice* (Calif. / London: Thousand Oaks / SAGE, 1997). | The Grounded Theory aims to avoid building theories from predetermined assumptions, and rather from field situations. The researcher collects, codes and analyses data in search of repetition patterns—within the ideas, concepts and observed elements. These patterns serve as a basis for the development of a new theory.

14.B Limitations

The present strategy and methodology are limited in a number of ways, starting with my results objectivity. Indeed, in project-grounded research, the quality of a design project is key, but is highly subjective. I tried to counter this limitation by paying attention to the audience and stakeholders' feedback, and I tried working with small teams of practitioners, when possible (the team members are referenced in the 'About the Project' section introducing each pictorial). Then, the generalisability of the data collected and generated is restrained to its observation situation. It is complicated (or impossible) to reproduce the exact same experimental situations, even with the same stakeholder, in the same location. Reliability and generalisability matters are characteristic of action research methodologies. It is indeed less suited to create verifiable 'truths,' than to point at new elements on the horizon of 'possible truths.' These new possibilities are open to further enquiries.

Lastly, there is an ethical issue, especially regarding the experiments taking place with the Commission, *Espace Éthique*, as they play with provocation. The experiments were not framed by an ethics advisory board (which was not compulsory for my type of research in France). The 'design residency' process played a crucial role regarding this matter. It allowed me not to stand as an external observer, or as a temporary participant to the stakeholder activities. Rather, taking the time to be accepted as a member of the field made the experimental process more open to adjustments and redefinitions by all the stakeholders, myself included. Getting to personally know people and their life experience also allowed to get a sense of what is acceptable. In the place of an external advisory board, I got a similar kind of feedback directly from those who are concerned by the experiment. In order to foster this principle, we put in place a collaborative setting with the Commission and with sample members of the audiences. It aimed at validating the relevance of each proposal before to release them in a debate situation.

15

KEY LEARNINGS

Progressively Unfolding the Fieldwork's Complexity

In the present chapter, I reviewed my choice of experimental terrains. They had to allow: the joining of publics that are already constructed and concerned by latent issues; collaborating with these people to create the artefact and the debate situation; and be suited to start interpersonal debating activities.

In response I set relevant fieldwork situations with an agronomic research laboratory (INRA), a medical ethics commission (the *Espace Éthique*), and a self-initiated setting related to major issues in French news (presidential elections).

It seemed important to me to articulate the different roles of the designer and the researcher, once immersed in a project situation. I hence elaborated on my research trajectories to set the content organisation of my upcoming experimental chapters—among theory, design making and observation.

Regarding data generation, interpretation and restitution, I employed an immersive approach (design residency) based on my design practice (auto-ethnography), and various qualitative means drawing on methods pertaining to action research (e.g. participatory observation), ethnography and Information and Communication Sciences (e.g. semiotic analysis).

Finally, in the manner of an anthropological or ethnographic account, I propose to discover the subtleties of my terrains as the chapters unfold. Thus, the dissertation will follow an iterative process because it seems to me able to return the designerly and iterative nature of my experimentations.

Experiments on Dissonance

INTRO

PRESENTATION OF THE FIELDWORK

Experimental Context of CH5–8

In order to gradually unfold the complexity of my fieldwork, I now give details on the fieldwork situation that is common to the four upcoming experiments—Chapters 5, 6, 7 and 8. I then outline the project opportunities that emerged in this context and how I adjusted my research strategy, once taken into account the specificity of the situation.

16 FIELD EXPERIENCE A Year as a Team Member of an Ethics Commission

16.A Design Residency at *Espace Éthique*

As said earlier, my stay at the *Espace Éthique* ethics commission is, chronologically, the second terrain I experienced. Indeed, on February the 10th of 2015, I was introduced to the Commission by Muriel Mambrini-Doudet, which I met as the stakeholder of my first terrain in late 2014, with INRA.¹

16.A.1 The Stakeholder

Espace Éthique is an independent ethics commission at the St-Louis Hospital in Paris. It consists of 9 people including 3 philosophers, 2 sociologists, the Medical Intern, the Director of Public Relations and Communication, 1 person in charge of video documentation and 2 people in charge of the administration (i.e. communication, co-direction).² While this is quite a small team, the Commission activities essentially rely on a very wide network of collaborators.

The *Espace Éthique* concept (which can be translated as a ‘space for ethical reflection’) does not refer to a regulatory institution. It is officially described as a kind of structure that is present in all regions of France and which has been imposed by the bioethics law since 2004, so that hospitals can set up an ethical reflection initiative in the medico-social and health sector. But their mission can also involve research, training and conferences. These structures are less defined by being a physical location than a succession of occasions to meet professionals and citizens involved with ethical reflection and medical concerns. It may be understood as a think-tank, a conference organiser and a pedagogic programme.

The *Espace Éthique* was founded in 1995 by Emmanuel Hirsch, before the 2004 law. Hirsch is still the Director of the Commission. He previously worked to support associations during the early times of the AIDS epidemic in France, and worked as a speaker on national radio. *Espace Éthique* spent more than twenty years discussing and promoting good practices about health-related issues. Initially called the *Espace Éthique de l'Assistance Publique – Hôpitaux de Paris* (Space for Ethical Reflection of the Parisian Hospitals), it was the first *Espace Éthique* created within a public institution, i.e. the St-Louis Hospital in Paris, where its offices are located.

The Parisian structure often plays a particular role within public debates and the French associative, professional, political and media landscape.

¹ Muriel Mambrini-Doudet was the Head of a Research Centre of the National Institute for Agronomic Research (INRA). She is a co-author of diverse works with Léo Coutellec, philosopher and member of *Espace Éthique* to which I have been introduced in February 2015.

² By the end of my one-year residency in their office, part of the team changed and two more positions were created (a trainee and a public relation manager). The team counts three women (co-director, sociologist, secretary).

One of their main goals is to disseminate good practices among different publics.³ As a consequence, they work as much on self-initiated research projects, as on state-commissioned ones (without any juridical power to constrain the law-making processes).

When the bioethics law was applied in 2013, the Parisian model was replicated in several French regions to create a network of *Espaces Éthiques* and the initial one was assigned to the Île-de-France Region (Greater Paris and its surroundings). The Parisian structure (which I will now refer to as, *Espace Éthique*) was also entrusted with the development of an ethical space at the national level, as part of the 2008-12 Alzheimer's Plan, a five-year research plan led by the National Health Ministry. Just before the start of my residency, the Commission has been appointed for a similar mission within the new research plan on Motor Neuron Diseases (MND), running from 2014 to 2019. My first design project and experiments took place with the MND plan and addressed Motor Neuron Diseases related conditions.

16.A.2 A Year of residency, Four Months of Participatory Observation

The two following episodes will give a sense of my experience at *Espace Éthique*.

Being the Interface of Several Worlds

When I arrived on the first day—February the 10th of 2015—I got lost because the office is in a building separated from the actual hospital (and I will explain why this is not so trivial). The offices of *Espace Éthique* are in a magnificent historical building dating back to 1607 (see [Appendix | Intro CH5–8 | The Commission Terrain](#)). This building housed the St-Louis Hospital until it was moved to a neighbouring, much larger and more modern building. The Commission is therefore separated from the hospital but is part of the same campus. The squared building hides a park in its centre. It counts various offices including those of the Commission. In their premises, the largest room, a lecture hall, seems to be the heart of their space. There are then two separate offices for the Director and Co-Director. And, then 3 shared offices. I was invited to join part of the team in the largest open space—we changed places 3 times in 12 months, due to the recruitment of a sociologist and a communication manager.

What struck me when I arrived was the impersonal character of the furniture (glass-box offices, plaster walls, fake wood tables, and plastic chairs) and decoration, in a building so steeped in history. Then I noticed the central park open to patients, workers and city dwellers, and its incredibly calm atmosphere (which is rare in the centre of Paris). The Commission is like this park, away from the hospital, but hidden in its (historical) centre. It is hard to find, but it is nonetheless at the interface of the healthcare communities and the

³ For instance, the commission Director has been very active in online press and government debates in 2014–2016 and 2019, before and after the French government enacted the Claeys-Leonetti law introducing the right to deep and continuous sedation for end-of-life patients. His combative position against the law can be found via the following Internet search request: “Emmanuel+Hirsch+Leonetti” or “Hirsch+Vincent+Lambert.”

rest of the world, which it regularly brings together within its walls via public events. Making this gateway is an assumed mission of the Commission, even if it means addressing issues that are not strictly related to health. As a sad example, during my residency, the second attack on Paris took place in 2017—and in particular two neighbouring restaurants, facing St. Louis Hospital—pushing the Director to speak publicly about these events, as a promoter of ethics, care and democracy; and to affect their program accordingly. I felt as if *Espace Éthique* oscillates between being apart and being a bridge between different worlds of care.

Sharing Methods

The two first teammate I met was the Commission philosophers, Léo Coutellec and Paul-Loup Weild-Dubuc. I met the rest of the team the following week. I quickly got into the habit of coming every day at 9am—following their activities. I was invited to move into a glass-walled office, in plain sight of the other workers. I quickly took possession of the place, reconfigured the furniture, and invested the (impersonally decorated) walls. I started by sticking posters of the project previously carried out with Muriel Mambrini-Doudet and INRA to the wall (see [Intro CH9–10 | Section 38.A](#)). One of these posters, dealing with the ‘prediction of medical diagnosis’ and ‘neurodegenerative diseases,’ had led Muriel to introduce me to the Commission. Working visually—e.g. displaying sketches on the walls—was the first occasion where the Commission and my methods confronted. During the 4 months observation phase (and beyond), I spent time drawing the team, taking pictures of them, producing videos of their events—the photographs were often used by the communication manager on their website. With an increasing recurrence, I was invited to meetings to provide graphic facilitation by brainstorming visually. I continued to (completely) fill the walls of my office with mind mappings and my research. I also brainstormed on the windows with the team and finally surprised them doing the same on their own, a few days later.

On the one hand, the simple confrontation of our methods was already impacting the Commission practices (as detailed in Chapter 8). On the other hand, it was not enough to win the whole team’s trust. Some of my colleagues remained formally against the use of my approach in their activities (at first) because it would disturb their usual methodology. The successful delivery of our first project, called *L’Éphéméride* (Chapters 5–8), changed their minds, and led us to develop three more projects until December 2015.

16.B Project Opportunity

Highlighting the initial disinclination of some of the team members better contextualises why the initial terms of my collaboration with the Commission did not go as planned. At first, we agreed I would spend 2 months of design residency prior to create a specific design piece for one of the Commission experts-workshop. I moved into the Commission offices in February but, the design project did not happen. The ethnographic observation phase lasted 4 months until I officially became part of the team (June 2015).

We developed 4 projects from June to December 2015. I ended the residency in February 2016 and episodically came back to observe the team's activities for another three months. Among the four project opportunities that emerged. The first one, the basis of the four upcoming chapters, is detailed now.

16.B.1 The Audiences, Issues & the Project's Release Situation

The Commission has a recurrent audience which, for the most part, seems to gather around recurrent issues, addressed by *Espace Éthique* throughout the years.

The issues they address include, among others, the end of life, dignity, the work of carers, the Alzheimer disease, and recently the Motor Neuron Diseases. Since the arrival of a new philosopher in the team in 2013, issues related to big data, privacy and algorithmic government are also addressed. We conducted one project on Motor Neuron Diseases and three projects on matters of concern related to health and data.⁴

Espace Éthique disseminates its work through various output. It takes the shape of research articles, books, conferences, seminars, courses and interventions in public media or in the government's hemicycle. Through these media, two of their main activities are, first, to serve as community managers between scientists, professionals and users of the health-care system at large. Second, they provide with recommendations for the concerned communities and the government.

Regarding the National MND Plan—within which my first project opportunity emerged—one of the Commission missions was to organise a yearly conference from 2014 to 2019. This conference is called *Université d'Été* (Summer University) was the setting of my first intervention.

These conferences aimed to build and animate a community composed of diverse audiences, due to the diversity of the six diseases concerned by the Plan. The six national patients' associations representing these diseases were invited to gather regularly in the Commission office in Paris. These associations would relay the invitations to *Espace Éthique*'s events. The audiences attending the Commission events were mainly composed of health professionals and relatives of people with a disease, according to my field observations. The speakers of the conference comprised a large network of politicians, thinkers, scientists, medical experts, and some 'expert-patients.'

Thanks to these events, I met a lot of people who gave me a better understanding of medical and life situations—which I did not experience myself.

⁴ One project addresses issues related to Motor Neuron Diseases. It is called *L'Éphéméride* (Sept. 2015) and is reviewed through chapters 5–8. Three projects were conducted on the implications of prediction algorithms for healthcare. The first one, *Épicure.app* (Oct. 2015), is reviewed in chapters 9–10 among projects developed in other situations.

16.B.2 Stakeholder Request

Project-grounded research, alike research action, transforms (and often improves) the initial situation observed during the fieldwork. It does this according to the stakeholders' aims. Hence, answering the stakeholders' request (e.g. a problem to solve) is often the start of a design project.

An example of an initial situation is one of *Espace Éthique*'s working protocol that I call 'experts-workshops.' A curated multidisciplinary group of experts is invited to present their work and to contribute to one question explored by the Commission for one day. The result is a booklet comprising a verbatim of the session, offered for free to the Commission's audience. The whole process informally feeds the thinking and writing of the permanent members of the Commission. Other formats include the Commission's seminar, talks, courses, etc.



Figure 25 | View of *Espace Éthique* experts-workshop gathering scientists and health professionals on "Big Data & Medicine" on 16 April 2015.

As evoked earlier, my first intention was to take part in this format to fuel debate among experts, the stakeholder decided otherwise. *Espace Éthique* offered to start our first collaboration by creating a collective debate format where experts and the general public would talk with each other, prompted by a design artefact. It aimed at a specific topic, for a specific occasion: ethical and societal issues about Motor Neuron related diseases (MND) for the first edition of their Summer University within the five-year MND Plan. The workshop was titled *Atelier de création éthique: construire ensemble l'Espace Éthique MND* (Workshop of Ethical Creation: Building the *Espace Éthique* MND Together) and was scheduled to take place on September 15, 2015.

According to the Summer University programme, the workshop would try to collectively explore the ethical issues related to the MND Plan of 2014–2019. While no official brief was formulated by the Commission, informal discussions revealed that increasing participatory and inclusive consultation practices was one of *Espace Éthique*'s recurring concerns.

In addition to this, six very different diseases were regarded as part of the MND plan. Gathering these very different communities emerged as a goal of the Commission, according to my interviews of the team.

In short, I understood *Espace Éthique*'s request as an expansion of their usual activities:

- **Exploring** unusual and **overlooked ethical questions**
- **Structuring their reflection** on the MND Plan.

To which is added unusual activities:

- **Being more inclusive** by engaging the MND Plan community (including non-experts) in a participatory way
- **Helping to gather a disparate community** structured around six medical conditions.

And doing this through specific means:

- **Organising a debate around a controversial artefact** that would trigger people's discussions.

16.C Adjusting My Research Strategy and Methodology

Drawing from the field's specificities, and since the stakeholder cancelled the two-month-long residency initially planned, I decided to spend a year-long design residency in this field. Accordingly, I defined a research strategy within two folds.

Starting in February 2015, the first four months of residency were solely devoted to open observations. These were bottom-up observations, without pre-defined frameworks, leaving room for surprises and allowing to get a general understanding of the situation. This phase aimed to enquire about the stakeholder activity and to collect data about the evolution of its practices. After the four first months, these observations continued, next to developing a series of projects.

Starting in June 2015, I conducted more systematic observations. Those included top-down, hypotheses-driven observations, with analysis criteria, generating in-depth understanding of the situations. This phase targeted the making and releasing of our first design for debate project called *L'Éphéméride*.

During these 12 months, open and systematic observations led me to carry out:

- 32 interviews (mainly informal ones),
- Including 9 semi-structured one-to-one interviews (one for each member of the team).
- I collected and read 70 documents they produced (from blog post to printed publications).
- I took part to 16 weekly meetings,
- To 12 events they organised on site (including 2 where I was invited to present our work and 3 organised by myself),
- And, to 5 events they organised in other institutions.

The chapters 5–8 focus on different phases of my first collaboration with *Espace Éthique*, as depicted in the following sketch.

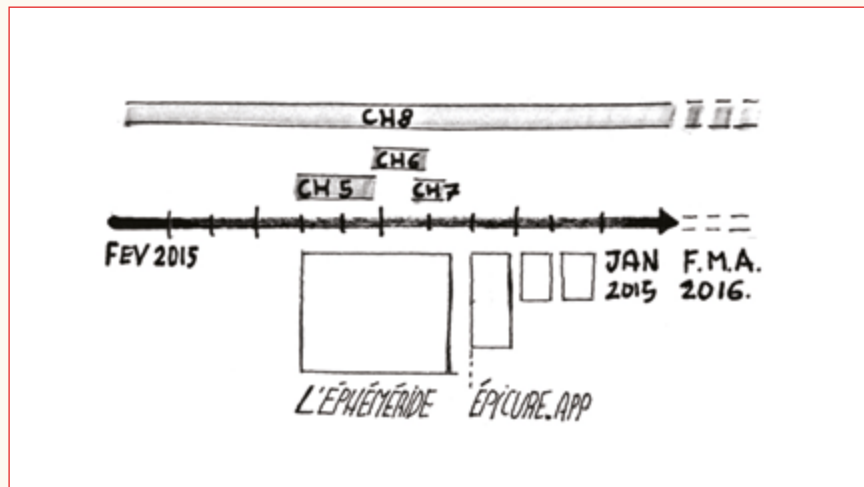


Figure 26 | Representation of the time scope addressed by my four upcoming chapters, within the design residency at *Espace Éthique*. The four chapters are articulated around one project. In order to contextualise the project within the year-long residency, the sketch also indicates (with squares) the three other projects I conducted with *Espace Éthique* in October, November and December 2015. They explored topics related to the implications of prediction algorithms for healthcare. One of them, called *Épicure.app* (2015), will be addressed in another set of experiments, in the chapters 9 and 10.

Chapters 5–8 unravel a project called *L'Éphéméride* (2015). Chapter 5 introduces and retrieve audience feedback on my first prototype. Chapter 6 reviews my final artefact. Chapter 7 assesses the artefact's ability to spark debate at the Summer University and Chapter 8 looks at the stakeholder's feedback regarding our collaboration. Stemming from Chapter 3's literature review, each chapter respectively look into different functions of design for debate: feeding critical reflection; engaging audiences with a chosen issue; enabling mutual contestation and employing it as a form of social research; or as a professional design practice.

CH5 *GLOSSARY OF CONCEPTS* **Feeding Critical Reflection via a Dissonant Artefact**

In Chapter 5 I present a first attempt to design a reflective artefact that is disturbing but not provocative. I then review the literature in search of a series of concepts that may allow to describe the subtlety of this approach.

17 AIMS & PROTOCOL Informing the Design Process and Evaluating the Results

17.A Aiming at Crafting a Reflection-Feeding Artefact

After my experiment with *Dog & Bone* (2010–2011) in Chapter 3, I was determined to: better tackle political issues not chosen in an authorial way; avoid circulation means made for dissemination; and avoid provocation. Following my ‘insertion’ hypothesis, I integrated the *Espace Éthique* team. We planned to conduct a participatory debate in September 2015, therefore the circulation question was dealt with. But also, part of the issues finding matter was almost solved since these people have real discussions on pressing issues with their own audience. However, I had left to address the design for debate’s function of feeding critical reflection.

In Chapter 3, when reviewing the literature in search of means to achieve this function, I observed designers’ recurrent use of vocabulary evoking a brutal play on the viewer’s emotions. In contrast, I also reported a shared attention to craft an ambivalent or an equivocal artefact, and a concern for disturbing with delicacy, in a ‘poised’ manner.

In this chapter I therefore ask: how to describe the way a design for debate artefact unsettles an audience to feed critical reflection? And, how to do this while avoiding the ‘provocation’ lexical field, which seems misleading considering the subtlety and complexity of this approach?

After clarifying the protocol of this experiment (just below), I detail the steps that led me to the design of my first prototypes. I then analyse the feedback generated among different audiences. I finally review the literature to discuss the quality criteria and the concepts proposed by design researchers—for such an artefact that feeds critical reflection.

17.B How I Informed the Designing Activity and Examined the Results

To inform my design process, I reviewed textual and video testimonies of people who have an illness, and interviewed people who are close to a person living with a Motor Neuron Disease (MND).

The stakeholder requested to bring together, through the project, people suffering from very disparate medical conditions. I therefore had to find a common issue that would feel relevant to very different people attending the final debate.¹ Hence, in order to refine my initial understanding of the six diseases included in the MND Plan, I asked the Commission for a list of readings.

¹ Not only different kinds of medical conditions but also relatives, health professionals, and scientists, for instance.

I complemented their list with other sources, articles, scientific information, and online testimonies in various formats (papers, blogs, videos, podcasts, conferences). I also looked for testimonies in popular culture (films, 3 documentaries, 2 radio show, 1 exhibitions).²

I conducted face-to-face semi-structured interviews with each commission members (this open observation phase also fed the study of the stakeholder's practices). I added informal interviews of 9 people, of which 5 were relatives of people affected by a disease. I collected pieces of feedback on what the families described as the patients' life experiences and memories. Among the others was 1 data-scientist, 1 director of a patient's association and 2 doctors.

The results of my design-making phase comprises the identification of 3 main categories of concepts that are common to disparate communities—described in the next section. These categories enabled the making of 12 design propositions of which one—selected by the Commission—is presented in a few pages.

In order to collect the audiences' feedback on the designed artefact, I presented my 12 first design propositions to the Commission. Via a 1-hour informal focus group. I collected the feedback of 6 of the commission members (2 philosophers, 1 medical intern, 1 director of public relations and communication, the Director and Co-Director). This took place during one of the 3-hours weekly meeting at *Espace Éthique's* office, in the St-Louis Hospital. As a result of the focus group, the commission members selected one proposition.

Once the design proposition chosen, the next step of my protocol was to collect feedback from two people that could be the artefact's potential users. This means, people who are directly concerned with one of the medical conditions of the MND Plan. In respect of the methodology described in Chapter 4, some precautions were taken. First, the Commission and their network helped to recruit two people that would be open to our approach and very comfortable with the fact of talking about their condition, in private or in public. For the sake of anonymity, I will call these two people Sophie (affected by Multiple Sclerosis) and Marion (affected by the Huntington's disease). Second, my research nevertheless consisted in exploring people's emotions regarding their own medical condition. Therefore, another part of the protocol was to take the time to build a personal relationship and to establish trust with the person encountered. Third, the Commission reviewed each prototype before releasing them or presenting them to testers.

I met Marion once, at her place in Paris, for 2.5 hours. I met Sophie 5 times (1 hour each time), in Parisian public places (e.g. the café, or a public park close to her place). The first two times allowed to build trust and to collect feedback on the first prototype (presented in this chapter). All interview sessions were audio recorded, two of them were typed and are given in an online appendix.³

² See: maxmollon.com/permalink/PHD_Appendix-CH5-Making-of_montre_ephemeride.pdf

³ maxmollon.com/permalink/PHD_Appendix-CH5-Sophie-Marion.pdf

18

FIELD EXPERIENCE & DATA

Design Intervention

As I started my design residence, a few challenges and questions appeared: What issues may be perceived as a common matter of concern for the variety of audiences expected to the final debate situation? What kinds of artefact could be made to convey these concerns?

18.A Framing Issues: Three Categories of the Audience's Concerns

Based on the material listed previously, I identified three categories of issues related to the conditions of people affected with a Motor Neuron Disease. In order to present these categories, I shall first introduce the diseases that are part of the MND Plan.

The group of Motor-Neuron Diseases (MND) that compose the National Plan is complex because it is highly heterogeneous, while the diseases share similarities. They all affect the brain cells located on the motor neuron. With the exception of Alzheimer's and, in some cases, of Parkinson's disease which involve cognitive disabilities, MNDs mainly affect the brain's ability to control movement, either to trigger motion or to refrain from it. Six main pathologies constitute the focus of attention, Alzheimer's disease, Parkinson's disease, Multiple Sclerosis, Huntington's disease, Amyotrophic Lateral Sclerosis (ALS), and Friedrich's Ataxia—ordered from the most to the least number of cases diagnosed annually in France in 2015. Contemporary medicine has not yet found any cure for any of them; only the symptoms are treated with very limited and unequal levels of success. Besides this, they are all very different and every person affected exhibits a different version of the disease. Some share common characteristics, although no particular characteristics apply exclusively to all. For instance, barring the links between pesticides and Parkinson's and Huntington's and DNA transmission, these diseases have no known causes. Friedrich's Ataxia mostly affects people under the age of 20 while Huntington is rarely declared before the age of 45. As a final example, some diagnoses (such as ALS) evolve to a lethal condition within three years whereas others (such as Multiple Sclerosis) last for more than 35.

Following the stakeholder's request,⁴ I aimed to reframe the subject of MNDs with issues that could be common to disparate communities (e.g. people living with a disease, but also relatives, health professionals, scientists, etc.). I analysed the discourses collected through my interviews and through the documents I collected. I was able to observe, in this material, recurrent topics.

⁴ Reminder from the introductory chapter to this experiment: the stakeholder's request for this design project was notably to gather (within one debate session and therefore within one artefact) people from very disparate backgrounds, and different medical conditions, related to the MND plan.

I organised a synthesis of these topics using a mind-mapping and grouped the issues in three main categories. It is composed of how MNDs impact patients' lives in terms of their relationship to 'themselves,' 'others,' and 'time.'

- **Relationship with oneself (appearances):** One's 'identity' is redefined by such a diagnosis since the body's state will inevitably spiral out of control irrespective of one's efforts. One's physical capacities will differ from those they experienced (and often trained for) in the past, as if one's pre-diagnosis history belonged to someone else. Moreover, these symptoms are frequently invisible or not perceived as such, and when visible, they tend to overshadow one's identity. Being afflicted with a rare illness that few people are familiar with may be regarded as a form of segregation. But philosophers from the Commission proposed as a counter argument to this, that it may as well be considered as something exceptional and precious on account of its rarity.
- **Relationship with others (dependencies):** Relationships with 'others'—relatives, caregivers, and doctors—are affected by one's condition over time. First, empathy is necessary to reach a mutual appreciation of the difficulties faced by each other. Further, the gradual worsening of one's disabilities calls for a greater need for confidence both in oneself as well as in others. However, according to the people living with a disease that I interviewed, being dependent on others is often one of the hardest things to accept. It is opposed to the ideal of being an accomplished and independent individual valued by modern societies. Last but not the least, according to the Commission who organised a conference cycle on the topic, caregivers who are often relatives, can find themselves trapped in a situation of exhaustion where they do not feel allowed to give up helping.
- **Time (inevitability):** My interviews and literature shows that 'time' assumes a different meaning for people with a motor neuron disease. The pattern of evolution of their condition is well known—even if all pathologies develop in a different manner and at a different pace, the trajectory is one of inevitable decline. Time is above all perceived as limited, because despite advances in contemporary medicine, an increase in symptom development is inevitable. According to *Espace Éthique's* philosophers, this situation often leads to strategies of anticipation of the disease evolution. Since the reasons behind the development of the condition are largely subject to the vicissitudes of chance and (mis)fortune, it becomes a fertile breeding ground for superstitious beliefs. In addition, the act of foreseeing one's future can be regarded either as empowerment or as heavy determinism. One of my interviews with a person diagnosed with an MND, for instance, suggested that science's unanswered questions can work both ways either by inducing hopes for a cure or by leading to a resigned acceptance of one's fate.

18.B Artefacts: Proposing Twelve Design Concepts

Within the three categories just introduced, I identified the following issues. They were more or less transversal to the different diseases of the MND Plan and to the people's conditions.

Relationship with oneself (appearances):

- My identity is actually affected but nobody sees it, or my symptoms are misunderstood.
- My symptoms (re)define me publicly.
- Does my difference make me marginal or exceptional/rare/precious?

Relationship with others (dependencies):

- What are the limits to empathy and the understanding of someone else's suffering?
- Confidence in oneself and the other, to the point of 'abandoning oneself to the other' (putting oneself in the other's hands).
- The concept of the 'individual' (the independent human that succeeds in modern society) is often opposed to the dependent one.
- Taking care of the caregivers (exhaustion).

Time (inevitability):

- The inevitable decrease implies a sense of emergency of planning and anticipation.
- The evolution is subject to (mis)fortune.
- Fatalism and determinism of the 'prognosis.'
- The not curability of the condition is either faced with helplessness or a greater faith in scientific research.

I then attempted to materialised some of the issues throughout twelve discursive design proposals. A preview is given below. The individual images can be found in an online appendix.⁵

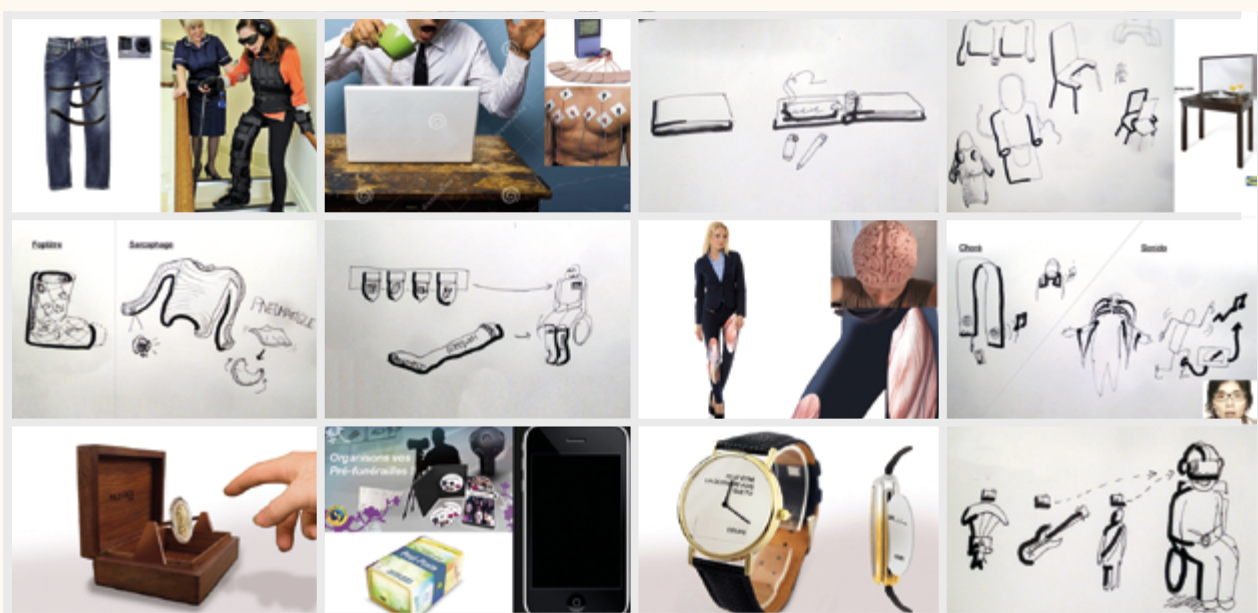


Figure 27 | Twelve design propositions submitted to *Espace Éthique* for reviewing. Among them, the Commission selected 'the ephemeral wristwatch,' called *Montre-Éphéméride*.

Twelve design proposals were reviewed by the Commission. Here, I do not review them individually in order to dedicate more attention to the selected one, *Montre-Éphéméride* (2015). Before going into details (in the results section) on why the Commission made this choice, I first want to introduce the rationales behind its design.

18.C Stakeholder's Choice: *Montre-Éphéméride* (2015)

I identified the theme of the ‘inevitability’ of the passage of time in many sources. Rather than listing these sources, I extracted several quote which are more striking than others.

A person living with an MND that I interviewed framed the ineluctability of his condition by remembering how, “That day was the last time I got up, I didn’t know it at the time” after then, employing a wheelchair was necessary. During a patient’s association meeting at *Espace Éthique*, I noticed how other patients talked about “key dates of drifting” to refer to moments of sudden evolution of their symptoms, thereby reinforcing the pressure on time.

I found a similar account of the inevitability of time passing in many other sources (Commission members interviews, online testimonies of relatives). But, the most compelling sources of information I found on this was in popular film culture. An example is *The Theory of Everything*,⁶ the biographical movie on Stephen Hawking. (Fig. 28) This film provides many examples of the predictive nature of MND diagnoses. For instance, in one specific scene, Hawking’s wife, Jane, attempts to cheer him up. Yet, the character’s reply leaves no room for hope, “[...] this will not be a fight, Jane. This is going to be a very heavy defeat.”

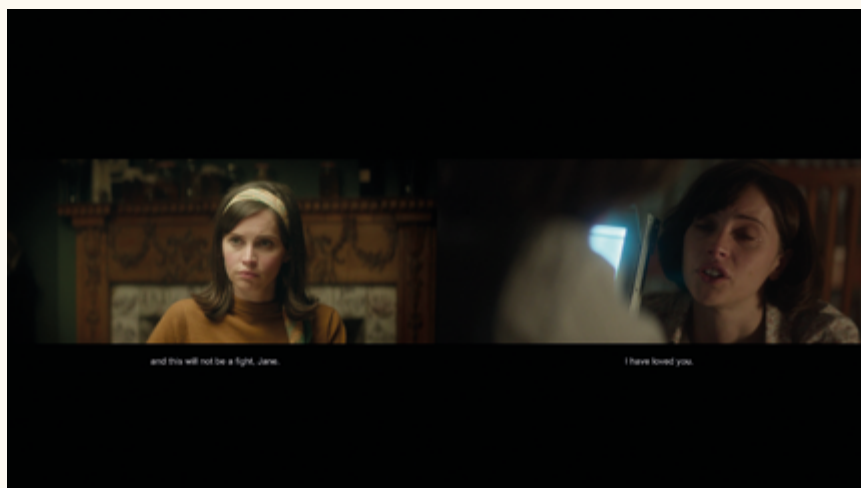


Figure 28 | Still images from James Marsh’s 2014 movie *The Theory of Everything*, a biographical representation of Stephen Hawking’s life. Subtitles: “and this will not be a fight, Jane” (left); “I have loved you” (right).

On many levels, this movie possesses a great pedagogic dimension as a way to popularise the specificity of the Amyotrophic Lateral Sclerosis conditions.

⁶ *The Theory of Everything*, James Marsh (2014; Working Title Films, London). Stephen Hawking is one of the most celebrated physicist of the past century. In his late twenties, he was diagnosed with the Amyotrophic Lateral Sclerosis (SLA) disease and 2 years to live (the average life expectancy for SLA). He died inexplicably at the age of 72.

Time is central in the movie, as it becomes the main focus of Stephen Hawking's astrophysics researches. Yet, it is not the only topic addressed. I listed some of them to show their correspondence with the three categories of concerns I detailed earlier:

- 'Self' category:
 - The development of other (cognitive) abilities in contrast to physical ones.
 - The assistance of technical equipment.
- 'Others' category:
 - The growing gap between people with an MND and their relatives.
 - The dependence on caregivers.
 - New kinds of relationships with oneself and with others.
- 'Time' category:
 - The announcement of the diagnosis.
 - The confrontation with the predictive nature of the generic evolutionary model of the symptoms.

Drawing from the topic of determinism—that was common to my interviews, the Commission's experience and popular culture—I came up with the following artefact.

The *Montre-Éphéméride* (Ephemeral Wristwatch) is a watch dedicated to people with an MND, displaying messages at the wearer's attention. These evocative, striking, and often shocking messages are given as a stimulus to the wearer for them to make the most out of their abilities before they fade away. They help the owner to fight the determinism and fatalism of their condition. A sample message may include the statement, 'This might be the last time you: run.' The last word changes over time and follows the model of degeneration announced by the diagnosis (examples include 'walk,' 'go shopping,' 'take a shower yourself,' and so on). In this concept, there would be six different watches according to the six different diseases included in the MND plan. Each ephemeral layer is disposable or collectable by the user.



Figure 29 | The *Montre-Éphéméride* was presented with the following text to the Commission, in August 2015: “Carpe diem! The message displayed by this clock face evolve and is planned on the generic degeneration model of your MND. It aims at providing a motivation to enjoy life and your abilities on a day-to-day basis. The button is to be pressed at each stage of the disease’s progress to reveal the following phase of degeneration. Messages can be collected, dated or annotated as the time goes.” | Extract from my design research journal.

My design hypothesis was that stripping the design of any formal aesthetic distractions would better (and only) convey the pressure of time. It would leave more room to the discomfort produced by confronting this reality. Accordingly, the appearance, the materials of the wristband and the clock face were chosen to be the more common or archetypal possible. This way, more people could identify to it. The watch strove to simply transcribe that the disease diagnoses come with a generic evolution model. Turning the symptoms evolution into a reminder on the watch dial intended to generate a feeling of fatalism and an incentive to capture the day.

Regarding the use of the watch, the notion of ‘dates of drifting,’ previously collected from a patient’s association meeting, was translated into a series of sliders that serve as memos (like pieces of paper loaded with memories) to be collected over time. This choice intended to suggest how a potential user could build different kinds of relationships to their disease over time, depending on their use of the sliders (collecting them, mailing them with a message, destroying them, etc.).

Finally, I chose this name for the artefact because ‘ephemeral’ refers to a specific type of calendar, well known in French popular culture, made of 365 (ephemeral) pages which the user tears off and dispose day after day.

In the next section, I provide audience feedback on this proposal, including the Commission’s rationale for choosing this topic and the ephemeral watch.

19 ANALYSIS & RESULTS

A Partial Rejection

I now present elements of feedback coming from three sources—a focus group and two interviews. First are the Commission’s comments on my design proposals and the reasons they gave for choosing the *Montre-Éphéméride*. Then, feedback on the selected artefact is reported from Sophie, a person living with Multiple Sclerosis and Marion, a person living with the Huntington disease.

19.A The Commission’s Feedback, Unsettling is Valued as a Debate Trigger



Figure 30 | Reviewing session, with the Director, Co-Director, two philosophers, the Medical Intern and the Director of Public Relations and Communication of the ethics commission. Feedback was collected during a team meeting at *Espace Éthique* at St-Louis Hospital in Paris on August 2, 2015.

The Commission formulated significant comments on the design approach, the targeted debate topics, and the selected artefact.

The design approach was appreciated regarding the absence of so-called ‘new technologies’ in my twelve design concepts. While the technologies are often part of the Commission’s concerns, they noticed in their own work how the ethical issues associated with technologies can mask the ones specific to the MND diseases. In addition, and more interestingly, the unsettling was pointed as a strong invitation to express oneself:

Commission member 1: “Ethical consultations are bogus, now we want to discuss! The object alone can be as interesting as an entire workshop.”

Expanding the same reflection, the commission members expressed strong reservations (and offered advice) on the protocol of the debate session. They stressed the importance to ensure diversity both of people who express themselves and of opinions.

We came up with two ideas to make room for the expression of contradictory opinions (for instance, non-fatalistic opinions). First, to represent a testimony (an interview of a fictional user) that would use the artefact differently and stand as a counter-example. Second, to introduce a different (more positive) project, on one specific topic, among the dozen which had been proposed. We decided that there would not be enough time during the debate session to present several projects. I will therefore work on the testimony option in Chapter 6.

The Commission addressed the three categories of proposals I offered but, the discussion often came back to matters of ‘time.’ The members especially stressed the matter of projecting into the future of one’s condition. This ‘time’ category was all the more relevant since the French SLA patients’ association recently testified, before the Commission, how doctors show, from the start of the disease, all the medical equipment that will be provided as the handicap progresses:

Commission member 3: “How far should the person be asked to represent themselves the disease? Should one consider the future at the cost of not being able to live in the present? Or should we rush to live? [...] Maybe you could try the other way around? [regarding the sentence written on the wristwatch’s dial] ‘This is the *first* time...’ I sit in a wheelchair, or get help with the shower.”

The commission members also acknowledged the relevance of the topic for different kinds of audiences. The race against time was suggested as relevant to the MND, and as something that affects us all:

Commission member 2: “It could be the watch of a person that does not have any medical condition.”

The *Montre-Éphéméride*, which belongs to the ‘time and inevitability’ category was picked by the Commission because of its ability to vulgarise and raise awareness on neurological degeneration towards people who do not have a disease.

Within the ‘time’ category, the Commission chose ‘ineluctability,’ ‘determinism,’ and ‘degeneration’ as the topics to be addressed during the final debate situation, the Summer University. According to commission members, these topics would feel relevant to a large audience because many other topics—among the ones I presented—are connected to these three central concepts.

The team found that the watch relevantly illustrated a specific conceptual tension between two kinds of patients’ reactions, observed when facing such diagnosis: the *anticipation* of the disease’s evolution (and the planning that it requires) and the *fatalism* of the disease’s evolution model (helplessness and determinism). Anticipation was perceived as clearly conveyed by the ‘warning messages’ on the clock face. Fatalism was said to emerge from the succession of ‘sliders,’ following the evolution cycle of each medical condition.

At the same time, one commission member highlighted how the artefact might generate a too brutal provocation and be too literal. I hence considered this proposition as a first version, which may need to be improved in Chapter 6.

19.B Sophie's Feedback, a Strong Rejection



Figure 31 | Portrait of Sophie (left). Meeting at the café in August 2015, with Alexandre, the medical intern of *Espace Éthique*.

This was my first meeting with Sophie. As I was intruding on the private space of her condition, a part of the interview was not recorded. It started as an informal discussion where I explained my research, until I asked permission. It was my way of seeing her as a collaborator, rather than the subject of an experiment. During this interview, Sophie talked about how the choice of the Café where we met was strategic for her. Her mobility is limited by the public bus network, as the Paris metro is not suitable for wheelchairs.

Max: Do you happen to think about the evolution model of these diseases?

Sophie: Not only am I thinking about it, but I discussed it with a friend, who is a doctor, and with my husband. To remain autonomous to the maximum is essential. [...] when the time comes, I'll take the necessary measures [referring to euthanasia] I'm not depressed, I'm lucid. But I would never talk about this with anyone.

M: Does it make you want to enjoy life (or does it petrify you)?

S: I'm trying to think of my family as an asset, the answer is yes. I can't do anything about it, like the weather. You have to adapt.

[...]

M: Now, I'll show you something. An object addressing the powerlessness often associated with the disease. I think it is too provocative and does not entice one to reflect or debate. Before I develop another one, I'd like to collect your reactions.

S: It's true [that] it's brutal! Actually, **with such a sentence it's 'Maybe the last time' I throw myself out the window!** [...] It can make people anxious and cry. It's driving the nail in and crushing the wound. Can we change the sentence: "You can still run? That would be more positive. [...] And a clock at home would be more suitable.

M: What if people could write what they want instead of that sentence?

S: There you are! It's good that you can choose the sentence yourself. And it's better to have an object in the sphere of intimacy. It's not that it tickles, it can freak you out. The one that isn't in a stable environment, it can disrupt them. [...] It becomes a logbook where the person is active. [...] Somebody can't request, 'you can still do this.' People have to formulate this themselves. The first time I got on a bus by myself, I was very proud. It was a challenge. In these pathologies, mood and the psychological state plays an important role. I often realise that."

Feedback from Sophie, a person affected by Multiple Sclerosis, often collaborating with *Espace Éthique*. Interviewed on August 17, 2015 in Paris. Find the whole interview in an online appendix.⁷ | Emphasis is my own.

Sophie's reaction in the rest of the conversation mainly focused on the sentences displayed by the watch. She proposed not to redesign the whole artefact, but to change the sentences. She perceived them as too rude and intrusive and, in her opinion, it seemed unlikely that anyone would want to buy such a watch or even use it.

Said otherwise, Sophie feedback showed that, although the selected topic (a determinist perception of the passage of time) was relevant to her, the *Montre-Éphéméride* has a main limitation: the feeling produced was way too strong. Her suggestions for redesigning were embedded later in the next design phase of Chapter 6.

19.C Marion's Feedback, A Desirable Artefact from Another Point of View



Figure 32 | Portrait of Marion at her place on 24 August 2015. We met for a 2.5 hours semi-structured interview.

Huntington's disease is another condition among the diseases which constitute the MND Plan. It also affects the motor neuron, but instead of losing the ability to move, one loses the ability to control movement. This is why it is also called the 'Huntington chorea.' The Huntington disease is hereditary and, therefore, often kept secret from parts of the family and relatives.

Max: Are you comfortable with this discussion?

Marion: It's a mysterious disease, so no. I am comfortable because I have lived for years with Huntington patients (my grandmother, my father). It is more difficult to talk with people who do not have the disease, who feels that mood disorders are whims. [...]

Max: The date and mode of your diagnosis?

Marion: 2009. I didn't go for the [genetic] test; it was a neurological check-up based on my symptoms. [...] The first neurologist told me I was simulating the disease. The second confirmed 6 months later. It felt good because I needed to be sure of what I was feeling, to be recognised. [...]

They do not announce a starting date of the disease. There are big statistics, 90% of patients get the disease in the same age group, I am one of them. [...]

We had very tense relationships with my mother because she did not accept the disease. My boyfriend left after three years. It put me in a situation of failure. Doctors also have a lot of trouble with this disease. We are told that we need to 'make more efforts.' These are words that hurt and are useless. [...] I had to learn to get help from my family, to ask for advice.

[...]

Max: Here is the object, a wristwatch which is very provocative [I took a lot of precautions to introduce the artefact].

Marion: A watch... why not? For the doctors it would disturb them, it would do them good. **I don't find it shocking. It can be useful for isolated [and misunderstood] people.** For instance, my father used to say to me, "My customers say I drink." When the person stumbles, one thinks they are alcoholics. The watch could say out loud: 'The person does not drink' [laughs].

As for myself, I yell at people, but that's not my character. The watch could indicate 'Emotion is too strong,' or 'this hurts too much.' But the black colour of the wristband is not great, to wear it every day I mean."

Feedback of Marion, a person affected by Huntington's disease. Interviewed on August 24, 2015 at her place in Paris. Find the whole interview in an online appendix.⁸ | My emphasis.

Since Marion and her family have a very specific history with the Huntington condition, she interpreted the watch very differently than Sophie.

At first, she did not perceive it as unsettling—maybe because I took too many precautions by actually saying it is provocative—or maybe, would wearing the watch in public be a form of provocation she could perform? Then, she found it useful. In some respects, Marion was interested by the potential use of this object. She stressed the utility of wearing it as a public accessory in order to warn others about her condition, which was frequently misunderstood. This eclipsed the discussion on determinism and disease evolution. In fact, Sophie also mentioned that an intimate artefact used in the private space of the home would be more appropriate, "Will people agree to wear a watch like this? They have several other ones. It can be uncomfortable in public. A clock at home would be more suitable." This was also taken into account for the next step of my designing phase.

Finally, the artefact was perceived as a pedagogic means to explain a medical condition (according to the Commission and Marion). **The choice of debate topic was perceived as relevant to the three kinds of audiences** (i.e. people with two different medical conditions and the members of the Commission who do not have an MND). **However, the artefact's design was either perceived as interesting and desirable, or as openly provocative** (by one member of the Commission and even more strongly by Sophie).

20 DISCUSSION A Dissonant Artefact Stimulates Critical Reflection and Debate

Designing for debate aims at stimulating critical reflection, within an audience. In this respect, in contrast to the term ‘provocation,’ other means (or other descriptions and theorisations of existing means) may be developed by the present research.

In this section, my aim is thus to review the literature so as to come up with a glossary of concepts. This glossary intends to refine the understanding and vocabulary available when referring to the unsettling of audiences’ emotions through design. Within this glossary I intend to find one specific term to refer to the unsettling of a public so as to spark debate.

20.A Balancing Open Provocation

20.A.1 Provocation Does Impinge on Reflection

As a start, to inform my review, I focus on Sophie’s rejection. What does her feedback tell us of the artefact’s ability to trigger reflective discussions?

Provocation is a widespread strategy for a wide variety of purposes⁹ including entertainment, which is not a part of design for debate’s goals. Thus, prior to further enquiries, I wondered whether provocation did indeed hamper reflection in my experiment. Comparing the artefact’s qualities and the audience’s actual experience (Sophie’s comments) allows to answer this.

Some of the characteristics of the *Montre-Éphéméride* aimed to embody the unavoidability of neurological degeneration and a sense of fatalism in the face of time. This relied on a succession of sentences which evolved through time, thanks to movable pellets stocked in the back of the clock’s face. Sophie rejected the watch but she did not make comments on the pellets during the whole interview, neither on the suggestion of collecting them nor on their very existence. I argue that, while she reflected on many other facets of the artefact and of her experience, she did not consider these design features in her comments because she rejected another part of the object instantly. I observed that **over-provocation impedes on critical reflection by diverting the audiences from the full consideration of the artefact**, obstructing the debate progress on specific questions. Here, provocation drew too much attention on part of the artefact, thereby abridging the interpretation of its complexity.

⁹ Dystopia, the dark match of utopia, inspired a whole category of artistic works, including fiction and science-fiction, of which an example is the TV series *Black-Mirror* (by Charlton Brooker) that explored the genre since December 2011.

20.A.2 Overcoming Provocation by Juxtaposing it to a Relatable Design Feature

If provocation intervenes in reflection, I need to identify how designers dealt with similar situations.

Auger’s Ph.D. thesis gives a useful example. It shows the kinds of experiences that provocation can generate and how to avoid them. *Afterlife* (2001–2009) by James Auger and Jimmy Loizeau, consists of a coffin, plugged with a technical device, which is able to recharge the energy of a dry cell battery thanks to the chemical reactions of organic decomposition of a deceased body.

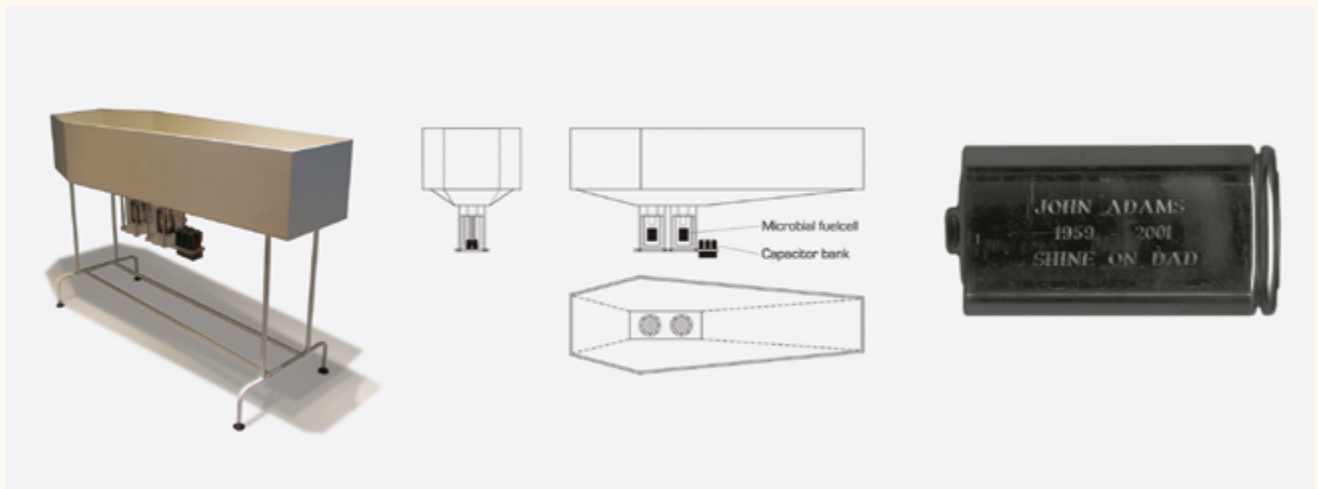


Figure 33 | *Afterlife* (2001–2009) by Auger-Loizeau. Coffin with microbial fuel cells plugged underneath; technical diagram, engraved R.I.P. battery.

According to the Auger and Loizeau, the project looked into the roles that science and technology can play in the field of death through new forms of funerary beliefs. The authors explained that whereas many cultures depicted heaven or reincarnation, science could not propose effective and convincing equivalents to an atheist. The project was based on the fact that everything populating our universe, including the human body, is made up of the original particulate matter left in the wake of the Big Bang and that after death our body is assimilated back into this natural system: “The Afterlife device intervenes during this process to harness the chemical potential and convert it into usable electrical energy via a microbial fuel cell.”¹⁰ Thanks to the emergence of this device in the industries of power generation and environmental treatment, “technology acts to provide conclusive proof of life after death, life being contained in the battery.”

The context of circulation chosen for the project’s dissemination was the *Design & the Elastic Mind* exhibition of 2007 at MoMA. *Afterlife* was presented in the exhibition space through a life-size model of the coffin, a technical schematic of its structure, a photograph of the battery, a text, and a video explanation.

¹⁰ James H. Auger and Jimmy Loizeau, ‘Afterlife,’ Auger-Loizeau.com (Online Portfolio), 2009, auger-loizeau.com/projects/afterlife/ (accessed Nov 2018). | See the end of the second paragraph.

Auger regarded the 2007 exhibition as a failed attempt since the audience focused on the repugnant part of the decomposition process and the discussions did not reach the main topic. While there is no specific data available on the audience's reaction, the author considered that the project was too provocative and seemed to hinder reflection. Therefore, the two designers redesigned the staging of their project for a second exhibition at Experimenta 09 in Lisbon, Portugal (2009). In the form of last wills, they added a dozen testimonials written by their relatives or lay people. These testimonials described how the battery was to be used (their bodily substance was to be converted into energy) and how they wanted to spend their 'afterlife.' Auger-Loizeau exhibited these texts complemented by the artefacts mentioned, for instance, a torchlight powered by two batteries beamed at the night sky, gathering lovers for eternity; or the battery powering an electric toothbrush of the designer's wife to remind them of the story behind their very first kiss. Some designers were also invited to write a text and design a specific artefact powered by their battery. This was the case of designers Dunne and Raby who, as a couple, proposed a euthanasia machine powered by the battery of the first person to die, thereby allowing the other to follow in the same path.



Figure 34 | *Afterlife* (2001–2009) by Auger-Loizeau. Toothbrush selected the designer's wife, to be used by her husband with her *Afterlife* battery—as a joke to remind him the story of their first kiss. A torchlight selected by a lover, powered by two *Afterlife* batteries beamed at the night sky, towards outer space, to be united forever.

According to Auger, some members of the 2009 Barcelona audience strongly related to the piece. While reflecting on the Barcelona exhibition, Auger notably describes an encounter with a member of the public, found in tears in the middle of the exhibition space. That person explained to the designer how the artefact and the testimony reminded her of her parents, and that she found the idea somewhat beautiful. The rest of the discussion is not detailed, nor analysed. It is worth adding that three of the additional artefacts presented with the coffin were already exhibited in MoMA without testimonials, but in Barcelona, more attention was drawn onto them and their way to convey the issue. It drew the attention away from the body decomposition.

Auger with this example demonstrates how open provocation impinged on reflection in his first exhibition, compared to the second one. The redesign also shows that it is possible to tame **the feeling of unease without dimming the intensity of the unsettling design features** (here, the coffin still transforms human bodies into energy through organic recycling).

20.B Familiarity Allows the Audiences' Self-Identification

In order to better understand Auger's experience, I now wonder what is the effect of attempting to 'familiarise' a strange artefact. Answering this question requires to look, in the literature again. How is this complex interaction described, how are the artefact's qualities (i.e. unease, dilemma) supposed to achieve such functions (feeding critical reflection) and the subsequent expected audience experience?

I first looked at how Auger describes the qualities of *Afterlife*'s redesign which intends to avoid provocation. Auger proposes the notion of "perceptual bridges:"

"If a speculative design proposal strays too far into the future to present clearly implausible concepts or describes a completely alien technological habitat, **the audience will fail to relate to the proposal**, resulting in a lack of engagement or connection. In effect **a design speculation requires a 'perceptual bridge' between the audience and the concept.**"¹¹

A bit later in his thesis, he defines these terms as, "ways of grounding the speculation to ensure that it connects with an identified audience's perceptions of the temporal world around them," that is, of the here and now.¹²

The choice of the terms 'perceptual bridges' are not further explained by Auger but, I suggest that the understanding of the term 'perceptual' can usefully draw onto Malpass's concept of "rhetorical use" introduced in Chapter 1.¹³ Both terms evoke how these kinds of design artefacts employed to spark debate are perceived but not necessarily used.

According to Auger, perceptual bridges make it possible to tame an unsettling feeling that is too strong. In Auger-Loizeau's case, it is not achieved by changing the topic or redesigning a less provocative coffin. Auger rather expresses the necessity of 'connecting' the artefact to the public in addition to the repulsive nature of the design proposal. **The unsettling design artefact seems to better relate to the audiences when being made 'familiar'**—throughout its features, or/and through the design of its mediation. **'Perceptual bridges' can therefore be understood as ways to ground the design proposal in the audiences' known references in order to enable self-identification.** Bridges may appeal, for instance, to nostalgia for a known cultural fact.

¹¹ Auger, 'Why Robot?', 140. | My emphases.

¹² Auger, 180.

¹³ A rhetorical use is the viewers' projection in the use of a (often fictional) artefact. It is supported by narratives of use giving meaning and context to the artefact—depicted through film, images, photomontage, vignette, etc. See the Glossary and: Malpass, *Critical Design in Context*, 47.

20.C Perceptual Bridges are Continuums Between the Familiar and the Unfamiliar

How can perceptual bridges be deployed? I would like to answer this by extending the previous review of Auger's research and contrasting it to the practice of other designers.

Auger defines the crafting of perceptual bridges as something happening through several dimensions:

“These perceptual ‘bridges’ can then be stretched in precise ways: this might be a **technical perception** such as extrapolating how they think a technology is likely to develop; a **psychological perception** such as not breaking taste or behaviour taboos; or a **cultural perception** such as exploiting nostalgia or familiarity with a particular subject. In this way the speculations appear convincing, plausible or personal, whilst at the same time new or alternative.”¹⁴

I now review the three kinds of bridges that Auger suggests to refine his typology and to better understand how it applied to the current experiment.

First, it seems that bridges can encompass other relevant criteria. For instance, I suggest that Auger's “cultural bridge” comprises the sub-criteria of existing ‘usages and practices’ that can be found in the targeted audience.

Second, the “technical bridges” may be more largely understood as a ‘knowledge bridge’ which is necessary to ensure that the audience is given enough clues to simply understand the project (accordingly, ‘technical expertise’ is a sub-criteria of the knowledge bridge).

Third, I make the hypothesis that more dimensions can be added to Auger's and that each perceptual bridge may be better seen as an ambivalent means where familiarity or unfamiliarity depend on the author's intent and on the audience's perception. To demonstrate this, I propose to compare the *Montre-Éphéméride* to one of Dunne and Raby's projects.



Figure 35 | (Bottom) *Not Here, Not Now* (2015) by Dunne and Raby.

Once arranged side by side, the two projects literally seem to belong to different planets. *Montre-Éphéméride*'s formal aesthetic is used to make the artefact familiar while in Dunne and Raby's *Not Here, Not Now* (2015),¹⁵ it is just the opposite.

Although in this project, unsettling the emotions is surely not limited to the formal aesthetic, a glance at most of the British duo's projects through time reveals that exploring this perceptual bridge is typical of their approach. Rather than for the mere sake of artistic expression or personal research, it seems to be their own strategy to unsettle the viewers' emotions.¹⁶

¹⁵ "We were commissioned by the MAK to produce new work for The School of Constructed Realities exhibition at the Geymüllerschloß. We focused on how design fictions are presented and wanted to move away from realism and naturalism to present a more ambiguous world, it could be now, the past or the future. We developed an earlier project commissioned by Z33 called *Not Here, Not Now* which consisted of six design proposals for slightly satirical objects for Digitarians." From: dunneandraby.co.uk/content/projects/772/0/ | See also *The School of Constructed Realities*: maharam.com/stories/raby_the-school-of-constructed-realities/ (two URLs accessed Nov 2018).

¹⁶ That said, this play on formal aesthetic also contributed to what Alex Coles refers as "design-art," the breakdown of boundaries between art and architectural, graphic, or product design. Alex Coles, *Design and Art* (London / Cambridge, MA: Whitechapel / MIT Press, 2007), www/

If, formal aesthetics can have a familiar or unfamiliar value depending on the context, I propose to refer to perceptual bridges as ‘dimensions.’ These dimensions can conversely be used to accommodate or disturb an audience, to connect or disconnect to them. I count 4 dimensions on which to draw a perceptual bridge:

- **Knowledge** (which comprises the “technical bridge,” e.g. how an existing technology may develop).
- **Psychology** (e.g. taste or behavioural taboos).
- **Culture** (e.g. nostalgia or familiarity, but also anchoring into existing practices observed in the targeted audience).
- **Formal aesthetic** (e.g. familiar or unfamiliar aesthetic for the artefact or the communication material).

Perceptual bridges allow to **manage the self-identification of the audiences through several dimensions** (formal aesthetic, culture, knowledge, psychology, and so on). They may be drawn to make strange artefacts relatable, but also **to get the artefact closer or further to the audiences’ set of known references**. As a result, if unsettling an audience is closely related to drawing perceptual bridges, **I suggest discussing this approach as a continuum of which familiarity is one end and unfamiliarity is the other**. Such hypothesis can be represented as follows.

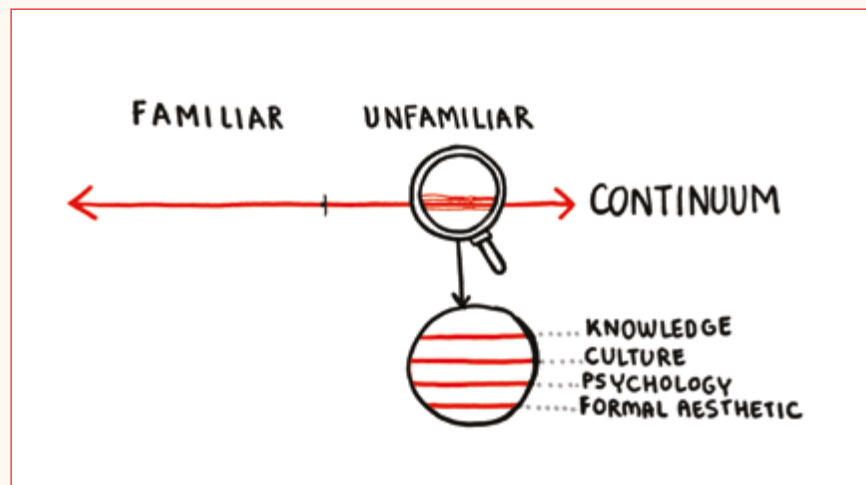


Figure 36 | According to a study of the literature—here focused on Auger and Dunne—four ways are described to get an artefact closer or further to the audiences’ set of references. I understand them as four dimensions—knowledge, culture, psychology and formal aesthetic. They may be seen as part of a same continuum, of which familiarity and unfamiliarity are two ends. The circle, above, is a zoom-in on the continuum to reveal its four components.

20.D Unfamiliar Artefacts Install a Defamiliarising Gap that Stimulates the Audiences Critical Reflection

I now wonder how design artefacts that are unsettling engage audiences with critical reflection.

Within the pieces of literature which address designing for debate's ability to stimulate reflection, one notion seems significant. It is used to describe the artefact's qualities regarding the aesthetic experience of encountering an unfamiliar artefact. The notion of 'gap' refers to the distance—as felt by an audience—between the audience's situation and the (other) possible worlds to which the artefact belongs. Dunne and Raby report on their practice with such a term.

“Critical design is critical thought translated into materiality. It is about thinking through design rather than through words and using the language and structure of design **to engage people...** **It is the gap between reality as we know it and the different idea of reality** referred to in the critical design proposal **that creates the space for discussion.** It depends on dialectical opposition between fiction and reality to have an effect.”¹⁷

I suggest that the concept of gap makes it possible to describe the artefact's quality of being different regarding a point of reference—for instance the audience's references and knowledge about the state of things. For instance, Sophie and Marion may have observed a gap between what is a conventional wristwatch and the *Montre-Éphéméride* proposal.

The term raises questions about what it does on the audience. Thinkers, artists and academics have been interested in the complex emotional state that is actually not provocation, so as to stimulate reflection. We can think of works such as the one on the “*Verfremdung*” referenced by Dunne in his 2005's *Hertzian Tales*. It is a concept introduced in the 1940s by the German theatre practitioner and playwright Bertolt Brecht to define one of the foundations of his theatrical project, distance.¹⁸ This approach intends to distance the spectator from emotional engagement with the characters and story so as to awake their critical awareness on the play.¹⁹ This is a notion at the border between aesthetics and politics, as it aims at a des-alienating the audience, by undoing the illusion of the reality represented by the theatre (by underlining its socially constructed character).

¹⁷ Dunne and Raby, *Speculative Everything*, 35.

¹⁸ The *Verfremdungseffekt* is often translated as 'defamiliarization effect,' 'distancing effect,' or 'estrangement effect.'

¹⁹ Bertolt Brecht, 'Description succincte d'une nouvelle technique d'art dramatique produisant un effet de distanciation (text from 1940),' in *Écrits sur le théâtre*, ed. Jean-Marie Valentin, trans. Bernard Banoun, Bibliothèque de la Pléiade (Paris: Gallimard. En collab. avec L'Arche, 2000), 1552.

My research of concepts that are alternative to provocation could draw on Brecht. However, *Verfremdung* implies to avoid involving the viewer's emotions—in order to make room for reflection—which is an opposite strategy to the design approach at stake in my research. Indeed, emotions are an important part of the *political*, as reported from Chantal Mouffe in [CH3 | Section 11.B](#).

That said, Brecht may be of inspiration for other matters. For instance, scholars and designers for debate draw on Brecht to describe the way design avoids the audience to be in a passive state of information consumption. For example, Dunne compares Critical Design to the poetic function of language—define by the American linguist Roman Osipovich Jakobson—regarding the way both poetry and critical artefacts resist the viewer's interpretation.²⁰

In order to consider the 'gap' feeling aroused when facing unfamiliarity, I turn to a cousin concept explored in Human Computer Interaction (HCI) and design research.²¹ I think of literary theory and especially the Russian formalists concept of *остранение*, *ostrancy*, strangeness. This concept first appears in the essay *Art as a Process* published by the literature theorist Victor Shklovsky, in 1917.²² In this essay, the author analyses the realist literature of the Russian author Leon Tolstoy. According to Tolstoy, alike literature “art removes objects from the automatism of perception.” The ‘estrangement’ or ‘defamiliarisation’ effect therefore refers to a feeling caused by perceiving common things in a non-familiar and strange form.

This approach of setting a distance between an audience and an artefact is not new to the arts. The 1965 example by the conceptual art practitioner Joseph Kosuth is of particular interest. Indeed, with *One and Three Chairs* (eminently staging ones of the symbols of product design), the ‘artist as an anthropologist’²³ allows the audience to perceive what has become mundane with new eyes, with ‘new senses.’²⁴ This stance, drawing bridges between art and anthropology, elaborates on the pragmatist turn of anthropology. Anthropology, in a post-colonial context, moved away from finding and studying the ‘foreign’ in far remote places.

²⁰ Dunne draws on Jakobson page 35, he also draws on Brecht's *Verfremdung* page 36 and on Marcus's otherness page 96 of Dunne, *Hertzian Tales*. | Other scholars interested in this interpretation mechanism include, for instance, the French design historian Emanuele Quinz who draw on Brecht to describe the 'strangeness' of design in Quinz, Emanuele. 'Prologue, A Slight Strangeness.'

²¹ Bell, Blythe and Sengers refer to Shklovsky's defamiliarisation to “argue that 'defamiliarization' is a useful tool for creating space for critical reflection” and to study domestic technologies with a fresh eye. Genevieve Bell, Mark Blythe, and Phoebe Sengers, 'Making by Making Strange: Defamiliarization and the Design of Domestic Technologies,' *ACM Trans. Comput.-Hum. Interact.* 12, no. 2 (June 2005): 150, [doi.org/](https://doi.org/10.1145/1055558.1055560)

²² Viktor Borisovich Shklovsky, *L'Art comme procédé*, trans. Kak Priëm Iskusstvo, (1st edition in 1917, at Petrograd, in Recueils sur la théorie de la langue politique, Vol 2) (Paris: Allia, 2008).

²³ The artist as an anthropologist is presented as an artist whose subject is society itself, and in which they are directly involved and not external to their subject. | Joseph Kosuth, 'The Artist as Anthropologist, 1975,' in *Art After Philosophy and After: Collected Writings, 1966–1990* (Cambridge, MA: MIT Press, 1993).

²⁴ This is an interpretation made in *Encyclopædia Universalis*, s.v. 'Joseph Kosuth (1945–...);' by Jacinto Lageira, universalis.fr/encyclopedie/joseph-kosuth/ (accessed Nov 2018). | I would like to acknowledge Anaïs Linares who pointed at this reference through her master thesis work.

Instead, anthropologists looked at the marginalised,²⁵ the other,²⁶ the self²⁷ as something foreign and under-observed. Defamiliarisation is a key concept because it describes well the effect intended on the audience. If we take the participants to my experiment as an example, the discourse carried by the *Montre-Éphéméride* may have allowed Marion to take a fresh look at the conventional views held by her relatives on MNDs.

From this perspective, **the unfamiliar side of the continuum can be understood as setting a defamiliarising gap** between one's known situation and the fictional situation to which the artefact pertains. **The distance installed by the artefact encourages scepticism and critical reflection towards a known situation** and the state of things.

20.E Ambivalence Elicits an Uncanny and a Dissonant Feeling, it Results in a Strong Emotional Involvement and a Spur to Speak

When taken separately, familiarity enables the audiences' self-identification, while unfamiliarity entices reflection. But, how does both qualities of an artefact work together?

Auger's critical feedback on mixing familiarity and unfamiliarity provides crucial clues to reply this question:

“The design solution is complex and contradictory, provocative whilst at the same time familiar. Sigmund Freud described the paradoxical reaction humans have—evoking a sense of familiarity whilst at the same time being foreign—as ‘uncanny.’ The term used by social psychologists is cognitive dissonance.”²⁸

Here, the author refers to both Leon Festinger and Sigmund Freud. In the rest of his thesis, Auger only focuses on the concept of the uncanny. The author derives from Freud the formulation “desirable discomfort” or “desirable uncanny.”²⁹ He then gives examples of the uncanny in popular culture, and uses them to shed a very useful and critical light on some of his work developed with Jimmy Loizeau. Here, I would like to dive into Freud's uncanny concept, contrasted to Festinger's cognitive dissonance, in order to suggest conceptual and theoretical foundations to the unsettling of a public.

²⁵ **Walter Benjamin**, 'L'auteur comme producteur.' Allocution à l'institut pour l'étude du fascisme à Paris, le 27 avril 1934,' in *Essais sur Brecht*, ed. Rolf Tiedemann and Philippe Ivernel (Paris: La Fabrique, 2003), 122–144, [www/](#)

²⁶ **Hal Foster**, 'L'artiste comme ethnographe, ou la « fin de l'Histoire » signifie-t-elle le retour à l'anthropologie ?,' in *Face à l'histoire, 1933–1996: l'artiste moderne devant l'événement historique (exhibition catalogue)*, ed. Jean-Paul Ameline (Paris: Flammarion : Éditions du Centre Pompidou, 1996), 499–514.

²⁷ In 1956, the American anthropologist Horace Miner offered an incredibly convincing defamiliarisation experience by writing about the North American people's body hygiene rituals as if being a tribe called *Nacirema (american)*. | **Horace Miner**, 'Body Ritual among the Nacirema,' *American Anthropologist* 58, no. 3 (1956): 503–507, [doi.org/](#)

²⁸ **Auger**, 'Why Robot?,' 150.

²⁹ **Auger**, 145 and 152, respectively.

20.E.1 The Uncanny Involves Emotions and Catharsis

In a book chapter co-authored with Annie Gentes,³⁰ we tried to understand how Freud’s work on the “uncanny” could be relevant to critical design practices. Freud proposed the first consistent theoretical work of its kind on the concept. His theory of the uncanny (*Unheimlich* in German)³¹ stemmed from his analysis of romantic literature, on the one hand, and psychiatric studies with his patients on the other. He analysed how literature of the fantastic produces a peculiar experience for the reader by crafting a narrative in such a way so that neither the reader nor the hero of the story know whether what they are told is the product of the feverish imagination of the hero or if the hero is indeed confronted by supernatural forces. This narrative strategy that strikes a balance between either a natural or a supernatural explanation had been analysed by Todorov. Todorov considers the uncanny as the essence of the Fantastic.³² A number of figures—such as the double, the mirror, and so on—are related to this. These are all figures that introduce a doubt about the uniqueness and veracity of an experience or a subject.

In other fields, like in robotics, the word ‘uncanny’ can describe the feeling of fright felt when facing an anthropomorphic robot that looks too close to a human.³³ Beyond robotics, the concept of the uncanny gives a theoretical ground to understand the viewer’s emotions aroused by facing the ideas of a decomposed body, a jewellery made of bones, a robot that digests living beings, a wristwatch that recalls how you are going to die.³⁴ The field of psychology is useful to grasp how design can sometimes connect the viewer to trauma and neurotic states. **Such involvement of the emotions allows the viewer’s catharsis, and a strong implication** towards the situations depicted by the design project.

That said, playing with the uncanny does not allow to escape the pitfall of provocation. Therefore, in this thesis, the **uncanny** is not employed for its reference to fright. It is rather appreciated for the unease produced when facing **something at the same time familiar and unfamiliar—that is, something ambivalent**, something that has at least two meanings.

³⁰ Annie Gentes and Max Mollon, ‘Critical Design,’ in *Empowering Users through Design: Interdisciplinary Studies and Combined Approaches for Technological Products and Services*, ed. David Bihanic (Cham, Switzerland: Springer International Publishing, 2015), 79–101, doi.org/

³¹ Sigmund Freud, ‘Das Unheimliche (The Uncanny – 1919),’ in *Fantastic Literature : A Critical Reader*, ed. Westport Sandner (Westport, London: Greenwood Publishing Group, 2004).

³² Tzvetan Todorov, *Introduction à la littérature fantastique* (Paris: Editions du Seuil, 1970).

³³ See the expression “uncanny valley” in: Masahiro Mori, ‘The Uncanny Valley [From the Field],’ Karl F MacDorman, and Norri Kageki *IEEE Robotics Automation Magazine* 19, no. 2 (June 2012): 98–100, doi.org/

³⁴ Here, I respectively reference the project *Afterlife* (Auger-Loizeau, 2009), *Bio jewellery* (Kerridge, 2006) see: bit.ly/biojewellery (Web archive), *Carnivorous Entertainment Domestic Robots* (Auger-Loizeau, 2009) see: auger-loizeau.com/projects/robots/, and *Montre-Éphéméride*.

Matthew Malpass refers to ambivalence as a key part of the critical reflection mechanism. According to his recent book, such artefacts may arouse a “dilemma of interpretation:”

“As we saw in [a previous example] the ambiguous objects that characterise critical design practice are made sense of through material that situates the work in an everyday and **familiar context**. [...] This encourages the user to imagine the object in their lives, while simultaneously creating a dilemma of interpretation within the user. This dilemma of interpretation **encourages the user to question** this object and the narrative of use that contextualise it. **It is within this dilemma of interpretation**, and in the suspension of disbelief, **that questions can be asked** of the product design and of the designer’s critical position.”³⁵

I suggest that this dilemma relies on the fact the artefact offers at least two interpretations—a familiar and an unfamiliar one. **Being in a state of dilemma does not leave the audience untouched.** It further fosters critical reflection by resisting interpretation.³⁶

In order to elaborate on ambivalence, I turn away from Freud’s concept and look into Leon Festinger’s one.

20.E.2 Cognitive Dissonance drives audiences to deal with unease, to feel concerned

In 2014, in a paper presented at the Design Research Society conference in Malmö,³⁷ our first intuition with Annie Gentès was to theorise the designers’ play on audience members’ emotions via the work of Sigmund Freud, on the uncanny. This former choice was also influenced by the reading of James Auger’s Ph.D. thesis, drawing on Freud alike. But I came to doubt this initial choice in 2015, after Sophie’s feedback on the *Montre-Éphéméride*, because it did not accurately convey the necessary attention that is needed to craft something poised and ambivalent—that is, something other than a provocation. I therefore searched the literature for a term that must have two qualities:

- First, not to overwrite the richness and complexity of the psychological disturbance.
- Second, to evoke the spur to reflect and react (i.e. the prompt to step into the conversation and not simply be a passive ‘receiver’ of a discourse).

³⁵ Malpass, *Critical Design in Context*, 47.

³⁶ James Pierce’s work on “design resistance” and on “counterfunctional design,” as well as Anthony Dunne’s “toolbox of concepts and ideas” about how an artefact may resist interpretation and use “estrangement to open the space between people and electronic products to discussion and criticism” can be relevant avenues to further explore ambivalence. | James Pierce, ‘Working by Not Quite Working: Designing Resistant Interactive Proposals, Prototypes, and Products’ (Ph.D. Dissertation, Carnegie Mellon University, 2015), 53–97, [www/](#) | Dunne, *Hertzian Tales*, 146.

³⁷ Max Mollon and Annie Gentès, ‘The Rhetoric of Design for Debate: Triggering Conversation with an “Uncanny Enough” Artefact,’ in *Proceedings DRS2014* (Umeå, Sweden, 2014), 1–13, [www/](#)

I found this term evoked in Auger’s quote given earlier.³⁸ A sign of relevance of this choice seems to be that Tharp and Tharp settle on the same term, at about the same time (within a different and compatible perspective).³⁹

The work of the American social psychologist Leon Festinger on cognitive dissonance was developed in his 1957 book *A Theory of Cognitive Dissonance*.⁴⁰ Festinger’s concept refers to, “the feeling of psychological discomfort produced by the combined presence of two thoughts that do not follow from one another.”⁴¹ The psychologist adds that a greater discomfort calls for a greater desire to reduce the dissonance of the two cognitive elements. The person can either reject the situation or rationalise the discordance through unconscious strategies aiming at restoring cognitive balance.

Aesop’s ancient fable, *The Fox and the Grapes*, is often given to exemplify the reduction of cognitive dissonance.⁴² But another example is Festinger’s 1954 study which demonstrated his theory. Festinger studied a millennial sect that had predicted the end of the world, yet on D-Day the world was still there, in total contradiction with the prediction. The most committed members of the cult did not renounce their hard-won belief. Instead, they have reduced the dissonance between a new unfamiliar element—i.e. ‘the prophecy has not been fulfilled’—and the original familiar element—i.e. ‘I have believed in this for years’—by transforming the first element—into ‘we saved the planet through our prayers.’ These many strategies are one of the aspects of Festinger’s dissonance that has been the most studied by cognitive scientists. But, what is of interest when designing for debate is rather the spur to react that is felt by people. The social psychology researcher Joel Cooper, from Princeton University, stresses this aspect in his book from 2007, *Cognitive Dissonance: 50 Years of a Classic Theory*. He recalls how humans dislike inconsistency to such extent that it *drives* us to action so as to reduce our inconsistency. It is not that the members of the cult are sad, disappointed, or would have preferred their prophecy to be fulfilled; it is that they must face the incoherence that its non-fulfillment has created.

³⁸ Auger, ‘Why Robot?’, 150. | I would like to thank the cognitive bias specialists Mariam Chammat and Albert Moukheiber who pointed me to these terms—which I initially overlooked in Auger’s work.

³⁹ The authors refer to the term dissonance in the abstract of a 2018 talk called *Dissonance: Leveraging “The Strangely Familiar,”* primerconference.com/2018/bruce-tharp/ (accessed June 2019.) | This work and the author’s book are not strongly integrated in my thesis because they were brought to my attention after the writing of my chapters 5–8.

⁴⁰ Leon Festinger, *A Theory of Cognitive Dissonance* (Stanford: University Press, 1957).

⁴¹ Judson Mills and Eddie Harmon-Jones, eds., *Cognitive Dissonance: Progress on a Pivotal Theory in Social Psychology* (Washington, D.C.: American Psychological Association, 1999), 3.

⁴² A hungry fox sees a beautiful bunch of grapes that they want. But, the grapes are too high up, out of reach. Disappointed, they give up and leave thinking that these grapes were not ripe anyway. This story follows the following pattern: desire for an object, discovery of the impossibility of obtaining it, then reduction of dissonance by devaluing the object.

According to Cooper,

“Festinger’s insistence that cognitive dissonance was like a drive that needed to be reduced implied that people were going to have to find some way of resolving their inconsistencies [...] people who are in the throes of inconsistency in their social life are *driven* to resolve that inconsistency.”⁴³

This means that an artefact that is ambivalent (both familiar and unfamiliar), **carries two discordant thoughts. It thus triggers cognitive dissonance and drives the audience to consider and deal with the unease of the situation. It entices the audience to feel concerned.** Yet, if the discordance of two thoughts that follows one other entices to change the situation or to rationalise it, may it also stand as a prompt to debate? What is dissonance’s connection with the *political*?

20.E.3 Once Experienced In Public, Dissonance Plays On Norms and Spurs to Express Oneself

In the *Montre-Éphéméride* project, a rejection situation similar to Auger-Loizeau’s *Afterlife* was observable. In the watch dial design, the sentence phrasing and its progression through time intended to capture the determinism of a disease that modern medicine cannot cure. By doing this, it expressed a truth that is not socially convenient to say. However, this was precisely what Sophie rejected. The artefact crossed a sort of ‘red line.’ Sophie’s indignation testified that such an artefact was simply unacceptable.

I propose to discuss this ‘red line’ in the light of sociology and ethnomethodology. Norms are regarded by some sociologists (structural functionalists) as constitutive of the structure and cohesion of society. Norms and values—moral, ethical, political ones—all belong to the aggregation of tacit shared social rules that make society stick together. They can become the standard for making judgments about ‘good’ behaviour or outcomes. Defining them, that is, setting a frame on social cohesion by designating some behaviours as good or undesirable, is called normativity. One of its consequences is to push most social activity towards a generally homogeneous set. For instance, popularly endorsed beliefs (or ‘common sense’) can have normative effects of social pressure and social conformism.

Harold Garfinkel’s concept of “breaching experiments”⁴⁴ is based on the assumption that social rules are often unexpressed, under-questioned and under-discussed (which, incidentally, makes them a relevant area of interest when designing for debate). In order to investigate social rules, he therefore developed an ethnological method to reveal norms by infringing them. Usually, only a few people question the norm before someone disrupts it. This disruption makes the other uncomfortable, eliciting reactions such as bewilderment, irritation, confusion, surprise, or anger.⁴⁵

⁴³ Joel Cooper, *Cognitive Dissonance: Fifty Years of Classic Theory* (London: SAGE, 2007), 3. | Emphasis is present in the original quote.

⁴⁴ Harold Garfinkel, *Studies in Ethnomethodology* (Englewood Cliffs, N.J.: Prentice-Hall, 1967).

⁴⁵ E.g. ordering a fast-food meal devoid of any clothes in order to study taboos against nudity and customs of decency in public space; suddenly talking to one’s own husband as a total stranger in order to study the norms of domestic coupling and family relationships.

What is the link to design?

Developed in the 60s and quite successful among Garfinkel's students (although largely critiqued for a lack of methodological rigour), the method was later expanded. Approaches were taken using an artefact instead of a human behaviour to breach and reveal the norms. In place of ethnomethodology, this was named "techno-methodology."⁴⁶ While breaching experiments target a better understanding of human behaviour, techno-methodology targets the improvement of an artefact (or a technology). It aims at creating knowledge, not only about people, but about an artefact and the interactions of people with this artefact.

In the present study, design artefacts are not used to collect knowledge on the artefact itself. Still, drawing on ethnomethodology gives handles to understand Sophie's feedback.

I suggest to understand Sophie's reaction as being close to the rejections that Garfinkel triggers when infringing social norms. This comparison seems all the more relevant when we consider that the catharsis and reflective issues mentioned above have a strong social component. Indeed, once experienced in a public or in a collective setting, any reflection, emotion, opinion, comes at play with a matter of what is allowed to think, feel, believe (respectively). Let us take as an example a situation where I would openly express a strong appreciation for the *Montre-Éphéméride*'s fatalistic nature in a room filled with Sophie and members of a patients' association. I may sound self-centred, out of my mind, outrageous and generate in the crowd an urge to counter-balance my declaration—i.e. to restore normality. I may also start a discussion about our conflicting opinions and discordant social values. This would be a debate on 'political' matters—i.e. what defines the common horizon that makes a group hold together—conducted in a 'political' way—i.e. fostering the expression of disagreement.

What is the role of the artefact in such a situation?

The answer is two-fold.

On the one hand, the interview with Sophie was quite different from making an unacceptable oral declaration. In Sophie's case, I was not the one openly making the affirmation that triggered her rejection, the artefact was. The design artefact was publicly expressing something that is unacceptable to say about the MND conditions (i.e. through the fatalistic sentences on the dial). But at the same time, it was a familiar, conventional and nice-looking wristwatch. The artefact intended to be ambivalent. Ambivalence may leave the audience with a dilemma of interpretation when both appreciating and rejecting the artefact. But, once in a public setting, ambivalence may create a tension between internal feelings and publicly upholding an opinion—i.e. supporting/rejecting the artefact, or doing both. Ambivalence may hence arouse cognitive dissonance and an urge to speak out.

⁴⁶ Andy Crabtree, 'Taking Technomethodology Seriously: Hybrid Change in the Ethnomethodology-Design Relationship,' *European Journal of Information Systems* 13, no. 3 (September 2004): 195–209, [doi.org/](https://doi.org/10.1080/09697540410001653888)

On the other hand, the artefact's unacceptable discourse is closely related to social norms. This is crucial because infringing social norms stimulates people to step in the conversation to restore normality. This is also a primordial argument because it may impact the methods of designing for debate. It may lead designers to take social norms as a medium.

Practitioners such as Dunne and Raby paved the way in that direction by sometimes calling their productions, “value fictions.”⁴⁷ Indeed, if conventional designs propose alternative shapes regarding the state of known products, value fictions may propose alternative discourses on the state of things. These discourses may be built on a set of unfamiliar social values. This shift from ‘forms’ to ‘values’ is made very clear in DiSalvo’s words when he attempts to distinguish Adversarial Design and Critical Design from other forms of design:

“[Critical Design] differs too from experimental design which seeks to extend the medium, extending it in the name of progress and aesthetic novelty. [...] It **takes as its medium social, psychological, cultural technical and economic values**, in an effort to push the limits of the lived experience, not the medium.”⁴⁸

I hence add to this that a specifically agonistic take on playing with social norms as a design medium would result in crafting ‘adversarial value fictions.’

Finally, setting an ambivalence regarding norms may create a multi-faceted spur to join the conversation, it may be able to indeed spark debate. I hence advance that the **design dissonance may rely on setting a collective (or public) setting in which confronting an audience to an ambivalent and conflicting set of social norms and values**. Drawing on ethnomethodology, I suggest that facing **an artefact that is disrupting what is socially acceptable may spur self-expression**. These social values may hence be taken by the designer as a medium during the design process.

In addition, in order avoid the lexical field of ‘provocation,’ I suggest to select **‘dissonance’ as a term that refers to designers’ approach of unsettling their audience so as to feed critical reflection and spark debate**. The term dissonance will be defined as a proper concept in my final section.

⁴⁷ Dunne and Raby, *Design Noir*, 63.

⁴⁸ Carl DiSalvo, *Adversarial Design*, 18. Quote extracted from the first chapters of the book where the author sets the frame of Critical Design.

20.E.4 A Careful Dissonance?

We now have a range of vocabulary to avoid the term of ‘provocation.’ Nonetheless, how to avoid open provocation in practice? How to avoid that the set of values crafted by the designer results in a brutal infringement of social norms?

We can look at how design researchers describe a failed or a successful artefact. The authors’ description can be regrouped in two categories.

First, a failed artefact is described as being extreme—either **extremely familiar or extremely unfamiliar**. When it is too familiar, the artefact may go unnoticed. When it is too unfamiliar it may turn to open provocation or remain un-relatable—according to Auger.⁴⁹ This approach requests subtlety according to Dunne.⁵⁰ The resulting artefact may be “occupying a fecund middle ground”⁵¹ between the familiar and the unfamiliar, according to Bardzell and coauthors.

A second kind of descriptions corroborates the arguments proposed in the present chapter. It depicts a successfully reflective artefact as having at least two meanings, it is **ambivalent**. Such artefact is not only strange or only part of our world.⁵² It is not only foreign or only legible.⁵³ In addition to the arguments given until now, I would like to stress the fact ambivalence implies that the two meanings of an artefact (i.e. being familiar and unfamiliar) are **distinct**. They may not occupy a space of the design dissonance continuum where familiar and unfamiliar design features are indistinguishable.

⁴⁹ A too familiar proposal “is easily assimilated [...] and would pass unnoticed” according to Auger’s thesis: Auger, ‘Why Robot?’, 145–150.

⁵⁰ According to Dunne’s experience, “a slight strangeness is the key” to craft an artefact that engages an audience with reflection: Dunne and Raby, *Design Noir*, 63.

⁵¹ According to Bardzell and coauthors’ study on Dunne and Raby’s use of provocation, the duo of designers “define a successfully provocative design as occupying a fecund middle ground.” Shaowen Bardzell et al., ‘Critical Design and Critical Theory: The Challenge of Designing for Provocation,’ in *Proceedings of the Designing Interactive Systems Conference, DIS ’12* (New York, NY, USA: ACM, 2012), 295. doi.org/

⁵² Anthony Dunne states, “We hope that people believe our pieces could be part of this world, and that their subtle strangeness intrigues rather than repels.” Anthony Dunne, Interpretation, Collaboration, and Critique, interview by Raoul Rickenberg, 2009, dunneandraby.co.uk/content/bydandr/465/0/ (accessed June 2018). | My emphasis.

⁵³ “I want to highlight what the story does so as to fill out the meaning of the clue-construction device, to make it something legible despite its foreignness.” Blecker, *Design Fiction*, 35.

Hence, the diagram proposed in Fig. 36 can be updated as follows:

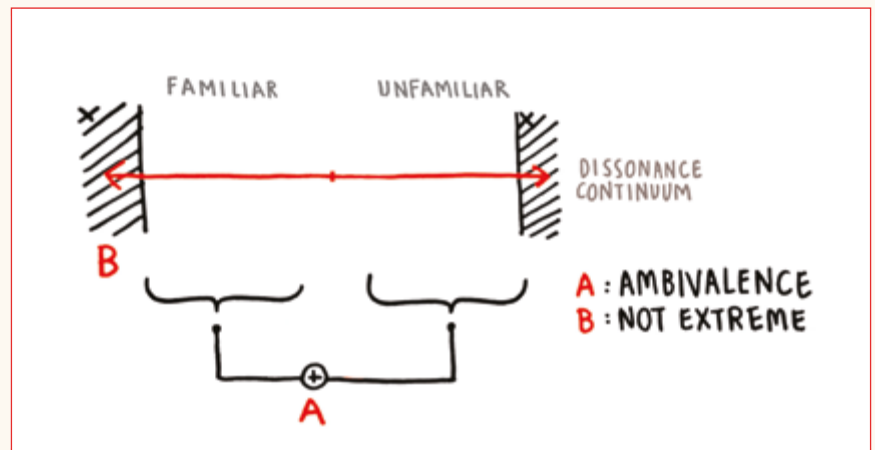


Figure 37 | Updated version of figure 36. Design researchers describe a reflective artefact as being ambivalent and not extreme, so as to elicit a successful dissonance.

The previous diagram is useful to describe the territory that may occupy a successfully reflective artefact, but it does not answer the following question: how to know when a dissonance crosses a red line?

The question of the subtlety is a primordial one because the design triggered dissonance is not a gentle unnoticed familiar-unfamiliarity. It is emotionally moving, disturbing, verging on unpleasantness and irritation. It is conflicting with the audience's known references. It does not leave the audience untouched or unconcerned. Hence, mismanaging this approach is a common and a counterproductive pitfall. In my next chapters, this I will be crucial to redesign an artefact that is indeed dissonant, but that is not strongly rejected by the 60 participants to the final live debate session.

In that respect, working with the previous perceptual bridges may be useful. Bruce and Stephanie Tharp's list of five criteria may stand as an additional and complementary resource.⁵⁴ They actually present them as an answer to the challenge of getting dissonance 'just right.' However, I suggest to look for the answer to my question within the limitations indicated in Chapter 3, about the authorial posture of issue identification. To this light, my question is: how to adjust dissonant design choices without making arbitrary decisions in an authorial posture?

My hypothesis to reply this questions is to study the social norms existing in a public before to manipulate these value systems as a medium. I suggest referring to such an **inclusive audience-oriented approach as a form of 'careful' dissonance**. This term describes the way dissonance is crafted with care (benevolence) for a specific audience (it is pragmatic, situated). Chapter 6 will be dedicated to further develop a careful dissonance in the redesign of *Montre-Éphéméride*.

⁵⁴ The authors propose five criteria: 'Clarity' is proposed as the proportion by which the public understands what is happening. 'Reality' is the level of plausibility or actuality potentially felt by the audience. 'Familiarity' is linked to a sense of awareness and experience. 'Veracity' refers to the extent to which the project is a serious and honest proposal, or attempts in any way to fool its audience. 'Desirability' depends on the degree of agreement or preferability elicited by the project. | **Tharp and Tharp**, *Discursive Design*, 211–235.

21 KEY LEARNINGS The Design Tactic of Dissonance?

In this chapter, I addressed one of design for debate’s functions, the feeding of critical reflection. I wondered: how to describe the way a design for debate artefact unsettles an audience as a way to feed critical reflection? And, how to do this while avoiding the ‘provocation’ lexical field, which seems misleading regarding the subtlety and complexity of this approach.

In reply, I propose to refer to designers’ approach in terms of the tactic of dissonance:

- **Dissonance** is a design tactic that feeds critical reflection and *political* debate by unsettling the public emotionally and cognitively. It relies on setting a collective (or public) situation in which confronting an audience to an ambivalent set of social values, carried by a design artefact. Dissonance entices the public to express themselves, to take part to a discussion on ‘political’ matters—i.e. what defines the common horizon that makes a group hold together—i.e. in a ‘*political*’ way—it entices the expression of disagreement.

This formulation is offered as a hypothesis to be refined and confirmed in the course of the upcoming chapters.

Please note that a design tactic, according to DiSalvo, is “a design-erly means directed towards the construction of publics”—or in other words, towards the political involvement and empowerment of people regarding an issue.⁵⁵ In qualifying this approach as a tactic, I stress the fact dissonance is intended to benefit first of all those people who are debating.

The arguments I collected throughout the chapter to reach this conclusion are the following.

First, when observing that only a part of the features of my first prototype—the *Montre-Éphéméride* (2015)—was addressed, by the rejection comments formulated by a participant, I concluded that provocation indeed impeded on reflection. Examining another designer’s way out of a similar situation—James Auger’s redesign of *Afterlife* (2001-09)—allowed me to pinpoint a key mechanism of dissonance, ambivalence. Reviewing the literature in search of a series of concepts, allowed to describe with subtlety the complexity of unsettling audiences via an ambivalent approach (see the glossary below).

⁵⁵ DiSalvo refers to de Certeau, for whom strategies result from the expression of power and the prescription of behaviour exerted by institutions. Tactics are put in place by people as ways of bypassing or negotiating these strategies. DiSalvo rightly points out that the distinction between tactics and strategies is ambiguous concerning designing for debate, depending on whereas the tactics are produced from within (or together with) the institutions of power. | **DiSalvo**, ‘Design and the Construction of Publics,’ 52. | **Michel de Certeau**, *The Practice of Everyday Life*, trans. Steven F. Rendall. (Berkeley: University of California Press, 1984).

In addition to the artefact's familiarity and unfamiliarity, that elicit self-identification and defamiliarisation (and thus, critical reflection), I came to think that the ambivalent artefact does not only unsettle emotions, like a catharsis would. First, ambivalence engages a dilemma of interpretation that does not leave the viewer untouched—it further fosters critical reflection by resisting interpretation. Drawing on social psychology, I understood the feeling elicited by facing an ambivalent artefact in terms of cognitive dissonance. Cognitive dissonance therefore drives the audience to consider and to deal with the unease of the situation—i.e. to feel concerned. Second, when spoken out in public or in a collective context, I suggested that any emotion or opinion, comes at play with social norms and with what is socially acceptable to feel or to believe. Hence—drawing on ethnomethodology—I proposed that facing an artefact that conflicts with the acceptable may spur self-expression. Finally, because it plays with social norms, I suggest that dissonance may be a spur to debate 'political' matters in a *'political'* way.

Chapter 5's main contribution takes the shape of:

- A glossary of concepts, provided below.
- An attempt of definition which stands as an hypothesis on the tactic of dissonance.

In the next chapters, I propose to further develop and assess the design tactic of dissonance—and especially a careful dissonance.

The following glossary articulates the concepts reviewed from the literature in the present chapter. They allow to overcome (conceptually) the notion of 'provocation,' which was presented as misleading considering the subtlety and complexity of the dissonance tactic. Please note this glossary does not constitute an exhaustive list. It rather lays the ground for working with additional terms.⁵⁶

⁵⁶ Such as the ones identified in the literature by Bruce and Stephanie Tharp: "lack of fit,' 'critical distance,' 'selective contradiction,' 'resistance,' 'incompleteness,' 'friction,' 'gap,' 'cognitive glitches,' 'cognitive estrangement,' 'dilemma of interpretation,' and most broadly as 'ambiguity.' That something is different—not quite normal [...]."
primerconference.com/2018/bruce-tharp/
 (accessed June 2019.)

Glossary of the Design Tactic of Dissonance

- **Ambivalence** is achieved through the juxtaposition of familiar and unfamiliar features in an artefact's design, in the manner of an aesthetic oxymoron, thereby eliciting a dilemma of interpretation. Ambivalence can trigger an impulse to express oneself when the artefact carries a discourse perceived as unacceptable by the participants. (This impulsive feeling is also described, in the literature, as an **uncanniness** or a cognitive **dissonance**.)
- **Cognitive dissonance**⁵⁷ is aroused when two thoughts do not follow one other. It drives the audience to consider and deal with the unease of the situation, i.e. to feel concerned.
- **Critical reflection**⁵⁸ is the activity of thinking which raises awareness of unconscious facets of an experience. Without it, one would unthinkingly adopt values and everyday experiences.
 - **Stimulating critical reflection** means to engage audiences with setting a distance towards something they know, in order to question its overlooked implications (causes and consequences).
- **Defamiliarisation**⁵⁹ is the perception of a familiar situation as if it was unfamiliar. Triggered by non-familiarity, it brings a distance from the known, hence stimulating critical reflection.
- **Dilemma of interpretation**⁶⁰ is a state of confusion of interpretation felt when facing something that has several meanings, something that resists interpretation. It further fosters critical reflection.
- **Dissonance** is a design tactic that stimulates critical reflection and *political* debate by unsettling the public emotionally and cognitively. It relies on setting a collective (or public) situation in which confronting an audience to an ambivalent set of social values, carried by a design artefact. This drives the public to express themselves, to take part into a discussion on 'political' matters—i.e. what defines the common horizon that makes a group hold together—in a '*political*' way—i.e. it entices the expression of disagreement.
 - This tactic is described as **careful** when crafted with care (benevolence) for a specific audience (it is pragmatic, situated).
 - The concept of **design tactic**⁶¹ is borrowed from DiSalvo, who draws on De Certeau's work on strategies put in place by institutions in a position of power for controlling the public. Tactics are counter-strategies to avoid or negotiate control.

⁵⁷ **Festinger**, *A Theory of Cognitive Dissonance*.

⁵⁸ I elaborated on these terms by drawing on Reflective Design (Sengers et.al) who draw on Critical Theory and advocate for a form of design that entices critical reflection. | **Sengers et al.**, 'Reflective Design.'

⁵⁹ **Shklovsky**, *L'Art comme procédé*.

⁶⁰ **Malpass**, *Critical Design in Context*.

⁶¹ **DiSalvo**, 'Design and the Construction of Publics,' 52. | **Michel de Certeau**, *The Practice of Everyday Life*, trans. Steven F. Rendall. (Berkeley: University of California Press, 1984).

- **Emotional and cognitive involvement** of the audience allows self-identification and critical reflection (towards the situation described by the project). It raises the audiences' concern for the artefact, and for the issue targeted. It may be achieved by crafting an artefact that is ambivalent, not extreme and carefully dissonant.
 - Successfully dissonant artefacts are described as **not extreme**, avoiding being 'too strong,' or 'not strong enough.' They occupy 'a fecund middle ground' between the familiar and the unfamiliar.
- **Familiarity** is said of an artefact's quality which allows the viewer's self-identification. It can also elicit pleasantness, appeal, usefulness, and so on.
 - **Unfamiliarity**, its opposite, confronts the audience to a perceptual **gap**⁶²—between what is known by the audience and the design proposal—thereby eliciting a defamiliarisation effect. In the literature, it is often referred in terms of strangeness, foreignness, weirdness, oddness.
- **Perceptual bridges**⁶³ are design features crafted to make an artefact relatable and to manage how much it is relatable (e.g. it can make an artefact little/very familiar or little/very strange). Bridges therefore work like continuums between familiarity and unfamiliarity. These continuums may play on various dimensions (formal aesthetic, culture, knowledge, psychology, and so on).
- The **uncanny**,⁶⁴ understood as a conflictual feeling aroused from facing something that is *at the same time familiar and unfamiliar*, enables an emotional catharsis, an introspective disturbance, close to fright and neurosis. It is easily mismanaged, becoming close to provocation, and can prevent reflection.

⁶² Dunne and Raby, *Speculative Everything*, 35.

⁶³ This definition is elaborated from Auger, 'Why Robot?'

⁶⁴ Freud, 'Das Unheimliche (The Uncanny – 1919).'

« C'est donc une sorte de situation étrange, certaines choses qui sont faites d'éléments familiers (comme un chariot de supermarché) et qui deviennent étranges. Ainsi, les opérateurs ne sont plus perçus comme ceux qui volent des chariots, mais comme des opérateurs légitimes de véhicules spécialement conçus. »

“So it's a kind of uncanny situation, some things that is made of elements that are familiar (like a shopping-cart) and that become strange. So the operators became no longer perceived as the ones that are stealing shopping-carts but legitimate operators of specially designed vehicles.”⁶⁵

— Krzysztof Wodiczko

65 In this quote, Wodiczko is talking about his *Homeless Vehicles* (1988) project, presented in CH1 | Section 1.C.1. In this project, modified designs of shopping carts are used as glass bottle collection devices to generate a minimum income and are used as shelters. Being impressive and large vehicles, they give a visibility (and a status of worker) to people living in the streets. | Quote pronounced in: **CAFKA (Contemporary Art Forum Kitchener and Area)**, *Big Ideas in Art and Culture: Krzysztof Wodiczko* (Kitchener City Hall, Ontario, Canada, 2013), youtube.com/watch?v=otzpjL7c7qQ (accessed June 2014).

CH6 *REDESIGN PROCESS* **Engaging Audiences with Carefully Dissonant Issues Conveyed Through Design**

In Chapter 6 I introduce my second attempt to design a disturbing but not ‘provocative’ artefact—now called ‘dissonant’ artefact. Rather than evaluating the public’s feedback, I discuss my design process and the formal qualities of my artefact in search of how to convey and prompt recognition of a specific issue.

22 AIMS & PROTOCOL Setting the Appropriate Conditions to Redesign the *Montre-Éphéméride*

22.A Introduction

After my first experience with the *Montre-Éphéméride*, it was clear that my artefact could not be presented in front of 60 people to start a debate. I decided to rework my prototype to make it less extreme. But also, I had to question my choice of debate issue regarding my final audience. Indeed, my objective was to spark a debate that seemed relevant to the final public, and which did not turn into a block rejection, but rather into an exchange and mutual contestation.

Now, I therefore address two functions of designing for debate: prompting the recognition of an issue that is under-discussed; and conveying this issue to a public (via a discursive design that is dissonant).

In Chapter 3, I reviewed conventional means to prompt recognition of an issue and notably, ‘top-down’ or ‘authorial’ stances. These stances were limited by the designer’s own blind-spot regarding their privileges. Moreover, the relevance of the debate issues chosen this way is relative to the designer’s ability to take in consideration the viewer’s standpoint.

In this chapter I therefore ask:

- How to engage audiences with a chosen under-discussed issue? And how to do this otherwise than by choosing issues in a top-down way?
- Also, how to make, and how to describe the way discursive designs convey these issues in a dissonant way?

I have two aims: to describe how I empirically turned provocation into a careful dissonance; and to enrich the conceptualisation of how a design carries issues—through a review of the literature.

After explaining how I informed the new design and how I analysed the result (hereafter), I present my redesign process (from the refining of a debate issue to the presentation of a finalised prototype). I then analyse the design features of the final artefact. While articulating this material with pieces of the literature, I discuss how my design process adapted to the audience and what makes design artefacts suitable to convey discourses in an adversarial way. I discuss how my design process adapted to the audience and what makes design artefacts suitable to convey discourses in an adversarial way.

22.B How I Informed and Analysed the New Design

The work of adjusting the debate issues and the corresponding artefacts took one month (from August to September 2015). I drew from Chapter 5's hypothesis according to which design dissonance puts norms at play. I started with refining the debate issue, namely, a social norm to be brought into a state of dissonance. In order to get a sense of what was the shared social values—among the heterogeneous audience expected for the final debate—I drew on the ethnographic study started in Chapter 5.¹

Then, in order to get a better sense of the social norms at play within these communities, from their points of view, I opted for a participatory design process. This process, and the redesign of *Montre-Éphéméride*—called *L'Éphéméride* and presented in the pages to come—was developed through several iterations. The first sketches stemmed from the feedback retrieved in Chapter 5 about *Montre-Éphéméride* (the focus group and the two interviews). A first draught was then presented to Marion during an informal semi-structured interview of 40 min. A later iteration of the final prototype was given to Sophie for 10 days, during which she could use it in the intimacy of her home. We saw each other 3 more times to collect feedback and to adjust the design choices. This included a co-design session of three hours to create the scenario of a user testimony.²

In terms of analysis process, it is important to clarify, here, that my overall study of dissonance and norms conflates with the two research questions of the present chapter. Please note that the assessment of the artefact's dissonance will be addressed in Chapter 7.

Meanwhile, I used auto-ethnography to retrieve the necessary material to take a critical look on the steps of my redesign process.³ Then, I used a semio-pragmatic analysis of the specific features given to the artefact. With this, I attempt to unravel how the redesign conveys the chosen debate issue—and the social norms that are dissonant to the audience's set of references.

¹ Reminder: the study counts 32 interviews (informal ones and 9 semi-structured one-to-one interviews of members of the Commission), the reading of 70 documents they produced, attending 16 weekly meetings, 17 events they organised (including 5 in other institutions). A part of the study allowed to conceptualise the three categories of issues related to the conditions of people living with an MND presented in Chapter 5.

² I met Sophie 5 times (1 hour each time), in Parisian public places (e.g. the café, or a public park close to her place). The first two times allowed to collect feedback on the first prototype (Chapter 5). The three following times punctuated the redesign process.

³ As detailed in Chapter 4, auto-ethnography draws on extracts from my design research journals, pictures, video or audio-recording of working situations and the artefacts produced, which are used as ethnographic material.

23 FIELD EXPERIENCE & DATA Design Intervention via a Co-Design Process

In this section, I want to lay out the necessary material to later analyse how a discursive artefact may convey issues. I wonder how the selection of an issue and its expression through an artefact can be crafted carefully.

During the redesign process, the overwhelming dissonant feeling is the first feedback I addressed. It was formulated by one of the commission members and by Sophie.

Learning from [CH5 | Section 20.E.4 | Figure 37](#), such a feeling could be either due to:

- A lack of ambivalence (i.e. the artefact is either familiar or unfamiliar, but not both at the same time).
- A too extreme use of unfamiliarity.

Inspired by Auger's redesign of the *Afterlife* (2001-09) project—which was made more ambivalent when exhibited for the second time in Barcelona—I wondered how my initial prototype may also arouse positive feelings (juxtaposed to negative ones).

23.A Tempering the Initial Debate Issue

The beginning of the redesign process focused on the debate issue, I looked for a way to temper the concept of *determinism*. I started back from one of my initial mind-maps⁴ (Fig. 38) which allowed to come up with the three categories of Motor Neuron Diseases-related issues, introduced in Chapter 5⁵ (Fig. 39). In both mappings I tried to gather the concepts and issues that were specifically related to the matter of time and determinism within the conditions of people living with an MND.

⁴ Mind-mapping is a part of my workflow. See [Appendix | Intro CH5–8 | The Commission Terrain](#) or maxmollon.com/permalink/PHD_Appendix-CH5-Making-of_monstre_ephemeride.pdf for a preview of this practice used in the context of the Commission's offices.

⁵ It is based on an ethnographic study conducted among members of the Commission and their network of partners. The three categories are given in the next page.

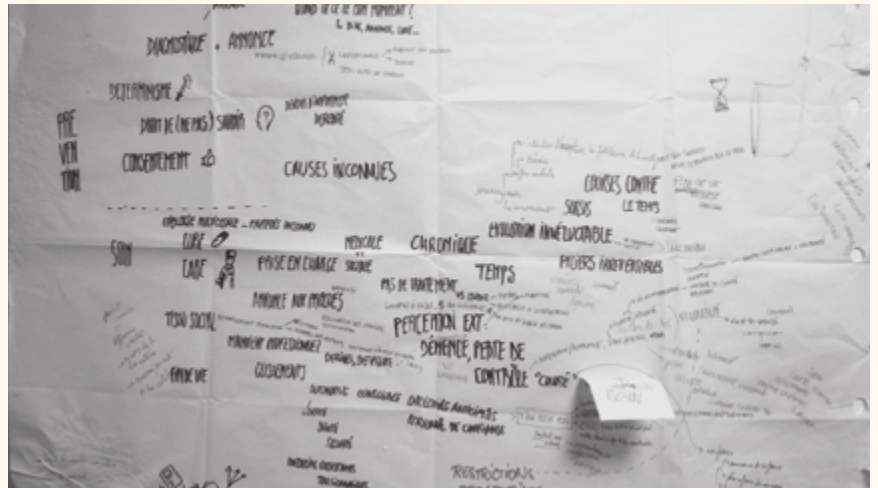


Figure 38 | It is through a mind-mapping process that I gathered and organised the information collected through an ethnographic study, preliminary to the creation of *Montre-Éphéméride*. It led to the identification of the three categories of MND-related issues. Being difficult to read, this map was later transformed into a summarised and digitalised version (next figure).

MAPPING OF EXPLORED CONCEPTS		
MYSELF AS AN ILL PERSON (APPEARANCES)	THE OTHER (DEPENDENCIES)	TIME (INEVITABLE)
Distorted identity, illusion: I have invisible, misunderstood symptoms	Empathy, understanding our mutual difficulties	Unavoidable loss: urgency, planning and anticipation
VS My visible symptoms define who I am publicly	Confidence in self/other "I surrender to you"	Evolution: chance and (in)fortune
My difference excludes me	The dependent person is opposed to the accomplished person in modern society	Incurable: determinism VS relief of identifying the culprit of my troubles
VS My rarity is precious	Caregivers' exhaustion	Incurable: idleness VS hope for a cure

Figure 39 | Mind-mapping of the three groups of debatable topics introduced in Chapter 5. This mapping, organised in a list of issues, was the one presented to the commission together with the *Montre-Éphéméride* artefact and the 11 other design proposals.

In the next mind-map, I attempted to spatially reorganised the concepts related to time and determinism, borrowed from the previous mappings.

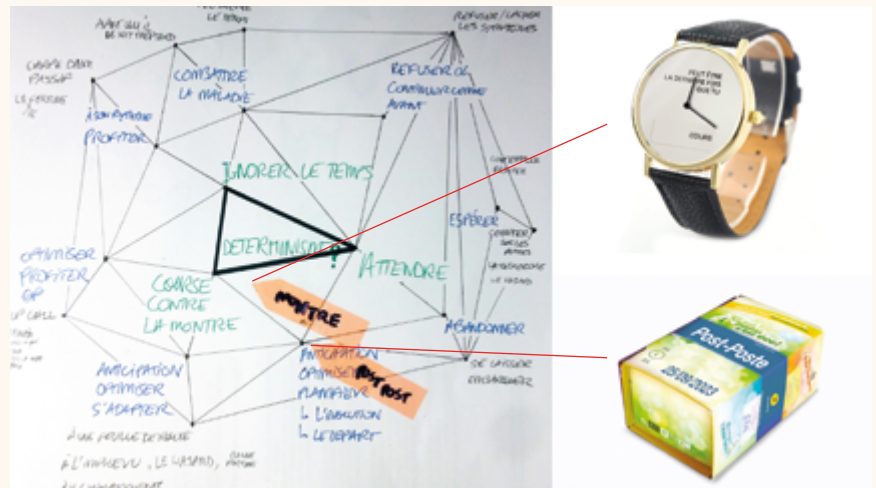


Figure 41 | This visual was presented to the Commission to discuss the redesign process. Two of the twelve design proposals initially showed to *Espace Éthique* are displayed on the right-hand side. Orange arrows position these two proposals on the map according to the discourse they carry and according to the audience interpretation.

Figure 40 is a (subjective) mapping of different stances that can be taken by people (mainly people with a disease) when facing the MND diagnoses. It was refined with the help of a philosopher of the Commission. With this, I initially intended to visually understand which debatable topics were left unaddressed (and how they could be mobilised within the next design). I used the mapping as a framework to understand the values carried by the *Montre-Éphéméride* and how to expand the number of concepts evoked by the artefact. Also, this allowed to pinpoint unaddressed concepts that could be later embodied in the redesigned artefact (i.e. “enjoying life at one’s own rhythm,” “refusing the diagnosis and continuing like before,” “hope”).

During a focus-group with the Commission, we used the mapping to identify the concepts of ‘empowerment’ and ‘free will’ in order to temper the one of ‘determinism’ conveyed by the watch. Juxtaposing, in the artefact’s design, elements that arouse a feeling of free will and of determinism was a form of aesthetic oxymoron. Being familiar and unfamiliar, or rather, positive and negative, it would confer an ambivalence to the artefact.

23.B Identifying a Norm to Be Brought in Dissonance

After the lack of ambivalence, the second feedback that I addressed was how *Montre-Éphéméride* employed unfamiliarity in a too extreme proportion—from the point of view of a person that has an MND. Indeed, Sophie’s visceral rejection of the deterministic nature of *Montre-Éphéméride* was interpreted, in Chapter 5, as if the artefact passed a red line regarding the acceptable, or regarding social norms.⁶ Here, following Garfinkel’s methodology, I attempted to transform what was considered as a debatable issue by the stakeholder, into a norm to conflict with. Drawing on my design research journals, I provide a summary of this redesigning process.

⁶ By drawing on ethnomethodology, I thus made the hypothesis that bringing a social norm in a state of dissonance could be a way for a discursive design to stimulate audience reflection and engagement with a *political* debate.

I first followed Garfinkel’s method which, initially, expects to shed light on how social norms regulate and give meaning to everyday behaviours.⁷ The method roughly consists of:

1. Making a hypothesis of the existence of a norm.
2. Performing a behaviour that is out of this norm (for instance, in a public space).
3. Collecting reactions as a material to evaluate the hypothesis.

The first step is to get a better picture of what are the norms. At that point in the design process, I spotted that the team assimilated the *Montre-Éphéméride* to the “determinism” of a diagnosis.

Second, I perceived the existence of a consensus about the unacceptability of determinism and fatalism among heterogeneous members of *Espace Éthique*’s usual audiences. Yet, despite this consensus, some shifts of perception existed between different standpoints (the mind-mapping given earlier partly reflect them). Moreover, the voices and points of view of people who have a disease seemed (to me) underrepresented within *Espace Éthique* events.⁸

Hence, my ‘guess’—of an existing social norm to conflict with—took root in Sophie’s interviews. In empathy with her, I constantly had to step back and started by wondering what was the norms targeted and infringed by *Montre-Éphéméride*, initially. The norm it infringed could be phrased as follows—*one should not come to summarise the MND diseases with the fatalism and determinism carried by such diagnoses*. The artefact intended to start discussions on the fatalistic postures and discourses evoked by the Commission, regarding MNDs.⁹

Based on further discussions with the Commission, and drawing from Chapter 5’s conceptual insights, I decided that the redesigned artefact would aim at two things:

- Bringing together two opposite threads of concepts in a sort of oxymoron (determinism VS empowerment and free will).
- Deeming the feeling of fatalism associated with the concept of determinism.

⁷ Garfinkel, *Studies in Ethnomethodology*. | Stanley Milgram et al., ‘Response to Intrusion into Waiting Lines,’ *Journal of Personality and Social Psychology* 51, no. 4 (1986): 683–689, [doi.org/](https://doi.org/10.1037/0022-3514.51.4.683) | George Ritzer, ‘Ethnomethodology,’ in *Sociological Theory*, 4th ed. (New York: McGraw-Hill, 1996), 778. | Erving Goffman, *Behavior in Public Places: Notes on Social Organization of Gatherings* (New York: Free Press, 1963).

⁸ Reminder from the Aims & Protocol section: in order to get a better sense of the social norms at play within these communities (from the point of view of a person living with an MND) the refining of the debate topic drew on 4 interviews and a 3h co-design session with Sophie.

⁹ For instance, the Commission reported a patients’ association testimony about all the medical equipment reviewed by doctors, with their patients, from the start of the SLA disease.

I formulated the norm brought in a state of dissonance as follows:

- **Debate theme targeted:** Deterministic and fatalistic discourses and postures regarding MNDs can be summarised in the phrase, “this will not be a fight [...] This is going to be a very heavy defeat.”¹⁰
- **Norm (identified through a co-design process):** Deterministic and fatalistic postures ‘should not’ come to summarise the diseases because, in doing so, such postures impose upon people arbitrary expectations of the kinds of life experiences to be had.
- **Infringement of the norm:** It may be achieved by regarding fatalistic postures as ‘normal’ and by taking determinism and temporal pressure as shared values (and as primary design principles).
- **Careful ambivalence:** In order to avoid total rejection, the artefact may play with notions of free will and empowerment.
- **Goal:** The goal is to better understand the arguments and beliefs underlying the norm in the communities represented by the participants. These included identifying the variety of reactions/postures/representations expressed in reaction to the one presented and understanding the diversity of the relations maintained with MNDs (both divergent and assenting points of view) within the usual audience of *Espace Éthique* and the new public concerned by the MND Plan, gathered for the first time.¹¹

Based on this list, the Chapter 7 will review the method put in place to identify a norm and to bring it into a state of dissonance.¹²

23.C Tempering the Initial Artefact

To co-design my artefact, I needed to integrate critical suggestions made by Sophie, Marion and the Commission.

I hence searched for design features to contrast determinism by evoking a feeling of empowerment, in the watch’s design. The Commission suggested doing this by presenting several projects during the debate session in order to balance the first artefact with other ones. However, there is not enough time for such extended debate during the final workshop. It was necessary to either inject contrary values into the project itself or to design a new and more accomplished artefact.

¹⁰ As given in Chapter 1, this paradigmatic quote is taken from Stephen Hawking’s character, answering his wife, in James Marsh’s 2014 movie: *The Theory of Everything*.

¹¹ The debate workshop would happen during the first out of the five annual Summer University, programmed during the 5 years of the MND plan.

¹² That being said, it is important to note that the debate issues reformulation process was not clearly separated into two phases. It did not happen as a conceptual reformulation phase followed with a simple translation of a discourse in an artefact. Rather, the crafting of the discourse conveyed by the artefact and the design of the artefact’s features happened simultaneously, through several iterations.



Figure 43 | First two images: the making-of-the physical prototypes of *Montre-Éphéméride*. Last image: three final versions of the watch (displaying the logo of the French National Healthcare Insurance system to make the object look familiar—and sponsored by the government). The watch positioned in the middle is different from the two others. It proposed a (more) positive and less provocative message, “I can still ... go get bread by bike.”

During an interview with Sophie, these names and these sentences did not prove successful. In fact, while reduced by some of the sentences chosen, the deterministic feeling was still overwhelming to Sophie.

Drawing on previous interviews, readings, discussions with the Commission and especially discussions with Sophie, I considered these attempts as dead-ends.

They were not satisfactory because they were not ambivalent enough. I had the feeling that the implication of degeneration through a series of sentences was too literal. Therefore, I revised the shape of the watch itself.

My second step was to look into the *Memento mori* concept. It is a Latin expression meaning ‘remember that you’ll die.’¹³ It is also an artistic genre that aims to recall the mortality of the human condition. Often associated with the attitude of *carpe diem* of Horace’s poem, this Latin phrase verges less on hedonism than on a profession of faith. But more interestingly, *Memento mori* also refers to a considerable history of watchmaking that addresses the inevitability of passing time and thereby, death.

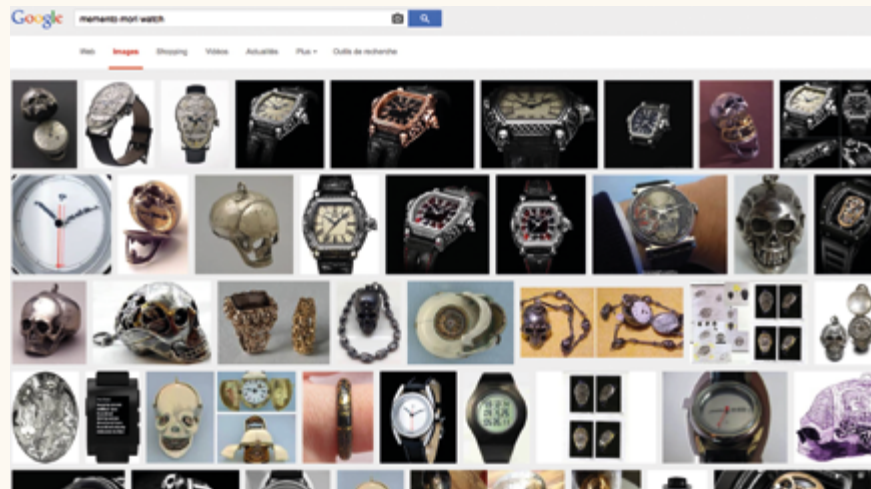


Figure 44 | Initial results of an Internet search of the request “*Memento mori* watch” extracted from my design research journal.

I anticipated that literally drawing on this watchmaking tradition would not be beneficial. First, it would directly evoke death and determinism and second, this kind of aesthetic would add too many layers of meaning and distraction to the watch. However, this was a stimulating start. So, in turn, I tried to design watches.

In the extract of my research journal given just now, increasing the ambivalence of the artefact was done by adding a second function to the one of giving time. This function was related to memory (and to the loss of memory).

Then, still in the watchmaking domain, I found inspirations in a rich corpus of design and contemporary-art pieces (as shown in the online part of my design research journal¹⁴ and previewed here).

¹³ Memento mori literally means “remember you must die” according to the *Oxford English Dictionary*, s.v. ‘Memento Mori.’

¹⁴ See this online appendix:
maxmollon.com/permalink/PHD_Appendix-CH6-Making-of_Ephemeride.pdf

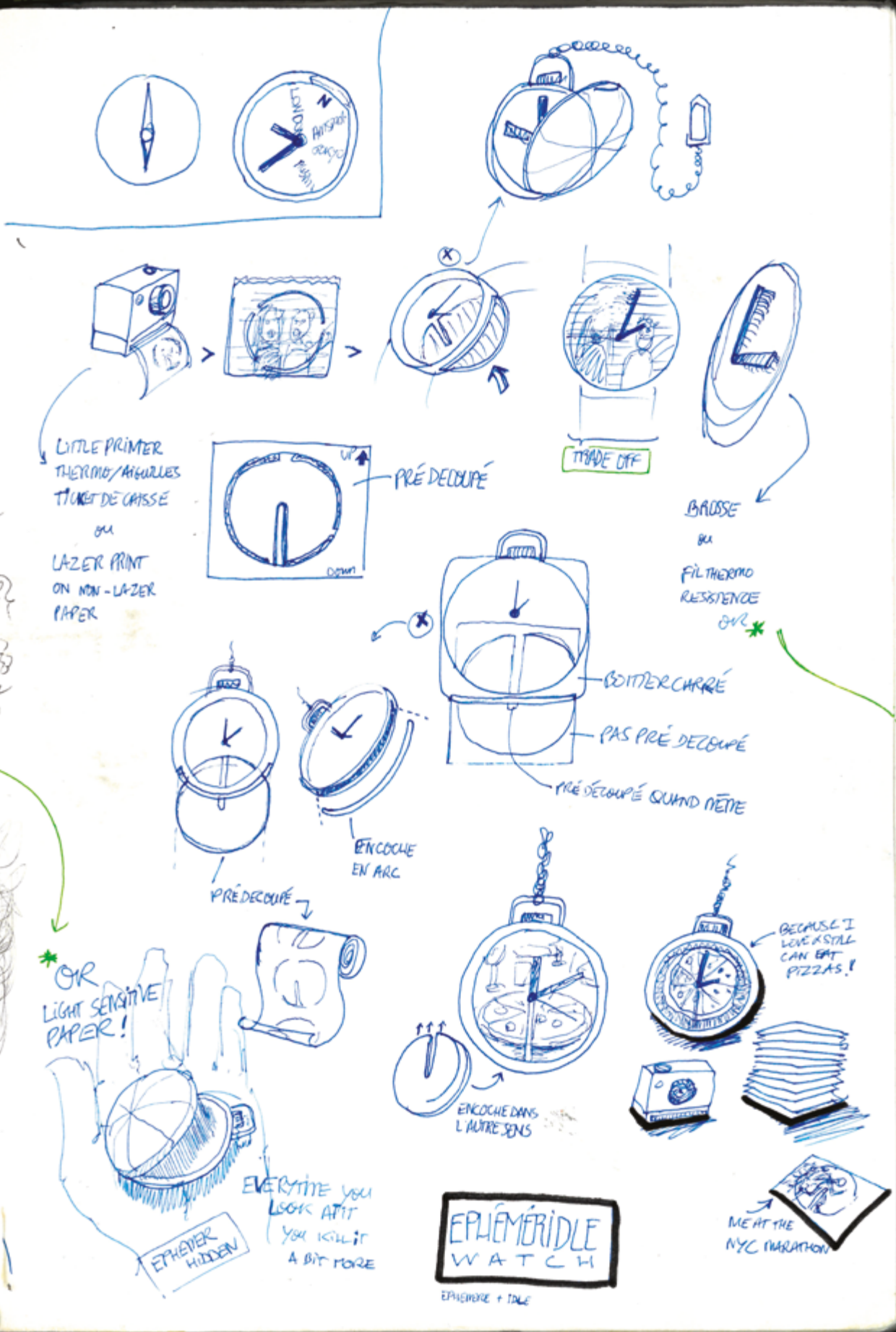


Figure 45 | The first watch in the upper-left corner has several hands that do not indicate time, but the geographic location of friends. The second concept, explored in the whole page through different versions, comes with a camera. The picture taken is placed in the watch dial's background. In one of the watch's version, the handles slowly erase the picture. In another one, the picture is (sensitive to, and is) slowly destroyed by sun light. A last version simply allows to display pictures of memories (e.g. "me at the NYC marathon" written in the bottom-right corner).

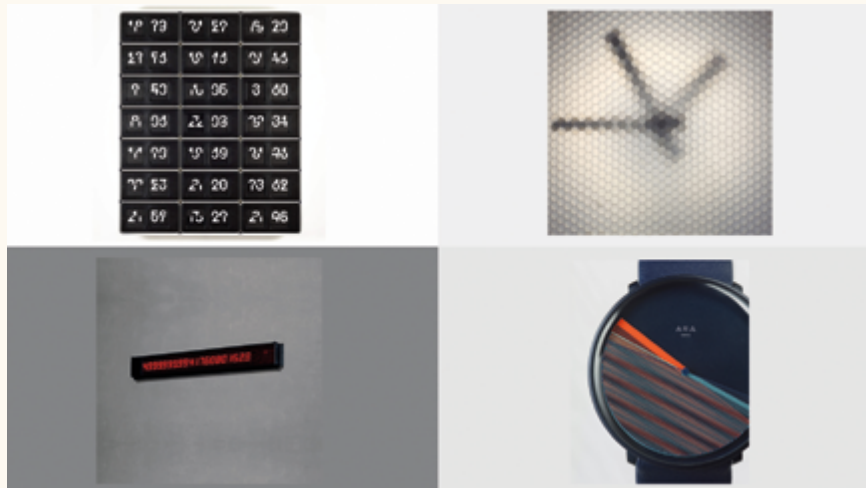


Figure 46 | Top-left to bottom-right: Almond's *Perfect-time*, 2012; Azambourg's *Horloge Pixel*, 2014; Gianni Motti's *Big Crunch Clock*, 1999; ARA Watch's *Lareida*, 2014.

Based on these inspirations, I attempted to explore different shapes of watches and to constrain the functions of reading Time.

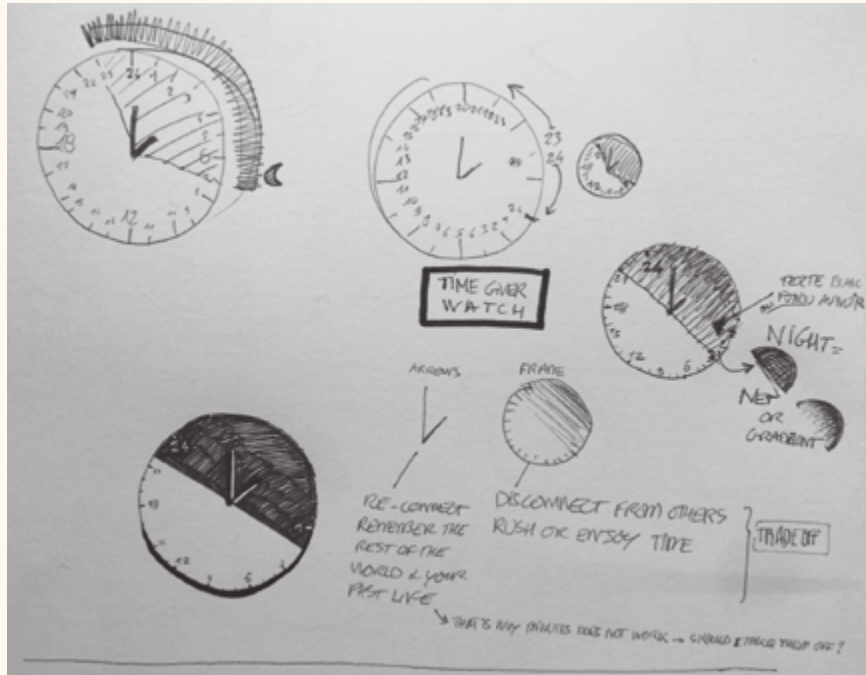


Figure 47 | Various attempts to reduce the feeling of determinism by counteracting or complicating access to time reading. Upper-left, 24 hours clock dial. Upper-middle, an uneven distribution of the space between each number gives the impression of having more time between 11 pm and midnight. On the right-hand side, a gradient in the background makes it increasingly difficult to read the time between 9 pm and 3 am.

During the iteration phases, I tried more and more to integrate Sophie and Marion's feedback. For instance, this intimate artefact could be used in the private space of the home, like a clock upon the wall. My next sketches therefore progressively got rid of the shape of the clock and its functions, coming closer to being a note-pad or a calendar. I nevertheless kept the counter-functional idea of a darkening gradient that would make it increasingly difficult to use the artefact.



Figure 49 | Digital representation of the previous sketch, entitled the *Éphéméride Clock*, built after Sophie's redesign suggestions. The explanations of the empowering and deterministic design features are given in the next pages.

Keeping in mind Sophie's feedback, I was striving to bring together the two opposite concepts of 'determinism' and 'empowerment.' Yet, I came to get rid of the clock because I realised that part of the determinism came from the appearance of a clock and the normative representation of time that it imposes on people. Indeed, how do '24 hours' feel to someone that has been announced 2 years of life expectancy?

Once the clock removed, the device was therefore renamed as *L'Éphéméride* and became the final artefact used for the participatory debate session. It is presented hereafter.

23.D Material for Introducing the Final Artefact, *L'Éphéméride* (2015)

The following pages contain the material provided to the audience during the debate session—the texts, photos and videos are presented in the same order in which they were presented during the final debate. The text is not strictly identical. It was extended and adjusted to the manuscript format for legibility reasons. This material will be analysed in my Analysis & Results section.

L'Éphéméride

1/2



L'Éphéméride is an unusual calendar designed to be used by people with an MND and their relatives. It does not contain any dates, but the gradient made by the colours of its pages symbolises the passage of time with the first one being white and the last one being black.



L'Éphéméride is based on the belief that people with an MND have very different and intimate perceptions of the passing of time, varying from one patient (and pathology) to another. Nonetheless, facing 'time' and 'degeneration' is an experience common to all. For such a way of life, is a regular calendar still relevant? As an answer to this question, *L'Éphéméride* suggests a calendar with a colour gradient instead of a normative scale of time.

How does one react to such a heavy diagnosis announcing a predictive model of the evolution of symptoms? Does 'non-curable degeneration' inevitably connote a sense of fatalism? This calendar tackles such questions by displaying on each page—even on the dark ones—the message "Today I will" as an invitation to reflect on ephemerality and to take action against fatalism despite the slow progression towards the darkest pages.



Watch Françoise's video testimonial at <http://bit.ly/lephemeride>



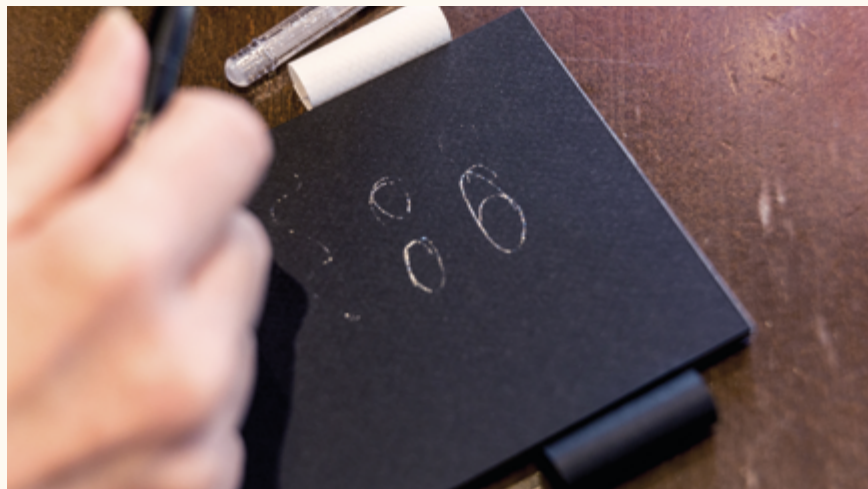
In this video testimonial, Françoise gives her feedback on fifteen years of living with her disease, Multiple Sclerosis, and with *L'Éphéméride*.



Françoise also made the following remarks off-camera: "I use it as a memo, a secret diary, and as a piece of memory. Sometimes, others leave messages to my attention."



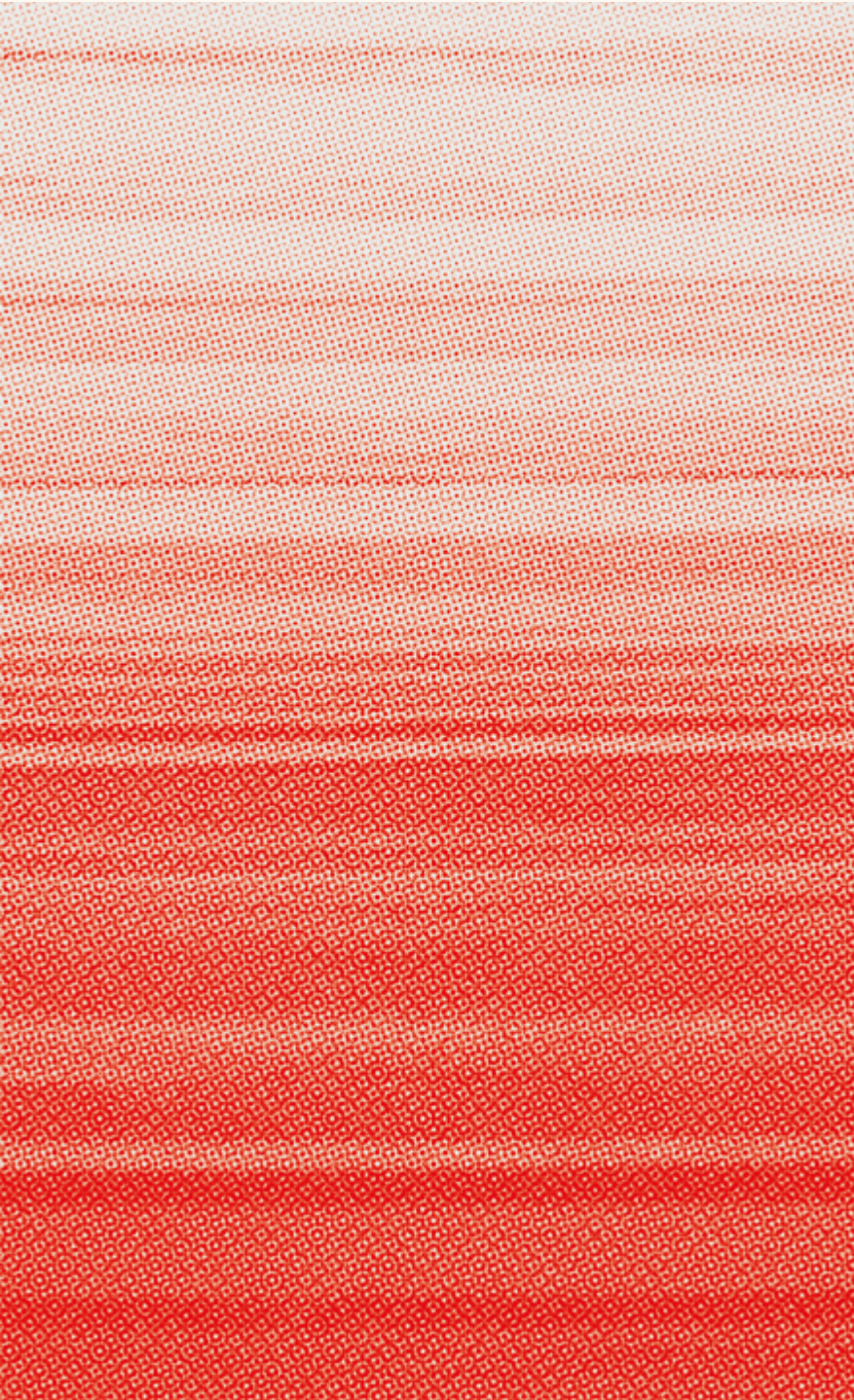
For me, it is like a spur, a challenge I set to myself, I must fight it every day."



"I can't wait to reach [the] black pages.
I love silver pens, I already bought one!"



In addition to this, a special page is hidden among the black ones in case the user did not think of buying a white pen (which is not provided with the pad).



In order to refine this final artefact, I made a version of *L'Éphéméride*. I invited Sophie to use it in the intimate space of her home. I left her a copy of *L'Éphéméride* for 10 days. Her feedback was mostly framed in terms of ergonomics and improving the object's usability. However, she also shared some comments on her personal relation to the object, as well as the relation of her family with the object.

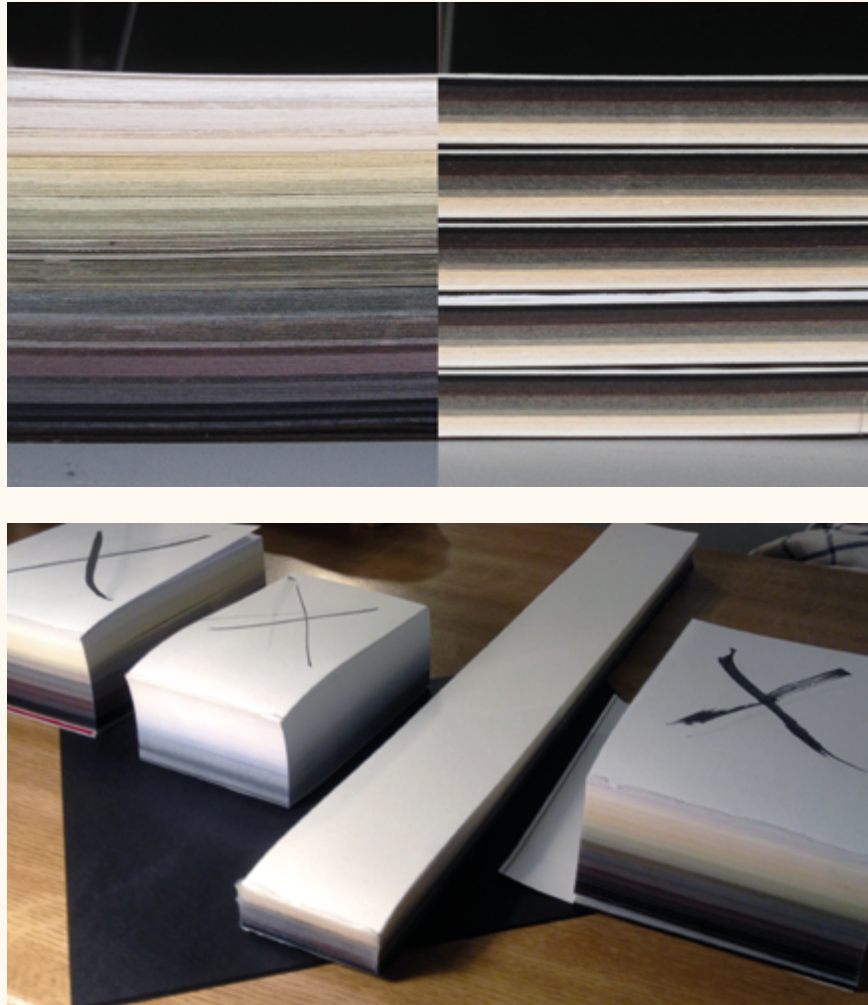


Figure 50 | Pictures of the making-of. Testing the colours and shape of different versions of the pad, taking into account Sophie's feedback (Especially her ability to rest her hand on the surface while writing).

Based on Sophie's feedback, I adjusted some features regarding the usability (size, weight, hanging system) and formal aesthetic (colours). I tempered the deterministic feeling (adding one hidden dark page with a special inscription). I also made the deterministic feeling stronger (providing the artefact with only one black pen and an empty white pen holder in order to increase the dramatic tension of being forced to write on black pages with a black pen).

Additionally, I followed the Commission's suggestion from Chapter 5—in order to contrast the discomfort of facing the artefact, a contented user testimony was added. This testimony is entirely based on Sophie's (true) life story. It was shot with a person recommended by the Commission, living with the same disease (Françoise, which is not a professional actor).

It was released in the form of a video, and within a slide presentation displaying pictures and quotes of the rhetorical user's feedback (the pictures were given just before). I also made these tensions and ambivalence emerge in the textual material presenting the project.

To conclude, **I turned the focus of my redesign process from aiming at a debate topic (chosen from the stakeholder's point of view) to embodying an infringed social norm (chosen from the point of view of people living with a disease).** This social rule is expected to be common to the Commission's usual audiences, who may attend the final debate session during the Summer University. I noticed that the point of view of patients on that topic is under-discussed, in *Espace Éthique*'s context.

Through a participatory design process with Sophie, I attempted to adopt her standpoint. I came to consider the ephemeral wrist watch as a dead end. The redesigned artefact took Sophie, Marion and the Commission's critiques and suggestions into account (the artefact is usable in the home, it displays a positive sentence, the project integrates a user's testimony). **The final artefact intends to infringe the social norm**—being built as if deterministic and fatalistic postures do actually summarise and define the condition of people living with an MND—it takes for granted that death and the disease evolution are ineluctable. **Still, it is 'careful' in the way it attempts to represent determinism in a very subtle way (a colour gradient). Indeed, the artefact has been redesigned to be at the same time, less deterministic (not extreme) and empowering (and therefore, ambivalent).**

24 ANALYSIS & RESULTS

Unravelling the Dissonant Discourse Conveyed by My Final Design

I wonder about the audience’s expected experience. What does the artefact’s features may convey to the audiences?

24.A Issues

The issues¹⁵ targeted by *L’Éphéméride* were chosen to temper the infringement of the norm by being less extreme (the issue is not addressed frontally by the project) and by being made ambivalent. Regarding ambivalence, the project materialises a form of oxymoron between determinism and empowerment, as described in the archives of my design research journal, when I first presented the artefact,

“*L’Éphéméride* intends to function like a notepad on which you can write your desires of activities and thoughts in order to **regain power over your condition as a person affected by a motor neuron disease.**”

The rest of the text addresses other features that are not strictly pertaining to the choice of issues. It is useful to understand the explicit intents of the other design features, detailed hereafter. It goes as follows,

“The pages are to be removed when full, to be employed at one’s convenience (diary, trash, to frame, to offer, and so on). Once placed in a bedroom—an intimate space—the pad may be used by different people. It becomes a communication interface for both patient and caregiver. The pages darken one after the other and go as far as turning completely black until one cannot write anymore. However, there is nothing stopping you from acquiring a white pen.”

¹⁵ Reminder: *L’Éphéméride*’s design intends to infringe a norm guessed as relevant in the context of the Commission’s usual audiences. Another way to put this norm is that ‘one should take care of avoiding confronting people suffering from an MND with fatalistic discourses.’ The artefact infringes this norm by considering as ‘normal’ the inevitable loss of the person’s ability against passing time.

24.B Artefact

The artefact seems familiar, user-friendly, and respectful of the shared social values. The sentence it displays and the ergonomic quality of the device provides, notably, a positive user experience:

1. **The indication “Today, I will...”:** This represents a call for action, an invitation, or even a spur to challenge the user to fight their¹⁶ symptoms every day as a strategy against the loss of capacity.
2. **Attaching the string to the wall or upon a table:** The pad may be pinned against the wall or used on a table surface. It is small enough to be stored in a drawer as its size has been adapted for these purposes.
3. **Large surface (for resting the writer’s hand):** The width of *L’Éphéméride* object is large enough for users to rest their hand on its surface despite experiencing difficulties to write due to their condition. Nevertheless, it is not small enough to be carried away. It has to be kept in a private space.
4. **The binding:** Glue binding is worked in such a manner that even those hands which have difficulties to grip can pull off the pages of the object.
5. **The hidden dark page and the white pen holder:** The page forwards the suggestion of acquiring a white pen in case the user did not think of this earlier. This contributes to encouraging hopefulness in the user and also suggests freeing oneself from any predetermined usages of the object.
6. **Disposable sheets:** These may allow the user to choose whether to keep pages or to throw them away—in other words, to choose between clinging on to memories or discarding them.
7. **Colour gradient:** Instead of the norm of time, the gradient allows the users to consume the object at their own speed, whether that be within one year, 40 years, or several pads used within the same year.

Unfamiliarity, un-friendliness, and the infringement of the social norm is evoked by proposing a negative experience for the users—through the symbolic choice of colour, the lack of ergonomic qualities (black ink on black paper), and the message that can be taken negatively:

8. **Dark colours and pastel colours:** These two colour categories constituting the gradient also evoke the fatalism of a diagnosis and the loss of capacity. They connote the unstoppable evolution of the situation over time. Dark colours can refer either to the progressive loss of capacities or the waning of a state of mind (i.e. positivism).
9. **Linear gradient:** The ‘linearity of the gradient’ conflicts with the representations of these diseases from the point of view of the affected individuals. It suggests a linear amplification of the symptoms which is an inaccurate generalisation for almost all cases and shows the limits of a generic point of view on these diseases.

¹⁶ Reminder, the plural form ‘they’ is used as gender-neutral pronoun.

10. **Glued binding:** It ‘binds’ the user to a linear use. Once the predetermined order of the colours is added to a glued binding (instead of a spiral one), it evokes the unavoidable and stigmatising power of the diagnosis and of the theoretical models of these diseases.
11. **Black pen:** Dark pages are disabling the owner. The pad comes with only a black pen in order to compel the owner to choose between ceasing writing altogether or to acquire a white pen to proceed once the black pages are reached. It ambiguously reinforces the powerlessness against one’s incurable condition by challenging ‘free will.’
12. **The indication “Today, I will...”:** This declaration appeals to the individual to make the most of their remaining time and capacities.
13. **Disposable sheets:** Pages which can be easily discarded could potentially suggest that memories and actions are also disposable.

24.C Communication Material

Familiarity. The communication material—name, texts, aesthetic, logo—also contribute to reaching out to the audience by depicting a pleasurable, satisficing experience of the artefact:

14. **Video testimony (satisfaction):** The video is a central element in the communication apparatus since it tempers the dissonance by featuring a user who is not outraged. The character gives her feedback on using *L’Éphéméride* for fifteen years, ever since her Multiple Sclerosis diagnosis. In addition to offering hints on its different uses, the video shows how people with an MND can personalise this object by interweaving it with their experiences over a lifetime.
15. **Video testimony (probability):** The character relates Sophie’s real memories of the past fifteen years.¹⁷ Her memories were interwoven with fiction. For instance, Sophie told me she would have store pages inside the “magic box” once given to her by her mother, the box therefore appears in the video.
16. **Video testimony (mundane aesthetic):** The video was shot in a documentary style (instead of forms such as found-footage or advertisement, for instance). A maximum of two cameras were used. The scene takes place in a typical Parisian café. These choices contribute to making the fiction probable, to anchor the story in the patient’s everyday life and in the community’s known references regarding the perceptual bridge of formal aesthetic.
17. **Texts, quotes, and slides (rhetorical use scenario):** Part of the testimony is given as slides. They show different ways of using *L’Éphéméride*—a trace for memories, a reminder or a secret diary, a message board, and a space for self-expression.

¹⁷ Sophie and I spent a 3h co-design session to insert, into the video testimony scenario, examples of how she could have used the artefact throughout her life.

This last element draws on ‘empowerment’ and is key to contrast the strong uncomfortable feeling of such a stigmatising artefact. The character’s use of a sliver pen on dark pages is a proof of ‘free will’ and shows how black pages are not a fatality but an opportunity to express oneself differently.

18. **Name (*L’Éphéméride*):** In French, *Éphéméride* is the name of a block calendar consisting of 365 pages. Displaying the date and a pearl of wisdom for each day, the pages of this calendar are disposable and, therefore (as the title suggests), ephemeral. Choosing this name plays on the cultural dimension of the perceptual bridge. It anchors the artefact into French popular culture, both in terms of imaginary as well as existing uses. The formal aesthetic dimension is also employed. A simple Internet search will reveal the formal similarity between the two artefacts.

Unfamiliarity. A sense of rejection towards the artefact’s identity (its name and logo) is also installed:

19. **Name:** By referring to the word ‘ephemeral’ (in its French equivalent), this name suggests to people that their abilities are ephemeral and therefore short-lived.
20. **Logo:** In keeping with the implications of the title, the letters of the logo gradually fade away.



L’Éphéméride

L’Éphéméride

L’Éphéméride

L’Éphéméride

Figure 51 | View of the movie shooting and movie editing phases | Logo (Bottom).

24.D Situation in Which Artefacts and Audiences Meet

The way to present *L'Éphéméride* to the audience was orchestrated so as to facilitate the circulation of speech. This part of the project is not within the main focus of the present chapter.¹⁸ This information is given now because some elements are the continuation of previously introduced design features.

The dissemination of the different pieces of the communication material was planned in three steps in order to manage the progressive emotional involvement of the audiences.¹⁹ A first step would be to present the photographs of the object and to collect questions of misunderstanding prior to launching the debate. (e.g. For who is this object? Who made it? Etc.). A second step would allow participants to manipulate the object (some built prototypes distributed in the public). Lastly, the video would allow to mitigate the participants' reactions by showing the fictional testimony of a contented user. Debate sessions took place after each step.

Also, in order to increase the project's believability, I had to stage myself. I claimed to be conducting research on the use of *L'Éphéméride* within the ethics commission, and that the object had, in fact, existed and been used for the past fifteen years (designed by someone else). This lie would be revealed to the audience over the second day, during the second workshop.²⁰

¹⁸ Indeed, the Chapter 7 is dedicated to review the participants' feedback during the final debate situation and the Chapter 9 presents a specific experiment on communication situations.

¹⁹ This step-by-step process also served to evaluate the effects and relevance of the communication material.

²⁰ In order to ensure the believability of the fictional artefact, this tricky choice must be made. The audience could not seriously consider the user testimony—i.e. someone living with the artefact for 15 years—if I revealed I am the designer. I was 30 at the time of the debate session.

24.E Interpretations

I initially asked how may the ambivalence of the artefact's features be interpreted by the debate participants.²¹

The recurrent criteria on which the project played, when carefully crafting a dealing of dissonance, point at two remarks:

- **Unfamiliarity was achieved by proposing a user-unfriendly experience** (being disempowered by writing with a black pen on black paper). Research works on design resistance could be used to discuss this—I think of Anthony Dunne's "user-unfriendliness" and James Pierce's "counter-functionality."²²
- **Familiarity was reached by considering the audiences as if they were *potential users* of the artefact.** This was also done **in a manner that makes the artefact's existence believable.** Developing a discussion on the 'suspension of incredulity'—including Tharp and Tharp criteria to adjust dissonance—would be appropriate, here.²³

In this thesis, I will not discuss the two previous results in order to focus on the following ones. The analysis shows that:

- Ambivalence was not restrained to the physical prop. It was **deployed through four levels: the issue, the artefact, the communication material and the communication situation.** This will be specifically addressed in Chapter 9.
- Finally—and this is the element I will discuss in my next section—ambivalence revealed that the same feature can be open to both positive and negative interpretations. Features occupied different positions on the dissonance continuum between the familiar and the unfamiliar. **Seductive and revolting features where juxtaposed, expecting to elicit a dilemma of interpretation between persuasion and reflection.**

Throughout the present section, **the first contribution** of this chapter was to provide an empirical account of the reworking of a provocative artefact into a dissonant one.

²¹ While the semio-pragmatic analysis provided possible responses to this question, we must wait for the final debate situation to properly answer it (Chapter 7).

²² Dunne, *Hertzian Tales*, 21. | Pierce, 'Working by Not Quite Working,' 99–130. James Pierce and Eric Paulos, 'Counterfunctional Things: Exploring Possibilities in Designing Digital Limitations,' in *Proceedings of the DIS '14 Conference* (Vancouver, BC, Canada: ACM Press, 2014), 375–84, doi.org/

²³ Tharp and Tharp, *Discursive Design*, 211–235.

25 DISCUSSION Bridging Adverse Points of Views Through an Artefact

I now address my two research questions—one after another (Subsections 25.A and B). Akin to Chapter 5, my aim is to enrich the range of concepts available to answer my questions. Hence, I offer a series of reviews of the literature. For each review, I first search for existing concepts that may shed light on my redesigned artefact. Then, I articulate the literature with my empirical experience so as to discuss existing concepts or propose complementary ones.

25.A Participatory and Inclusive Posture to Engage the Audience

My first question dealt with design for debate’s function of prompting recognition of an issue: How to engage audiences with a chosen under-discussed issue? And how to do this otherwise than by choosing issues in a top-down way?

25.A.1 Rhetoric as Strategy to Engage Audiences

First of all, I wonder what kinds of strategies may the designer develop to have their issue and their artefact considered by the audience?

I suggest that designers employ a form of **rhetoric**. Here, I draw on a book chapter co-authored with Annie Gentès in 2014.²⁴ In this chapter, we advance that Freud’s concept of the uncanny is not only a narrative strategy used in fantastic literature to move the reader’s emotions by confronting them to ambivalence. It is also a rhetorical strategy.

In order to present this argument, I will return to Aristotle’s treatise,²⁵ that offers a frame of analysis of discourses and persuasion.

In Aristotle’s treatise, rhetoric is described as the art of persuasion that has three foundations, which are three ways of connecting with the audience:

- The authenticity and legitimacy of the speaker.
- The audience’s interests and feelings.
- The choice and organisation of the argumentation.

I will now discuss how these three strategies are used either by other designers or in my experiment.

First, does the authenticity and legitimacy of the speaker play a role when intending to spark debate through design?

To answer this question, I had to look at discursive designers ‘positioning,’ who often affirm that they are designers and not artists, an interesting positioning.²⁶

²⁴ Gentès and Mollon, ‘Critical Design.’

²⁵ Aristotle, *The Rhetoric and the Poetics of Aristotle*, trans. W. Rhys Roberts and Ingram Bywater, 350 B.C.E. (New York: Random House, 1954), [www/](#)

²⁶ Find a critique of this positioning in; Cameron Tonkinwise, ‘Just Design,’ Medium (Blog), 21 August 2015, [medium.com/@camerontw/just-design-b1f97cb3996f/](#) (accessed Dec 2018).

On the one hand, asserting their design heritage, practitioners reaffirm their links with the industry and claim a type of legitimacy. On the other hand, the institutions they work with (such as the New York's Museum of Modern Art, Barcelona's CCCB *Centre de Cultura Contemporània*, Paris's Centre Pompidou) reinforce their artistic heritage. Therefore, they are at the crossroad of industrial design and art which helps them navigate both worlds.

According to Aristotle, the greater the controversial nature of the subject, the more the audience needs to have some certainty about the author's engagement and legitimacy. This legitimacy can arise either from the intimate personal experience of the speaker or from their professional experience. Claiming the industrial design heritage, is a way to legitimise their work however speculative it can be.

In *L'Éphéméride* experiment a specific approach to legitimacy is put in place. By showing the public a testimonial video, the video's character stands as an additional speaker, next to me. Within the fiction, the character is qualified to give her feedback because she has been using the artefact for 15 years, while living with an MND. Hence, **the testimonial video provides legitimacy to the relevance of a yet unacceptable artefact.**

Second, how could the artefact reach out to the audience's interests and feelings?

In *L'Éphéméride* (as in Auger-Loizeau's project *Afterlife* (2001-09) already mentioned), the aim of generating emotions was not limited to a cathartic experience, as is usually the case in a work of art. The unsettling of emotions was intended to start a discussion.

In rhetoric, the speaker has to stir and relate to people's interests and feelings in order to start a discussion. First, the speaker has to establish a good relationship with their public, what traditional rhetoric terms *captatio benevolentiae*. They do that by respecting the feelings and expectations of their audience. However, to win their case, the speaker needs to move the audience. Rhetoric is born in the tribunal. Different emotions (such as anger, sadness, joy, and so on) need to be elicited from the audience. Aristotle remarks that most of the time, this play on emotions is what decides the success or failure of a case because although people do not have the time to learn or to follow complicated demonstrations, they can still feel about a case and make a decision on the basis of these feelings.²⁷

Echoing the literature review offered in Chapter 5, **this play on the audiences' interest and feelings may be achieved by drawing perceptual bridges** that make strange artefacts more familiar. **It may also elicit a dilemma of interpretation** within members of the audience.

This strategy is neither without consequences, nor easy to handle. In the case of *L'Éphéméride* final debate situation, I am expecting to face challenges to deal with the complexity of feelings that I want to elicit.

²⁷ I would like to add, here, that discursive designs, while relying on rhetoric to catch people's interest, often contain (or allow to unpack through discussion) a great amount of pedagogic information in order to make complexity accessible.

Lastly, how is the argumentation chosen and organised? The tactic of dissonance does not simply mean triggering feelings of unease but implies stimulating people’s cognitive process as well. It is a means to an end, that is, the debate itself. Auger observes:

“For technological believability, the Audio Tooth Implant relies on a general public awareness of hard and well-publicised facts, such as the miniaturisation of digital technology and urban myths such as dental fillings acting as radio antenna and picking up audio signals. These combine to give the concept a familiarity. It was also necessary to provide a **convincing description**, in layman’s terms, of the technology involved. [...] This description helped in convincing those with a good understanding of electronic technology.”²⁸

The artefact is part of a larger situation of communication and its formal qualities help support the argumentation. Stories, descriptions, metaphors, and examples are part of the argumentative process as much as the aesthetic qualities of the objects.

Designers’ emphasis on the quality and finishing of their productions can be seen as techniques which are part of this strategy. *L’Éphéméride* provides another example of **employing the artefacts’ features to organise an argument**. A specific attention is spent **to craft the artefact as if it was meant to be sold and used in reality, in order to make it seem probable and believable**.

25.A.2 Bridging Standpoints

Through various rhetorical means, designers can tailor their proposal to their audience. How did I adapt *L’Éphéméride*’s discourse to the Commission’s audiences? What does it allow to learn on the way my artefact may engage the audience with an issue?

Here, I would like to reflect on the main difficulty I encountered when adapting to my audience. I observed that the designer, like in Auger-Loizeau’s example, may present their case in relation to what can or cannot be believed, what is technically feasible and what is not, they make hypotheses about the technical literacy of their audience. The designer needs to have a fairly good idea of what is considered common knowledge in order to be able to relate to it or to destabilise it. Setting such working hypotheses was the process I went through when trying to ground my artefact in the reality of Sophie. Nevertheless, in my case, I could not pretend deeply knowing what is the experience of a person living with an MND. In order to achieve this, adopting both a ‘participatory’ and ‘inclusive’ design approach imposed as a necessary step.

Indeed, the design process that I detailed in the present chapter is different from the one reported for the making of the *Montre-Éphéméride*. The process taken when designing the *Montre-Éphéméride* was participatory. I worked with the Commission, I met health professionals and relatives. However, the people that participated in the issues finding process was not the ones the most concerned by the issues (that is, the person living with an MND).

My posture was akin to the one reported by Kerridge in the *Material Beliefs* project, when mainly collaborating with experts (i.e. scientists).²⁹ My posture was participatory but not inclusive.

In contrast, during *L'Éphéméride*'s design process, my approach offered a designerly interpretation of Sandra Harding's standpoint theory, evoked as a theoretical resource in Chapter 3.³⁰ Working from the standpoint of Sophie was like walking a mile in her shoes.³¹ Adopting her standpoint made it possible to translate 15 years of key memories, brought from her life with a disease, into a convincing scenario for the user testimony video. It allowed to optimise the ergonomics of the artefact as if it is used for real. It allowed revolting and improbable features of the artefact to believably coexist with familiar and attractive ones. Working in an inclusive way with “issues-experts”³² allowed the project to reach a level of sensibility, relevance and believability that would not have been possible by working only among so-called ‘experts’ (the Commission, scientists, doctors). But in practice, it **allowed to draw** what Auger calls ‘**perceptual bridges**’ **from within the standpoint of the public—towards others’ standpoints** (e.g. the one of the Commission, any people who do not have an MND, and so on). **This intended to open a way, for the public, to deeply consider and talk about unfamiliar features** (e.g. the colour gradient) instead of rejecting them.

I offer to call ‘**bridging**’ the action of adopting the public’s standpoint in order to (1) punctuate an unfamiliar proposal with familiar elements and (2) make an unfamiliar standpoint available to others. Bridging—the short for ‘bridging different standpoints’—is part of the dissonance tactic. It can thus be understood as increasing the public’s ability to self-identify with a strange artefact, but above all, to rub shoulders with another point of view, to experience otherness. This action of **bridging a design artefact both requires and is a means of giving a voice to the other and to their point of view**. I suggest that **it is an essential component of what makes dissonance ‘careful’** because it requires to adopt a participatory and inclusive approach.

Consequently, the participants to *L'Éphéméride*'s final debate activity should experience a strong feeling of self-identification for the topic under discussion (i.e. the issue and the artefact should not leave the participants insensitive) punctuated by an unsettling feeling regarding some revolting elements.

²⁹ This approach may lead to operate an elitist separation between experts and non-experts, as suggested in [CH3 | Section 11.A.1](#).

³⁰ **Harding**, *Whose Science? Whose Knowledge?*.

³¹ Here, I make a reference to Elvis Presley's song *Walk a Mile in My Shoes* (1970) and to the fact that, in Sophie's case, ‘walking’ was not an available option anymore given the progress of her condition, which constrains her to use a wheelchair.

³² **Tommaso Venturini et al.**, ‘Designing Controversies and Their Publics.’

25.B Mediating Issues Through a Discursive and Adversarial Design

My second question regarded design for debate’s function of conveying issues. I both wonder how discursive designs convey issues and how they do this in an adversarial way.

25.B.1 Communication Strategies, Rhetorical Uses and Discursive Design

In their 2001 book *Design Noir*, Dunne and Raby make a very clear point related to my question of how to ‘communicate’ design for debate proposals. The authors advocate that critical design must be relatable to the everyday life of the viewer³³ and they warn that,

“One of the main challenges of using value fictions is how they are communicated: we need to see them in use, placed in everyday life [...] We don’t actually have to use the proposed products ourselves, it is by imagining them being used that they have an effect on us.”³⁴

What Matthew Mallpass names a “rhetorical use” or a narrative of use—in his 2017 book *Critical Design in Context*³⁵—is part of the new strategies to which Dunne and Raby allude. It is also what Bruce and Stephany Tharp clearly summarise through this figure given in Chapter 1.³⁶

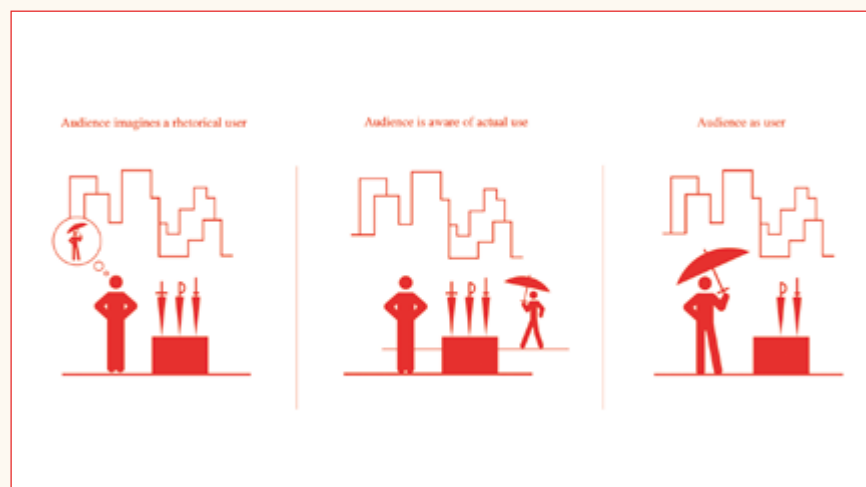


Figure 52 | Audience and use, three primary relationships between artefacts and audiences.

People are not (necessarily) expected to actually use the artefact. They are expected to imagine using it. The artefact and its use are considered as proper to a ‘language of design’ that has various communication qualities.

³³ Dunne and Raby, *Design Noir*, 59.

³⁴ Dunne and Raby, 60. | The authors also stress how the “designers will need to develop new communication strategies [...] they will have to shift emphasis from the object and demonstrating its feasibility to the experiences it can offer.” Dunne and Raby, 63.

³⁵ Mallpass, *Critical Design in Context*, 47.

³⁶ See also their Chapter 16 on communication strategies: Tharp and Tharp, *Discursive Design*, 241–243.

This opens many questions about the communication strategies set by discursive designs. The ones that contribute to my enquiry are: How may discursive designs carry issues? And first, what kind of relation do artefacts set between audiences and issues?

25.B.2 Media, Distancing Viewers from the Artefact's Use

In Auger's work, evoked in the previous subsection, a relation is set between the audience and the issue. The perceptual bridges turn the artefact into a kind of interface between the audience and the issue. Here I ask, what kind of interface?

In Chapter 5, the notion of reflective distance was made close to the concept of defamiliarisation. Drawing on Information and Communication Sciences and the work of Annie Gentès, I propose to complement this with an original point of view. In her book *The Indiscipline of Design*,³⁷ Gentès studies the act of conception from the perspective of communication. She advocates and shows how the study of HCI and Design in general can benefit from the humanities. She particularly highlights how Foucault's definition³⁸ of the humanities focuses on the message (linguistic and representation) rather than on the medium (communication and media).

She argues that media, contrary to face-to-face conversations, stand as an interface between absence (e.g. of a speaker) and presence (e.g. of speech). Media are a way to distance ourselves from the world and according to her, all artificial objects can be seen as media. She takes as an example the Information and Communication Technologies and analyses them as objects that open spaces for generative practices related to human activities. By providing an aesthetic plan of exploration and realisation, artefacts seem emblematic of the "reflexivity of design," as she phrases it. Drawing from this example, she proposes that:

“[L]ooking at design from the humanities perspective means that we consider this process of distantiation that breaks free from social or technical determinisms not only through personal expression but within a social horizon of communication, hence the definition of things as fundamentally debatable.”³⁹

In other words, an Information and Communication Sciences perspective on discursive design may focus on the ways designers use their artefact as 'media' to step back.

³⁷ Annie Gentès, *The In-Discipline of Design: Bridging the Gap Between Humanities and Engineering*, Design Research Foundations. (Cham, Switzerland: Springer International, 2017).

³⁸ In *The Order of Things*, Foucault proposes a definition of the Humanities as “that region where the laws and forms of a language hold sway, but where, nevertheless, they remain on the edge of themselves, enabling man to introduce into them the play of his representations, in that region arise the study of literature and myths, the analysis of all oral expressions and written documents, in short, the analysis of the verbal traces that a culture or an individual may leave behind them.” Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences (Les Mots et Les Choses, 1966)* (New York: Pantheon Books, 1970), 67.

³⁹ Gentès, *The In-Discipline of Design*, 234.

What does it mean to consider a design artefact as a **media**?

A media is a cognitive element that sets a distance with action, and which materialises and conveys meaning. For instance, a book can simulate the experience of being J.F. Kennedy, a theatre play can simulate living in a great poverty in the turn of the last century, or the spoken language itself creates a (significant) distance between saying ‘I’m going to kill you, return my chocolate bar straightaway!’ and actually ending the life of a person. According to Gentès, the design artefact is a media because it invites the (yet potential) user to project themselves in the artefact’s use, before actually using it. This projection into potential usage is something one does every day—for instance, by evaluating if the size of a pot is appropriate before pouring water in it, for drinking or cooking.

Gentès offers a media perspective to a general theory of design, but I rather focus on Discursive Design in particular. I posit that discursive designs, which are not meant to be (necessarily) used, essentially play on the media nature of design.

Conventional design uses media like diagrams, mock-ups, scenarios, drawings, and suchlike to distance the user from usage and to create a space for reflection. But discursive design rather employs narratives of use, like the one Malpass describes. **I thus propose to understand discursive designs as media too.** Discursive designs’ quality of media **is a key part of what allows users to distance themselves from usage, to make artefacts understandable and debatable rather than usable**, and to test diverse possibilities.

25.B.3 Mediating-Artefacts, Simulating Issues

How did the relationship of distance imposed by the ‘media,’ installed in the redesign of *L’Éphéméride*?

The narrative of use (the video testimony) was used to bring the audience closer to the issue. It was used to ‘simulate’ a situation in which the infringed norm is considered as a ‘normal’ situation. Indeed, the video’s actress acted as if it was ‘normal’ to live in a world where people use *L’Éphéméride*. ‘Simulation’ is what the distance set by a media enables. This is one of Discursive Design’s qualities that are increasingly employed as a means of simulating policy making decisions, for instance.⁴⁰

Depicting and simulating an arguable situation may be part of what engages audiences with an actual conflictual debate. Discursive designs both distance the audience from using the artefacts and, through narrative of uses, they bring the fictional situation closer to the audiences—they mediate it. Gentès’s concept of media allows to understand this appeal on the audience’s imagination (i.e. the audience may imagine themselves using the artefact) as a test-drive, a simulation of a remote situation.

This form of simulation allows a rehearsal in which to test opinions, values, and the changes that could affect collective life.

⁴⁰ Nesta, ‘SimPolicy: Smarter Policy through Simulation,’ Company Website, [nesta.com](https://www.nesta.com), 2018, [nesta.org.uk/feature/10-predictions-2018/simpolicy-smarter-policy-through-simulation/](https://www.nesta.org.uk/feature/10-predictions-2018/simpolicy-smarter-policy-through-simulation/) (accessed Dec 2018).

When crafting value fictions, the simulation may allow to test unusual conditions under which a collective is assembled (the social values gathering a group, or a society). It opens a safe space for debating these changes, however, the agonistic conflict—the mutual contestation targeted by this experience—is very real (Fig. 53).

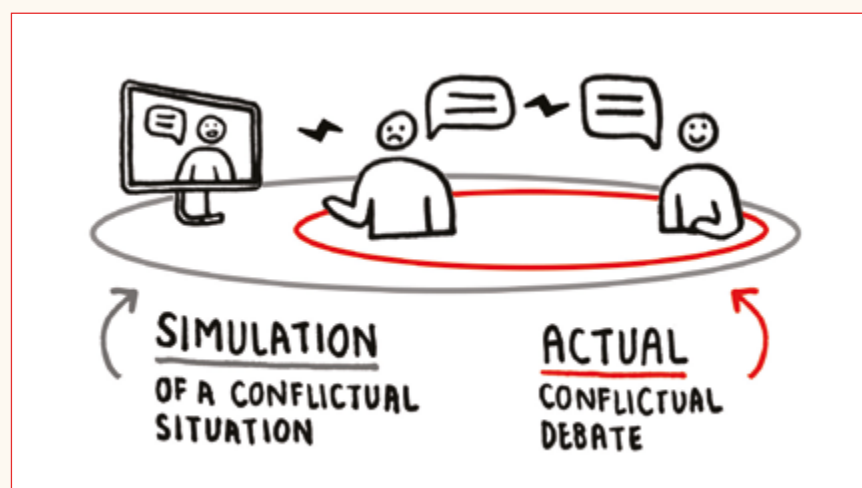


Figure 53 | Discursive designs for debate employ simulations of conflictual life situations, in order to open an actual conflictual debate situation (i.e. mutual contestation).

I suggest referring to the work of mediation and distancing that is specific to a discursive design in terms of *mediating-artefact*. This terms refer to both abilities of discursive designs to put the actual use at a distance and to immerse the viewer in the situation depicted by the artefact—bringing the arguable situation closer. **Mediating-artefacts may be seen as a way to *simulate* conflictual situation so as to ‘stimulate’ reflection.**

25.B.4 Issuefication, Embodying Issues into Artefacts

Once a debate issue has been chosen, how can it be made accessible to an audience through an artefact?

The stripping down of *L’Éphéméride* design features revealed an attempt to ‘embody’ debate topics into an artefact, expecting their resurgence in collective debate to come at a later date.

The ability of these artefacts to become laden with issues is addressed by Noortje Marres’⁴¹ work from 2015.⁴² From this paper, I draw the concept of “issuefication,” which describes objects that are ‘charged,’ ‘loaded,’ which ‘carry,’ or ‘resonate’ with issues. Such objects connect a range of complex concerns with the plan of everyday life of an audience, which subsequently participates in the construction of political collectives.

⁴¹ Marres is an Amsterdam trained and Warwick-based associate professor in sociology and philosophy of sciences. Her doctoral research, in the field of Science Technology and Society (STS), was partly developed at Mines ParisTech—where Madeleine Akrich, referenced below, is based.

⁴² **Noortje Marres and Richard Rogers**, ‘Recipe for Tracing the Fate of Issues and Their Publics on the Web,’ in *Making Things Public: Atmospheres of Democracy*, ed. Peter Weibel and Bruno Latour (Karlsruhe, Germany / Cambridge, MA: ZKM / The MIT Press, 2005), 922–935, [www/](#) | On the question of publics, Marres’ research contributes to the understanding of how objects prompt publics into being. It drew extensively on Lippman and Dewey so as to argue for an object-oriented reading of democracy.

The artefacts that are considered by the author to be ‘political’ are of two types.

The first understanding of the politics of objects refers to artefacts’ normative ability. The author introduces the concept of “scripted” objects⁴³ coined by Madeleine Akrich in 1992.⁴⁴ The concept of “scripts” describes how users are lead to appropriate technologies and how these technologies redefine their relations with their environment. A good example to understand this concept is Akrich’s case study from 1992 where she enquired into the installation of electricity metres in the Ivory Coast. In this context where no strong bureaucratic apparatus was in place, she argued that one feature of the studied object—its ability to “measure” electricity—made it a means to enrol undocumented citizens and to forge political bonds between the government and its freshly-registered citizens. Akrich proposed the notion of “script” to account for the normative abilities of these artefacts. This concept can be related to that of the “agency of the non-humans.”⁴⁵ It also echoes the more recent concept of “nudge”⁴⁶ in the field of cognitive sciences.

The second understanding of the politics of objects deals with how objects contribute to ‘issues formation.’ The way events or topics that concern the citizens of a society become a shared issue was traditionally studied from the point of view of ‘discursive politics’ (i.e. how discourses that circulate in the media influence the construction of a public around an issue). However, she displaces the study from the politics of discourses to the politics of objects by drawing on STS.⁴⁷ The ability of artefacts to ‘activate’ topics within publics is further addressed by Marres. She calls such artefacts, *issuefied* objects. If scripted objects activate behaviours, issuefied ones activate ideas. Akrich’s scripted artefacts are ‘usable.’ By being used they constrain and affect people’s behaviour. The script for action is inscribed into the object and forced on to the subject. The script can be understood as latent or concealed.⁴⁸ In contrast, Marres’ issuefied artefacts are ‘representations,’ they act like a media. By being watched they vehicle information and affect thinking, first.

⁴³ Madeleine Akrich, research director at Mines ParisTech, has devoted most of her work to the sociology of technology. Despite her research on “scripted” objects, her work partly centered on medicine, comparing obstetrical practices’ impact on pregnancy, between the Netherlands and France, and patient organisations in knowledge production and circulation.

⁴⁴ **Madeleine Akrich**, ‘The De-Description of Technical Objects,’ in *Shaping Technology/Building Society: Studies in Sociotechnical Change*, ed. Wiebe E Bijker and John Law (Cambridge, Mass.: MIT Press, 1992), 205–224.

⁴⁵ **Bruno Latour**, ‘Where Are the Missing Masses?: The Sociology of a Few Mundane Artifacts,’ in *Shaping Technology/Building Society: Studies in Sociotechnical Change*, ed. Wiebe E Bijker and John Law (Cambridge, Mass.: MIT Press, 1992), 225–258.

⁴⁶ **Thomas C. Leonard**, ‘Richard H. Thaler, Cass R. Sunstein, Nudge: Improving Decisions about Health, Wealth, and Happiness,’ *Constitutional Political Economy* 19, no. 4 (1 December 2008): 356–360, doi.org/

⁴⁷ The author refers to the contributions of sociology, anthropology, philosophy, and history to the study of material objects and their capacities to influence the organisation of political collectives. She notably draws on: **Benedict Anderson**, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, Revised ed. (London New York: Verso, 2016). | **Bruno Latour**, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge, Mass.: Harvard University Press, 1993). **Langdon Winner**, ‘Do Artifacts Have Politics?,’ *Daedalus* 109, no. 1 (1980): 121–136, www/

⁴⁸ Like in the example of the Ivory Coast case study.

Marres exemplified her concept with the archetype of the teapot. She notes how this specific artefact was used in several climate awareness advertisements to publicise concerns about energy consumption and environmental footprint. The author compares several adverts in order to get a sense of the state of politicisation of the teapot in British culture. These examples are used to formulate theories about how an artefact can engage people with an issue, and thus construct audiences.

This study of what she sometimes calls ‘interface objects’ or ‘placeholder-objects’ leaves room for interpretation. The objects which Marres speaks of appear to be vectors of communication. Under this perspective, it seems justified to draw on her concept to list the points of contacts that are shared with Discursive Design.

Issuefied objects and discursive designs both work as a media, as a vehicle for information, affecting thinking by being watched—rather than by primarily being used. In addition to this, issuefied objects employ perceptual bridges. Marres’s analyses the use of teapots in advertising as part of the popular culture of teatime, within the context of the United Kingdom. The approach used in the adverts she analyses echoes the solicitation of the ‘cultural dimension’ of the perceptual bridge described in Chapter 5.

In contrast, I see one main difference between Discursive Design practices and Marres’ concept of the issuefication of objects. Issuefied objects are *existing artefacts ‘loaded’ with issues*, in retrospect, through communication means (e.g. the picture of a teapot placed above an environmental slogan). Meanwhile, discursive artefacts are *created for the occasion* of engaging audiences with issues.

For example, each choice of *L’Éphéméride* design feature was an attempt to ‘embody’ debate topics into an artefact, expecting their resurgence in collective debate to come at a later date. In this respect, I find it useful to distinguish two types of artefacts—artefacts that are “loaded” with issues and those which “embody” issues:

- **Loading issues:** Issuefied artefacts that are loaded with issues are existing artefacts (e.g. a teapot). They are not political at first. They are represented and surrounded with communication material so as to load them with meaning, and more specifically, issues (e.g. a teapot in an environmental awareness advert).
- **Embodying issues:** Issuefied artefacts that are embodied with issues are especially invented and made with specific design features in order to carry the chosen issues (e.g. *L’Éphéméride*, a non-normative calendar addressing deterministic discourses formulated towards life conditions of people with an MND).

In other words, as a way to extend Marres' concept, **I propose to understand discursive designs as a kind of issuefied artefacts which make issues accessible to audiences by deliberately embodying them.**

That said, crafting the embodiment of an issue is not sufficient for the audiences to genuinely care about it. The work of rhetoric detailed earlier and adopting an inclusive design process seems necessary. In addition, engaging audiences in an adversarial way—that is, fostering a *political* debate situation—may require a specific kind of issuefication work. This second question is now addressed.

25.B.5 Arguable artefacts, a Non-Persuasive issuefication

If discursive designs are issuefied through an embodiment process, I wonder how issues were embodied in *L'Éphéméride*'s redesign.

The answer is two-folds. First, issuefication was embodied through several levels—which correspond to the four levels of content organisation chosen in my Analysis and Results section (I will come back to this in Chapter 9).

The second fold deals with ambivalence, which is one of the specificities of adopting a dissonant approach to issuefication.

In fact, the way I embodied issues in *L'Éphéméride* is directly linked to the hypothesis I formulated in [CH3 | Section 11.B.2](#). In Chapter 3, I listed the limitations related to the design artefacts that persuasively express arguments and foster collective contestation. Such artefacts stimulate the emergence of consensus in a group of people and they blur the boundary between the nurturing of debate and the influence of opinion. I thus hypothesised that avoiding to craft persuasive artefacts would overcome these limitations and enable mutual disagreement. How did that take place within *L'Éphéméride*'s design?

The semio-pragmatic analysis has shown that the artefact did not embody one clear issue, and neither a sole argument on an issue. The artefacts' features did not create a simple binary opposition of two elements (as was the case with *Montre-Éphéméride* when I juxtaposed a conventional wristwatch and an uncomfortable watch dial). The same feature was often interpreted in both positive and negative ways. The many qualities of the artefact created a subtle mesh of dissonant juxtapositions. The features occupied various positions on the continuum of dissonance between the familiar and the unfamiliar (and is put in place through many conceptual bridges). **The ambivalent nature of the artefact seems to offer a multifaceted oxymoron-like aesthetic experience.**

Designs for debate are not persuasively defending clear contesting arguments, they rather embody and juxtapose ambivalent arguments that are open to interpretation. Consequently, **they may allow members of the audience to come up with different interpretations and contradictory opinions**, over an issue at stake. As a result, in a debating situation, **they should enable the expression of mutual disagreement**. The artefact is not expressing a contestation in itself, it is expecting contestations and ambivalent arguments against itself. **Rather than talking about a contestational design,⁴⁹ I will refer to it as an **arguable** artefact.**

Arguable describes the quality of an artefact that is ambivalent enough to enable the making of contradictory (or non-consensual) interpretations by different members of an audience. Its ambivalence (also described as the embodiment of an aesthetic oxymoron) invites us to challenge the artefact. Once in a situation of debate, it invites us to challenge people who would be of a different opinion.

The choice of this term comes from the fact the artefact is (1) not contesting something, it (2) cannot be fully rejected or ‘contested’ neither, and it is (3) opposable but not yet debatable (an encounter with others is lacking). ‘Arguable’ encompasses an openness to opposition and a prompt to reflection and debate. It is hence characteristic of a specific type of adversarial and discursive designs—dissonant ones.

This last piece of discussion leaves us with a question. How is my arguable artefact going to play with a live debate situation with 60 people? This will be addressed in Chapter 7.

26 KEY LEARNINGS On the Way to Prompt Mutual Contestation About a Chosen Issue

In this chapter, I mainly addressed two functions attributed to designing for debate—conveying issues and prompting recognition of these issues. I hence asked: how to engage audiences with a chosen under-discussed issue—otherwise than by choosing issues in a top-down way? Also, how to make and how to describe the way discursive designs convey these issues, in a dissonant way?

I now propose to describe design for debate's work of engaging an audience as:

- A matter of tailoring a discourse to specific audiences (using **rhetoric**), which may be necessarily inclusive in order to be careful. It leads to adopt and relay the audience's standpoint (through an approach I called **bridging**).

Also, drawing on Discursive Design, I advance that a way in which design artefacts may convey issues, so as to spark debate, is:

- By distancing the use of the object (being a form of **media**), while drawing the viewer in a narrative that depicts a distant situation (acting as a **mediating-artefact**).
- By embodying the issues (through a deliberate kind of **embodied issuefication**), in a non-persuasive and ambivalent way (the artefact remains **arguable**).

I came to these replies through three threads of discussion. While wondering how designers adapt to their audience, the prism of Greek philosophy allowed me to consider designers' communication strategies in terms of rhetoric. Then, when I contrasted my redesign process (of *L'Éphéméride*) to the making process of the *Montre-Éphéméride*, it seemed clear that I moved to both a participatory and inclusive stance. Working in an inclusive way with issues-experts not only allowed the project to reach a better level of sensibility, relevance and believability. It enabled me to adopt the public's standpoint when making unfamiliar proposal familiar. It made it possible to bridge different standpoints—I thus called this approach, part of the dissonance tactic, 'bridging.'

Also, borrowing to Information and Communication Sciences the concept of media, I looked at my design artefact in a different way. I suggested that *mediating-artefacts* may be seen as a means to *simulate* conflictual situation so as to 'stimulate' reflection.

I finally made a focus on a subset of design for debate practices that specifically uses artefacts that are not (necessarily) used—namely, Bruce and Stephanie Tharp's Discursive Design. Reviewing STS literature about how artefacts convey issues allowed me to expand Noortje Marres' concept of issuefication. I suggested that issues are embodied within the design features of artefacts—rather than loaded around the artefact within the slogans of a poster, for instance. Then, looking at the semio-pragmatic analysis of *L'Éphéméride* enabled me to better describe its *arguable* nature. I argued that my design is not persuasively defending clear contesting arguments, it embodies and juxtaposes ambivalent arguments that are open to interpretation.

Therefore, what I called ‘arguable’ artefacts may allow the making of contradictory opinions among different members of the audience, over an issue at stake. In a debating setting, this may enable the expression of mutual disagreement.

In conclusion, it is important to note that, while I focused on my two research questions, the findings of this chapter might more largely contribute to the literature on design *things* (listed in Chapter 1). Indeed, according to DiSalvo, the *thing* carries a matter of concern (e.g. here, matters of determinism of the MND diagnoses). The *thing* encourages to recognise how important it is to collectively debate a specific issue.⁵⁰ The concepts I provided in this chapter may therefore help other scholars to describe how a design *thing* conveys and prompts recognition of an issue—so as to politicise audiences, hopefully sparking debate.

Chapter 6’s contributions are:

- An empirical account of the rework of a ‘provocative’ artefact into a ‘carefully dissonant’ one (it contains the creation process and the semio-pragmatic analysis of the final artefact).
- An array of concepts nurturing the understanding of how discursive designs for debate convey and prompt recognition of issues. It also offers a discursive design perspective on design *things*.

50 Carl DiSalvo et al., ‘Making Public Things: How HCI Design Can Express Matters of Concern,’ in *Proceedings of the 32nd Annual ACM Conference on Human Factors in Computing Systems - CHI '14*, CHI '14 (the 32nd annual ACM conference, New York, NY: ACM, 2014), 2397-2398, doi.org/

« La question de savoir si de tels designs pour débattre auront un effet réel dépend de la mesure dans laquelle ils aborderont les sujets d'intérêt général de **manière mesurée** et les rendront **significatifs pour le public et pour ceux qui les mettront en œuvre.** »

“Whether such designs for debate will have any genuine effect depends on how well they tackle subjects of widespread public concern **in measured ways** and make these **meaningful for both the public and those who will be implementing them.**”⁶²

—Tim Parson

CH7 PARTICIPATORY DEBATE **Sparking Mutual Contestation as a Form of Design-Driven Ethnomethodology**

In Chapter 7 I describe and analyse the audience's experience during *L'Éphéméride*'s final debate situation. I then assess, discuss and share my methods on the use of a carefully dissonant artefact employed to foster mutual contestation, and to generate knowledge about social norms.

27 AIMS & PROTOCOL Coming-Up With a Method Drawing From Ethnomethodology

27.A Introduction

The previous chapter presented a carefully dissonant artefact, ready to spark debate. In Chapter 7 I put the resulting artefact to the test within a live debate situation during *Espace Éthique*'s Summer University. I thus look at two functions attributed to designing for debate practices—enabling mutual contestation and being a form of social research.

Here, I ask two main questions:

- Has design really stimulated a debate that involves mutual contestation? And if it did, what is design's specific contribution to agonism (i.e. the challenge of consensus and therefore hegemony, through debate and especially here, mutual contestation)?
- Can design be a way to study social values at play? If so, is dissonance a form of ethnomethodology and what is specific to design in this approach?

After presenting the experiment protocol, I provide information on the emotional, experiential and practical conditions in which the debate took place. I analyse the participants' feedback. In my discussion, I address the contributions of designing for debate, and of the tactic of dissonance, to the experiential dimensions of agonism. I also discuss the benefits of this protocol for social research.

27.B Means of Data Generation

On Tuesday the 15th of September 2015, 4 months after the project's start, the final debate situation planned with the *Espace Éthique* team took place during their Summer University in Nantes, France.

The experiment planned to follow this timeline:

- 09:30 Call for participants during the plenary session launching the second day of the Summer University (by the Commission Director and myself)
- 09:30—14:00 Plenary session (talks) and lunch
- 14:15—15:30 Start of 5 parallel workshop sessions
- 16:15 Start of the 5 next parallel sessions of 1h15 workshops, including ours. Starting with the reading and signing of the informed consent sheet. Introduction of the aim of the session and introduction of myself (by the Commission Member 1)
- 16:30 Start of the animation (by myself). Presentation of *L'Éphéméride*'s topic (i.e. time), and the concept of the artefact with one image
- 16:35 First phase of feedback (Q&A)
- 16:50 Circulation of 4 copies of the artefact among the participants and second phase of feedback (collective debate)
- 17:05 Presentation of the video and additional material (user testimonial) and third phase of feedback (collective debate)
- 17:20 End of the debate and filling of the questionnaires
- 17:30 Concluding remark to invite the participants to the second workshop on the next day (by the Commission Member 1). End of the workshop.

Eventually, for the first session, the debate lasted 1h30. Sixty people (including seven people from the Commission) attended the event. I acted as a moderator. Participants were asked to fill qualitative questionnaires, once the debate activity was over. This was complemented with two informal group interviews, after the debate session, with 3 participants who remained in the room (during 15 min) and then, with 1 participant and 1 member of the Commission (during 30 min).

The next day, 26 participants gathered to discuss the results of the debate session (i.e. a mapping that I created, synthesising the debate topics addressed during the first day). This second workshop took place in the same room on the same schedule. This workshop served as a focus group for a self-confrontation session around the mapping of debated topics. This focus group informed the interpretation of the data generated on the first day (which is the main dataset). In this session, I privileged the research methods of participant observation. I stood as the moderator.

For both days the Commission's team helped to document the 1h15 sessions through videotaping, photography, audio recording, and note-taking.

27.C Methods to Analyse Participant's Feedback

Drawing on Grounded Theory, I analysed the generated data through an 'open-coding' approach—turning this linguistic data collection into qualitative analyses. The main dataset comprises the comments orally expressed by participants during the first day's debate session. The analysis results were contrasted with the remaining part of the dataset—participants' declarations collected through questionnaires, interviews and the second day's 1h15 focus group.

A first round of analysis allowed to regroup participants' feedback in clusters of topics. These clusters made it possible to map the controversy.

In a second round of analysis, I came up with an analysis method inspired by ethnomethodology. In Garfinkel's breaching experiment, people facing a conflicting behaviour are expected to reject it and to express a desire to bring a situation back to 'normal.' Here, instead of a behaviour, I rather took the 12 design features listed in Chapter 6 and looked at which ones were rejected by participants.¹

¹ The 12 features include the: Gradient, Dark colour and black pen, sentence *Aujourd'hui je vais*, Black hidden page, Glued square-back binding, Disposable or collectible pages, Limited lifespan of the artefact, Name, Logo, Large surface of the page, Attachment string, Aesthetic (i.e. nice-looking artefact).

I conducted an in-depth analysis of the participants' discourses within two folds. First, I parsed the discourses through this list of criteria:

- What is the nature of the comment:
 - A clarification question.
 - A critique (an opposition).
 - Or an improvement suggestion?
- What are the design features or the usages of the artefact addressed by the feedback?
- Does the comment target:
 - An expected (previously listed) feature.
 - Or an unexpected one?
- Is the person's interpretation of the feature or the usage:
 - Negative.
 - Or positive?
- According to other participants' comments on the same feature or usage, does the formulated interpretation make:
 - A consensus.
 - Or a disagreement?

Second, dealing with the resulting data, I drew on ethnomethodology and created a method of analysis which progressed along the following steps:

- Describing the hypothesis (previously formulated in Chapter 6) regarding the social values presumably existing among the participants—and brought into dissonance via the design artefact.
- Identifying what the participants rejected/supported:
 - Comparing the list of *L'Éphéméride*'s design features expected to be commented on, with the list actually commented on by the participants (and ranking the features according to the frequency of comments).
 - Sorting through participants' interpretations of the features' meaning (i.e. positive and negative, agreements and disagreements).
- Seeking why they rejected/supported these elements:
 - Searching for why and how participants restored normality by digging into the justifications they provided for their interpretations (positive or negative ones).
 - Unravelling the tensions and beliefs that underpin the studied social values, by contrasting the analysis results with additional material (e.g. quotes extracts, questionnaires, interviews and focus-group).

27.D Relevance of the Experimental Setting

27.D.1 Participation

The data parsed through the previous method is based on the session's audio recording. A bit less than half of the participants expressed themselves orally during the debate session—according to the questionnaires.

43.9%	Participants talked using the microphone
56.1%	Did not talk openly but expressed their opinions through the questionnaire

Table 2 | Number of participants who expressed orally.

The data was complemented with a questionnaire filled in by 80% of the participants at the end of the debate session. The *Espace Éthique* team (which represents 11,6% of the participants) answered a specific version of the questionnaire.

60	Participants in the room, including:
48	People who filled out questionnaires (and who were not the 7 members of our team)
5	People who did not fill out questionnaires
7	Members of the Espace Éthique team

Table 3 | Number of participants to the questionnaires

In addition to this data, one of the participants communicated through an additional sheet from her notepad, and 4 participants, including a member of the team came in for private discussions at the close of the event.

27.D.2 Representativeness

Of the 60 participants, only two had been diagnosed with an MND (In addition, Sophie also attended the debate but is not counted in the data. She is part of the participants who did not fill questionnaires because she left the room during the session). 40% of the participants were health professionals while 13,3% were professionals from other areas and 15% were relatives of people living with a disease.²

According to informal interviews conducted with the Commission Member 2 after the debate, 10 of the 60 participants were part of their network of experts. If counting the 7 team members, 28.3% of participants were considered as experts by the stakeholder. That said, only the Commission Member 1 actively participated in the debate, among the team.

² The event was open to all kinds of audiences. I see two potential explanations to these figures. They might be representative of the usual frequentation of the Summer University or of *Espace Éthique*'s events. Or it could be due to the workshop n° 1 subtitle: *Workshop of ethical creation: building together the Espace Éthique MND 1/2. Debating the urgency of living and the caregivers' exhaustion.*

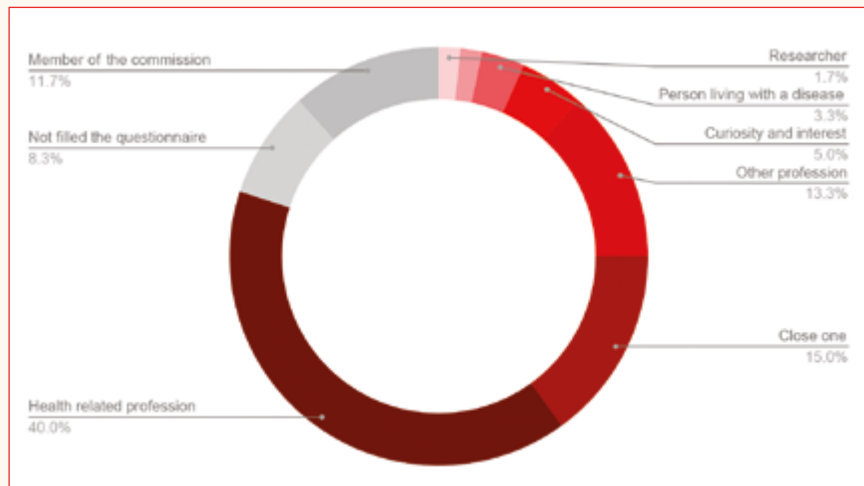


Figure 54 | Count of responses to the multi-choice question, “What is your link to Motor Neuron Diseases?” | Student: 1, Researcher: 1, Person living with a disease: 2, Curiosity and interest: 3, Other profession: 8, Close one: 9, Health related profession: 24, Not filled the questionnaire: 5, Commission members: 7, Total: 60. | extracted from the questionnaire given during *L’Éphéméride* debate, Sept. 15, 2018. Nantes.

27.D.3 Number of Interventions, Regrouped by Kind

During the debate, 58 pieces of feedback were counted—once excluding my own interventions, several technical discussions unrelated to the debate (such as the filling in of questionnaires), and a few clarification questions on the factual functioning of the artefact. The clarification questions gradually stopped and left room for critiques and appreciations (i.e. comments made against or in favour of the artefact and its use). A number of propositions of alternative designs for *L’Éphéméride* were also collected.

4	Clarification questions
58	Pieces of feedback in total (clarification questions left aside), which included:
46	Critiques or appreciations
12	Suggestions for improvement
2	Personal anecdotes (memories)

Table 4 | Kind of interventions

Finally, I would like to comment on the fact this chapter will try to draw conclusions from a single experiment. I want to underline the fact that action research and project-grounded research are less suited to create verifiable ‘truths’ than to point new elements on the horizon of ‘possible truths’—as suggested in [CH4 | Section 14.B](#). These new possibilities that I will attempt to reveal, regarding my research questions, are offered as ‘proof of concepts,’ open to further enquiries.

28 FIELD EXPERIENCE & DATA Stepping into the Debate Situation

I now present the participants' perspectives on the MNDs. I then give a description of the debate process, and a list of the topics actually debated.

28.A Immersion into the Participant's Point of View

Within a pragmatist and inclusive approach, being able to get closer to the participant's reality is primordial to interpret their comments—and to better understand how *L'Éphéméride* may or may not be dissonant for the targeted communities.

One of the diseases included in the MND National Plan, the Huntington's disease, is one of the least known and understood of the MNDs. I found Alice Rivière and her Manifesto—about her experience with this condition and about the intentions of her collective, the Dingdingdong institute—very helpful to understand what the stakes are. Dingdingdong is an association dedicated to the co-production of knowledge on Huntington's disease. The Manifesto includes *About chorea* by Georges Huntington, 1872 which constitutes the very first medical description of the disease.³

“The hereditary chorea, as I shall call it, is confined to certain and fortunately a few families, and has been transmitted to them, an heirloom from generations away back in the dim past. It is spoken of by those in whose veins the seeds of the disease are known to exist, with a kind of horror, and not at all alluded to except through dire necessity, when it is mentioned as ‘that disorder.’ It is attended generally by all the symptoms of common chorea, only in an aggravated degree, hardly ever manifesting itself until adult of middle life, and then coming on gradually but surely, increasing by degree, and often occupying years in its development, until the hapless sufferer is but a quivering wreck of his former self.”

“I have never known a recovery or even an amelioration of symptoms in this form of chorea; when once it begins it clings to the bitter end. No treatment seems to be of any avail, and indeed nowadays its end is so well-known to the sufferer and his friends, that medical advice is seldom sought. It seems at least to be one of the incurables.”

³ **George Huntington**, ‘De La Chorée (About Chorea, 1872, trans. Vincent Bergerat),’ in *Manifeste de Dingdingdong*, ed. Dingdingdong and A. R., (Paris: Dingdingdong Éditions, 2013). | Quotes are respectively from pages 36 and 42. My translation from the French.

The *Dingdingdong Manifesto* (2012) presents in its own words the situation:

“With this testimony written by a young woman who is gene positive, Dingdingdong wishes to share a different vision of the Huntington disease, and to bring a reflexion about which could one day affect us all: living with a genetically foretold disease.”⁴

“Encouraging me to work on mourning my normality is not only stupid but also dangerous. I’m not dead yet. Maybe I shouldn’t have been born, but I’m not dead yet. And **like most of us, I was never normal. Telling me to grieve for my normality places me within a normative program of long-term existential withdrawal** that destroys all the singular possibilities contained within my experience of becoming-Huntington’s before they’ve even been explored.”⁵

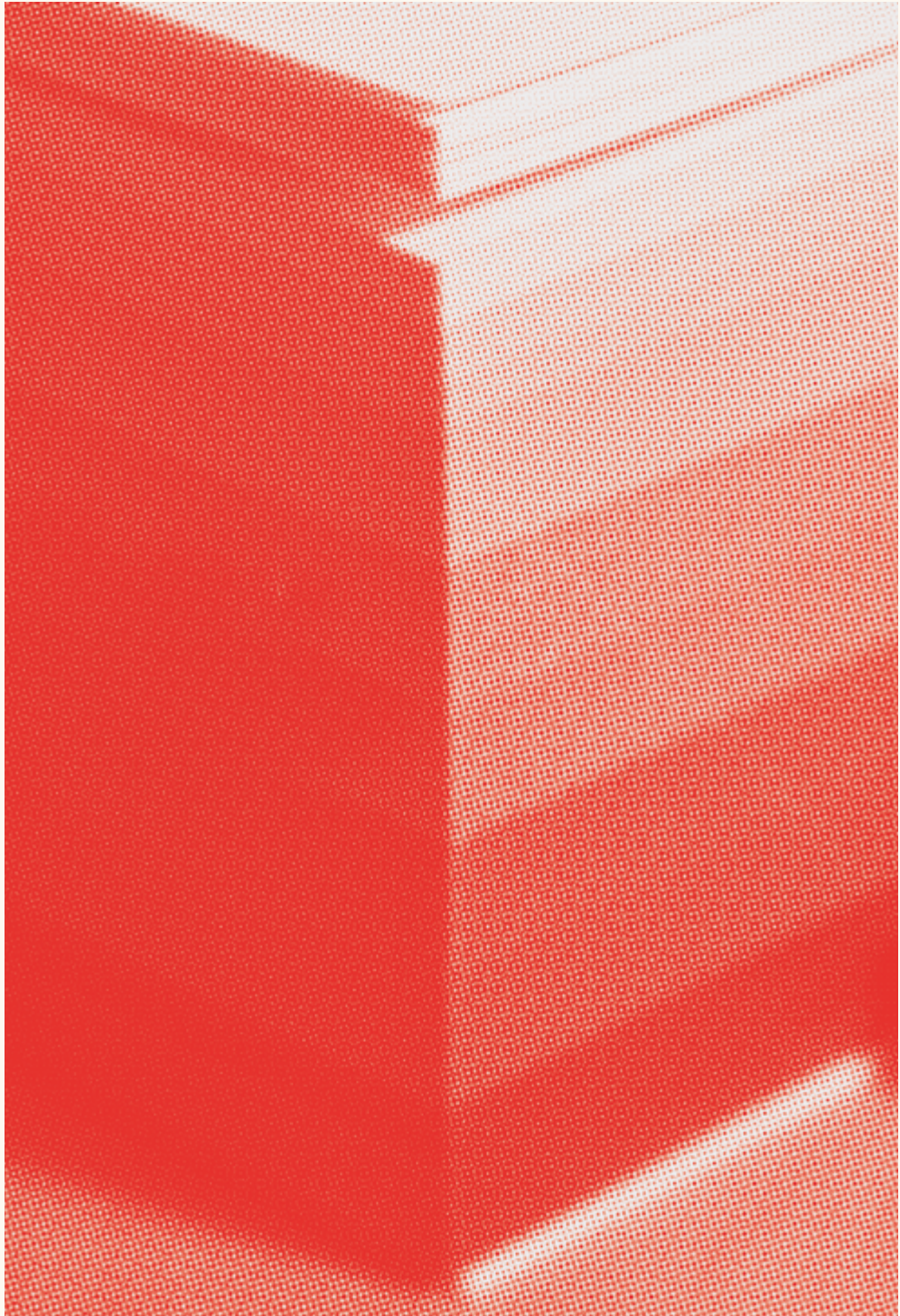
Alice Rivière reflects on the words that her psychiatrist pronounced after having taken the Huntington’s disease genetic test. Later in the Manifesto, she refers to aging as an instance of genetically ‘programmed’ condition that affects us all—thereby echoing parts of the discourse embodied in *L’Éphéméride*.

The readers are invited to find more about the Manifesto, online (see the previous footnote). It describes with a fascinating strength an anti-deterministic conception of the Huntington’s disease.

⁴ Words from the Web page introducing the English version of the Manifesto: dingdingdong.org/a-propos/dingdingdong-manifesto/ (accessed Dec 2018).

⁵ **Dingdingdong and A. R.**, ‘Dingdingdong Manifesto,’ trans. Damien Bright ([Online], June 2013), 12–13, dingdingdong.org/a-propos/dingdingdong-manifesto/ | Or in French: **Dingdingdong and A. R.**, *Manifeste de Dingdingdong* (Paris: Ding ding dong éditions, 2013), 83, www/ | My emphases.

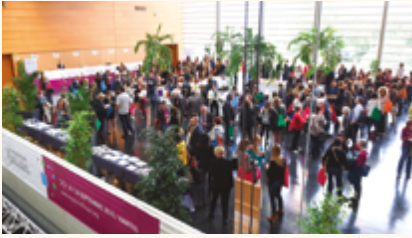
With the previously described context in mind, the reader is now invited to find the second part of *L'Éphéméride* project presentation. It is focused on the debate situation and is given within a pictorial format.



L'Éphéméride

28.B The Debate Experience

28.B.1 The Situation in Which the Audience and the Artefact Met



The Summer University of the nationwide *Espace Éthique MND*, in charge of the national Plan on Motor Neuron Disease, is an annual event. This event happened 5 times during the 5-years plan until 2019. The first edition took place in the Palais des Congrès of Nantes, from the 14th to 16th of September 2015. It gathered around 400 people including people living with diseases of the MND Plan, relatives, health workers, medical researchers, social scientists and politics.

The event took place under three modes: plenary sessions with speakers such as Eric Fiat (bottom left), or Clementine Célarié and Emmanuel Hirsch the Commission Director (middle left); informal break sessions to meet each other (top images); and workshops (next page, bottom left).





At 9:30 September 2015 the 15th, the second out of three days of the Summer University, the Commission director introduced the team on stage and formulated a call for participants for our workshop.



The debate room was organised in an agora-like setting. Allowing people to face each other intended to leave the participants discuss among themselves instead of having a question and answer session (only) with the moderator.

Photo © [flickr.com/photos/espace-ethique/](https://www.flickr.com/photos/espace-ethique/)

28.B.2 The Communication Material

In a room packed with sixty people (including seven people from the *Espace Éthique* team), and after a word from the Director, the Commission Member 1 introduced our collaboration. He presented it as an attempt, among others, to tackle the challenges of being commissioned on the MND Plan. He highlighted two particularly pressing challenges—jointly constructing the nationwide *Espace Éthique* on MNDs with the public and gathering people from very disparate communities and diseases. The speeches both of the Commission Member 1 and myself, explained the context and the goal, that is to collaboratively discuss and identify ethical questions that are common to the six diseases of the plan—and to the communities related to the people living with them.

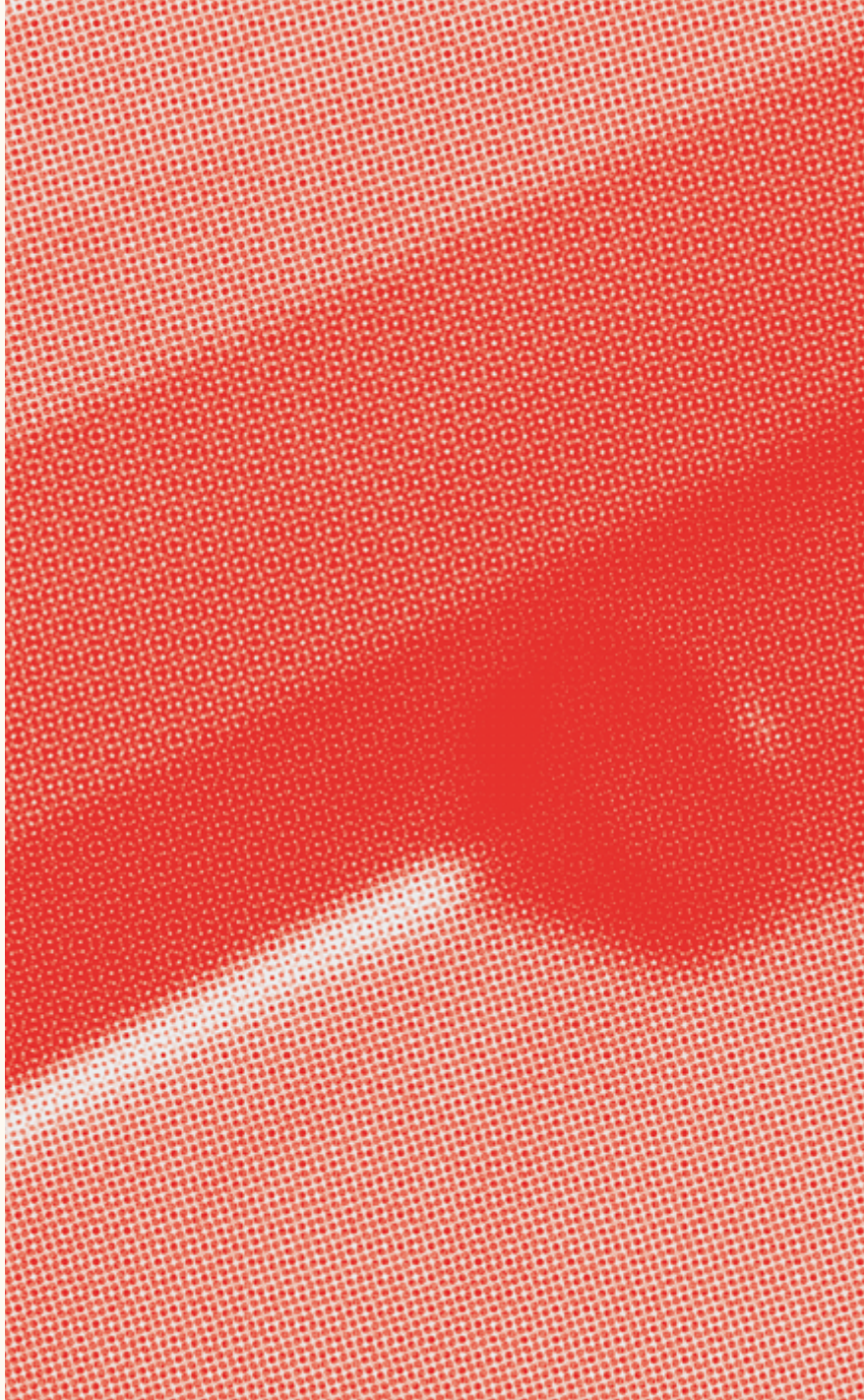
The presentation material of *L'Éphéméride* was unfolded in three phases, followed each time by 15 minutes of debate.

First, I presented the session's topic (i.e. time). I briefly mentioned the three meta-categories identified in Chapter 5: MNDs affect one's relation to the self, others and time. I announced the topic of "Time and the urgent need to live" as central to today's session. The concept of the artefact was then introduced with one image (shown as slides and followed with a 15 min Q&A session).

Second, more images were presented while circulating 4 physical copies (left picture) among the participants (followed with a 15 min collective debate).

Third, the video testimonial and complementary images were displayed, describing the usages of a contented user (as described in Chapter 6). This was followed with a 15 min collective debate.

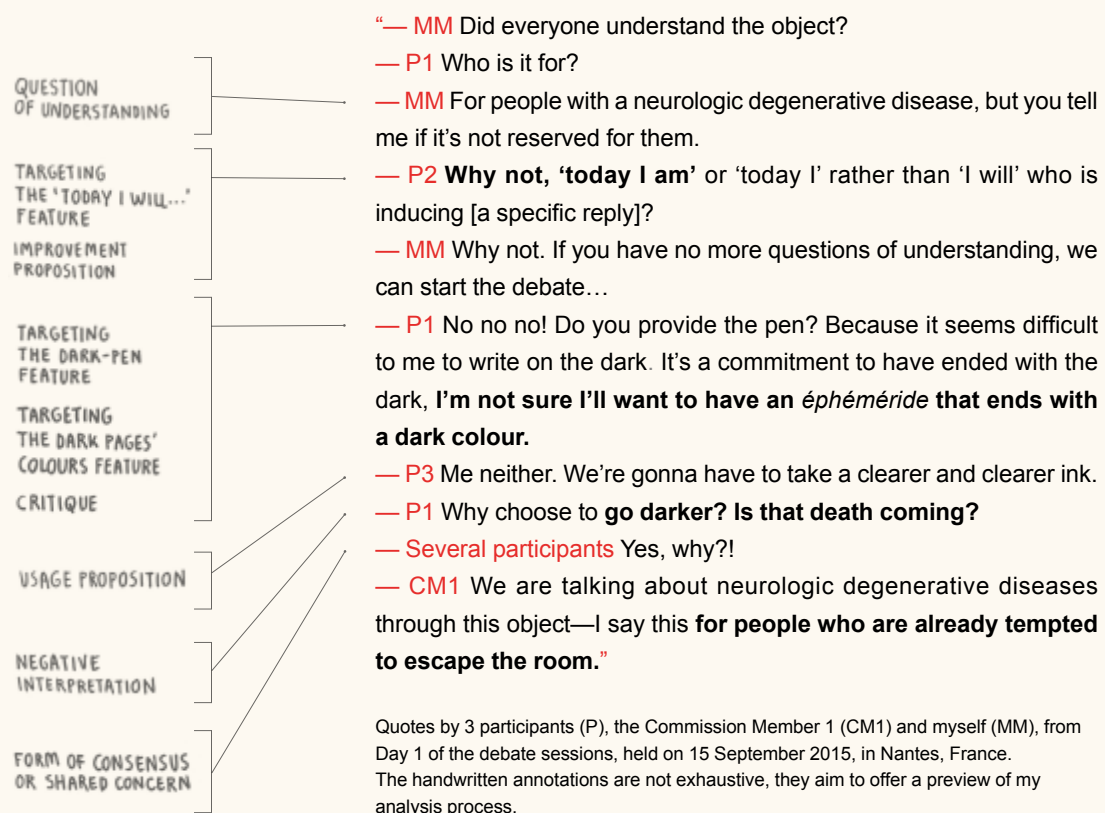




28.C Topics Debated

How did participants react to these debate conditions and the material presented? Some excerpts from the conversations are now given in order to convey a sense of the debate's atmosphere. Then, I present a list of the main debate topics addressed during the session.

After announcing the debate topic—the unavailability of the passage of time—I introduced *L'Éphéméride* with just minimum explanations: “*L'Éphéméride* is a calendar with no date, displaying a colour gradient as a progression forward.” Here are detailed the very first comments generated after this presentation:



The second phase of feedback generation was launched by showing more visuals and by the circulation, among the participants, of 4 copies of the artefact. While manipulating one of the artefacts, a participant (P1) requested to describe to the audience what they discovered, and their neighbours replied (P2, P3):

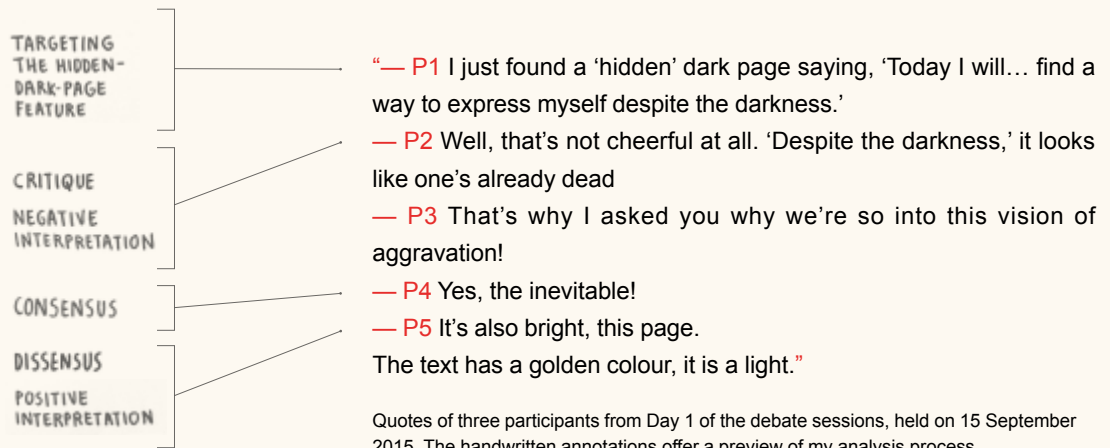


Figure 55 | Two people handling one of the 4 copies of *L'Éphéméride* and describing their feelings and opinions.

During the third phase (after showing the video), the participants' comments showed they believed that the project was not a fiction.



Figure 56 | Emotions observed in participants' non-verbal postures. Discourses ranged from reflection, doubt and misunderstanding to amazement, opinion change and contestation.

Based on the video and audio recording of the first day session, I made a map of the topics that have been debated. It answers the stakeholder's demand of mapping keys of understanding on the ethical issues relative to the 6 different communities (and diseases) of the MND Plan.

I analysed participants' feedback in order to identify the variety and recurrence of topics they addressed. The topics were regrouped in clusters of similarities. Finally, the mapping was organised along the three meta-categories according to which: MNDs affects one's relationship to 'self,' 'others,' and 'time.'⁶

⁶ Later, thanks to participants' reviews, we decided to add another meta-category: the relationship to 'institutions and society.'



Figure 57 | Working, in the hotel room, on the first iteration of the map of debated topics (top left). View of the print shop, in Nantes, printing a poster of a first version of the mapping (top right). Participants reviews pasted on the poster in the end of the second day workshop (bottom).

I refined the mapping through several iterations and printed it as a poster for the next day. The three meta-categories and the topics (extracted from the previous mapping) go as follows:

- The way the disease affects one's relationship with *oneself*:
 - The value of life.
 - The image of oneself.
 - Resilience (living together “with” the disease).
- Affecting the relationship with *others*:
 - Their gaze.
 - Their help.
 - Their exhaustion.
- Different regimes of relations to *time*:
 - Waiting.
 - Hoping.
 - Optimising.
 - Making the most of.
 - Ignoring.

The overview of the map's content is given in order to **summarise the subjects addressed** during the session. It **replied to the stakeholder's request** about mapping societal and ethical issues related to MNDs, from the point of view of the Commission's audiences. **It also provided additional data to complement my main dataset.**

A last piece of information provided by this map is the fact **it shows one way in which the experiment can generate knowledge**, in a participatory manner, via the confrontation to a dissonant artefact. That said, did the experiment allow to produce knowledge on the social values targeted?

Answering this first research question is now addressed. I focus my analysis on how the artefact conflicted with the norm and how participants reacted to it. I therefore pay less attention to the debate topics or to the meta-categories to which they belong. I rather focus on the design features of the artefact that were commented by the participants.

29

ANALYSIS & RESULTS

Demonstrating the Analysis Process of Studying Social Norms Through Design

29.A Unravelling the Social Values at Stake Among Participants Within Five Steps

29.A.1 Describing the Social Values Initially aimed at—and Brought into Dissonance via the Design Artefact

The breaching experiment approach involves ‘guessing’ about the existence of an unquestioned social rule or social values in specific audiences. In my case, I relied onto a co-design process to let my ‘guess’ be informed by issue-experts—people directly concerned by the debate topic, especially Sophie.

My ‘guess’ took the following shape, drawing on the participatory and inclusive design phases of Chapter 6:

- **Audience:** The usual public attending *Espace Éthique*’s events (including people living with one of the 6 diseases of the MND Plan, relatives, health workers, medical researchers, social scientists and politics), and the Commission’s itself
- **Debate theme targeted:** Deterministic and fatalistic discourses and positions regarding MNDs
- **Social norm aimed at:** Deterministic and fatalistic positions ‘should not’ come to summarise the diseases because, in doing so, such positions impose upon people arbitrary expectations of the kinds of life experiences to be had
- **Infringement of the norm:** It may be achieved by regarding fatalistic positions as ‘normal’ and by taking determinism and temporal pressure as shared values (and as primary design principles)
- **Careful ambivalence:** In order to avoid total rejection, the artefact may play with notions of free will and empowerment.

As a complement to this list, drawing from the design choices detailed in Chapter 6, I add the following two items:

- **Materialisation of the discourse:** The conflicting position is embodied in an object—a notepad diary—which fulfils its function of indicating the passage of time via a linear gradient of colour ending in black pages. The ‘mediating-artefact’ puts into play the free will remaining to the user by offering only a black pen while motivating him to fight this adversity (by means of an indication on each page).
- **The feedback I expect:** Generated comments may target the mediating-artefact formal and functional criteria as well as of its suggested uses. They should also range from outright rejection of the object, criticism, partial appreciation and the restoration of normality—by suggesting ways for the user to escape from this pre-programmed use.

29.A.2 Comparing the Design Features Expected to be Commented on, With the Actual List of Comments

Was *L'Éphéméride* perceived as dissonant and did it trigger comments on the expected social values?

In order to reply, the next step was to look at the kinds of features or usages of *L'Éphéméride* that were commented by the participants (expected and unexpected ones) and in which proportion.

Below, the feedback was analysed and coded regarding the design feature they addressed (positive and negative reactions were not distinguished, first). Some of these comments addressed 'expected features' which are the ones listed in Chapter 6 when analysing the artefact.

9	Linear gradient
8	Dark colour and black pen (i.e. death or loss of abilities)
3	Aesthetic (i.e. nice-looking artefact)
3	The sentence Aujourd'hui je vais
3	The hidden page
2	Glued square-back binding (i.e. the use of the pages in a fixed order)
2	Disposable or collectible pages
2	Limited lifespan of the artefact (i.e. the end of pages was interpreted as the death of the owner)
2	Name (i.e. <i>L'Éphéméride</i>)
0	Logo | not addressed
0	Large surface of the page | not addressed
0	Attachment string (to be affixed on the wall or upon a table) | not addressed

Table 5 | Expected features of *L'Éphéméride* which were indeed addressed by participants' feedback (ranged by the number of comments they generated)

In the table above are listed 9 out of the 12 expected features that were addressed by the participants. In the table below, 6 non-expected features or usages were also addressed.

11	Predetermined user (i.e. artefact reserved for patients only; or open to collaborative use with non-patients; or open for all)
4	Non-adaptability of the artefact to the evolving abilities of its own user
3	When to acquire the artefact (i.e. announcement of the diagnostic)
2	Writing (i.e. this ability vanishes over time)
2	Blank pages (i.e. are open to interpretation)
2	No customisation of the artefact to the six different diseases

Table 6 | Non-expected features of *L'Éphéméride* addressed by participants' feedback (ordered by the number of comments they generated)

34 out of 58 comments (58,6%) were reactions to the expected features or usages identified during the designing process (either positive or negative ones). 24 out of 58 comments addressed features or usages that were not anticipated. I observed two things:

- Of the 9 expected features addressed, 50% of the comments focused on the linear gradient and the dark colour (once taken together).⁷ These features were mainly negatively interpreted as death or a loss of ability.
- Among the non-expected features, one of them was the most debated (once taken individually): the fact of reserving the artefact's use only to people diagnosed with MND. It was strongly and collectively rejected by participants.

According to ethnomethodology, rejection can be interpreted as an identifier of broken social rules. Here, the features that generated the two largest number of critiques may be seen as potentially pointing at two facets of one social rule relevant to the participants. The semio-pragmatic analysis of Chapter 6 introduced the linear gradient and the dark colour as embodiments of the social values I initially aimed at. These observations show that the **social norm I aimed at seems relevant to the targeted audience.**

This data requires a deeper analysis, provided below. But already, these preliminary results show how *L'Éphéméride* **generated discussions on the targeted features and usages.** This indicates that **the artefact and the debate topic seemed relevant to the audience.**

⁷ These two features were most of the time addressed together (while they are two separate design features).

29.A.3 Sorting Participant's Interpretations of the Features' Meaning

I now look at the participant's interpretation of each feature/usage (is it negative or positive?). I also compared this interpretation with the ones of others (does it reach a consensus or a disagreement?).

Critiques and rejection were part of the feedback provided by the participants during the debate session, but they were not the only kinds. I therefore differentiated the features addressed into negative as well as positive comments and among the variety of interpretations, a number of consensuses emerged—the contestation against the artefact was collectively shared. Below, the consensuses are ordered from the largest to the smallest number of people in agreement.

(-) Negative interpretations that brought a consensus:

- Black + gradient = is seen as time passing, death is coming.
- Predetermined user = usage should not be restricted to people with an MND.
- Gradient = worsening (of one's condition), ineluctable.
- End of the notepad = death.

(+) Positive interpretations that made consensus possible:

- Participants would personally use the artefact if available in a different colour other than black (17 people raised their hands).
- It encourages people to express themselves about their condition while it is so hard to communicate sometimes (e.g. Alzheimer's disease).
- It is a nice-looking artefact (formal aesthetic).

Table 7 | Interpretations made of the features of *L'Éphéméride* on which participants were in agreement, sorted from the largest to the lowest number of people in agreement.

In complement to the data given above, the greatest consensus of all (which had people nodding their heads or commenting off the microphone) was on the negative interpretation of the dark colours and the gradient which were often mentioned together. For instance, the darkening gradient was interpreted by a participant as “the approach of death” to such an extent that the end of the notepad was sometimes perceived as an equivalent to the owner's death.⁸

Although the consensuses are the most visible part of the debate experience, it was important to move beyond them. This is where, surprisingly, once the first shock of encountering the artefact had passed, participants' interpretations began to diverge. Participants manifested disagreement in one-on-one conversations (this therefore regards a smaller proportion of people).

In the table 8, I list the features that were interpreted differently by the participants. For each feature, I listed the two or more kinds of interpretations offered (which often took the form of an opposition between a positive and a negative interpretation).

⁸ Sample from the debate session: “Otherwise, we saw [in the testimonial video] that she almost finished her *éphéméride*. Is she allowed to have another one?” And another person replied, “Or should she die?”

<p>Hidden page:</p> <ul style="list-style-type: none"> • (-) This is not cheerful [2 people]. • (+) It is enlightening, like an invitation to speak [1 person]. <p>Dark colour:</p> <ul style="list-style-type: none"> • (-) Death [majority of interventions]. • (+) It evokes the night and white evokes the day [1 person]. <p>Linear gradient:</p> <ul style="list-style-type: none"> • (-) Ineluctable loss of abilities [for the most of reactions]. • (+) "It allows planning!" [1 person, which instantly provoked general discontent]. • (+) "It constitutes the amount of 'time left to live,' there are way more white pages than black ones (or than the 'time left to die')" [1 person]. <p>The name:</p> <ul style="list-style-type: none"> • (-) Need something more poetic [1 person]. • (+) "No, it's already balanced by the inscription and the fact this éphéméride is unconventional" [1 person, who replied to the previous one].
--

Table 8 | Interpretations made of the features of *L'Éphéméride* on which participants were in disagreement. The order in which the list is displayed is arbitrary.

The number of people who contested others is fairly small, compared to the number of people who expressed contestations towards the artefact itself. Rather than the number, it is the variety of divergent interpretations of *L'Éphéméride* made by participants that is of interest here. The three interpretations made of the linear colour gradient (reported in the table above) can be taken as paradigmatic examples. They indicate three different positions taken by participants along the debate session when facing the artefact and the conflicted norm:

- **Rejecting the deterministic** representation made of MNDs. (This stance is the most common and can be found for most of the other commented features)
- **Acknowledging it**, learning to accept it
- **Challenging** this representation by either proposing a non-pessimistic way to interpret the gradient or by offering suggestions of alternative use (such as 'using a glitter pen').

Participants' interpretations helped to identify these three kinds of stances. Now, I assume that this identification exercise can be refined by exploring participants' justifications of their interpretations.

29.A.4 Searching for Why and How Participants Restored Normality, and Justified Their Interpretations

How did participants express a desire to reduce dissonance or to bring a situation back to ‘normal?’ How did participants justify their interpretations of the design features (positive or negative ones)?

To answer this, I tried to find normative comments (interventions that try to reset the accepted social rules). However, I did not find this kind of reaction obvious to pinpoint since *L’Éphéméride* offers an infringement (or rather a dissonance) that is not extreme and which is ambivalent.

I found two kinds of reactions:

- Propositions of other ways to use the artefact (alternative use, diversions of use).
- Design improvement suggestions (counter-propositions, redesigns).

Consequently, several categories of reactions became visible when handling this list of propositions which were accordingly organised in tabular form:

<p>Alternative use:</p> <ul style="list-style-type: none"> • Accepting the suggested usage: <ul style="list-style-type: none"> • Glitter pen. • Resisting/challenging: <ul style="list-style-type: none"> • Collaborative use (“transitional object”). • Pasting pictures. • Pasting stars in the dark pages (as if it was the night sky). • Using scissors. • Folding pages (origami). • Setting another paradigm of interpretation: <ul style="list-style-type: none"> • Starting from the end (if possible). <p>Alternative designs (counter-propositions):</p> <ul style="list-style-type: none"> • Refusing: <ul style="list-style-type: none"> • Any colour other than black or grey. • Opening the artefact’s meanings: <ul style="list-style-type: none"> • “Today I...” instead of “Today I will.” • Other inscriptions instead of repeating “Today I will” once it has been memorised. • I write your name or something poetic would be a better name for the artefact than <i>L’Éphéméride</i>. • Taking back control: <ul style="list-style-type: none"> • Spiral binding instead of glued square-back binding; • Several pages of different colours (making all colours available). • Making it accessible: <ul style="list-style-type: none"> • Digital interface instead of a physical one.
--

Table 9 | Participants’ resetting of normality was operated by formulating alternative uses and counter-propositions of alternative designs, while commenting on *L’Éphéméride*’s features.

In order to explain why I regrouped the previous propositions into these specific categories, I choose and briefly comment on two examples found in the table above.

First, when participants put forth the use of a light-coloured ink on the dark pages, they actually answered to the suggestion made by the ‘hidden’ page.⁹ Even if this was supposedly an act of resistance, accepting the use of the artefact in this way is also an act of obedience. Moreover, the hidden page’s suggestion makes the fatalism of the whole artefact ‘acceptable.’ Using a light pen is equivalent to acknowledging the legitimacy of the darkening gradient. By doing so, it validates the representation of MNDs as (mainly) degenerative.

Second, in contrast with the previous example, one of the propositions belongs to a completely different paradigm—starting *L’Éphéméride* at the end. In fact, this suggests an understanding of MNDs that follows an evolutionary model but is not degenerative at all.

Under this new light, I review the three stances identified in my previous step of analysis by adding one last stance—that of giving up. In retrospect, this stance appeared clearly when the *Montre-Éphéméride* (the first over-dissonant prototype, discussed in Chapter 5) was presented to Sophie.¹⁰ Altogether, the list of stances previously drafted can be revised as follows:

- Acknowledging the deterministic and fatalistic representation:
 - Enduring it: giving up.
 - Enduring it: learning to accept (this condition is defined by the darkening gradient representation).
 - Challenging it: proposing non-pessimistic interpretations of it but still identifying with such a representation.
- Rejecting the deterministic and fatalistic representation:
 - Refusing or resisting it.
- Setting another paradigm of representations for MNDs:
 - Creating something else.

In short, it appears that, in the context of this debate, participants’ **normative reactions against the artefact were expressed** in two forms—suggesting **alternative ways of using** the artefact, and counter-propositions made under the shape of **alternative designs** suggestions. Among these propositions, I identified three groups of participants’ stances—acknowledging the deterministic representation, rejecting it, and setting another paradigm of representation for the MNDs. I understand **these stances as three different ways of dealing with the artefact and its fatalistic representation of time.**

29.A.5 Unravelling Tensions and Beliefs Underpinning the Studied Social Values

The last step of my analysis further explores the three previous stances as a way to unravel why deterministic and fatalistic representations seemed particularly sensitive to this audience. I therefore contrast the analysis results with additional material (e.g. quotes extracts, questionnaires, interviews and focus-group), searching for recurrence or paradoxes regarding the analysis’ results in other contexts.

⁹ As shown in *L’Éphéméride*’s visual presentation, one page displays the sentence: “Today I will... find a way to express myself despite the darkness.”

¹⁰ From the verbatim extracts of the interview given in [CH5 | Section 19.B](#).

Previously, the tables of expected (Table 5) and unexpected (Table 6) features addressed by participants highlighted the three most critiqued features. They comprised the fact *L'Éphéméride* has a 'pre-determined user,' the 'gradient,' and the 'dark colour.'¹¹ The first of these three features (although here it suggests usage) was addressed by 18.9% of the comments. Table 7 showed how this critique brought the audience in a state of consensus.

It is therefore worth looking in detail at the kind of comments triggered by the fact of reserving the artefact only for diagnosed people.

The very first comments after my presentation of *L'Éphéméride*:

“— MM Did everyone understand the object?

— Participant Who is it for?

— MM **For people with a neurodegenerative¹² disease**, but you tell me if it's not reserved for them.”

Second phase of the debate (30 minutes later) after having shown the video testimonial:

“— MM I thought she [Françoise, the video actress] **would be using it collaboratively**. But she keeps it carefully on the bedside table. Where another person living with the Huntington disease told me it would be an object for her to display in a semi-public space, like the living room or the kitchen. **Where her relatives could leave her a note.**”

10 minutes later:

“— Françoise's neurologist,¹³ replying to another participant, I'm starting to join you on this one, it could be **an object for all of us. Our patients finally... it's all of us, we're sick of life**, which is the deadliest disease. [...] By the way, we're talking about ALS¹⁴, which I know very well. I wonder if this *éphéméride* **could be entrusted to the loved one**, to write down what the patient wants, or [to write] her ephemeral moment that she just lived with the patient.

— The Commission Member 1 I ask myself a question about the double status of this object: the intimate object; the transitional object, even an object of mediation (and for whom? With which relative?). Can't there also be a page area reserved to the expression of the relative on *L'Éphéméride*? **In a real medical file**, there should be **the opinion of the doctor, but also that of the patient**. Here, can it be a shared object?”

Conversation between a single participant, the Commission Member 1, and myself (MM). Quotes from Day 1 of the debate session (15 September 2015).

¹¹ Respectively 11, 9 and 8 critiques out of 58 comments. The 56 comments include 46 critiques and 12 suggestions of improvement.

¹² This is the French translation for Motor Neuron Disease.

¹³ As a reminder, Françoise is the (non-professional) actress of the video, and a person living with multiple sclerosis. Her neurologist was among the debate participants because Françoise and the neurologist are both close collaborators of the Commission.

¹⁴ ALS = Amyotrophic Lateral Sclerosis, the disease initially diagnosed to Stephen Hawking.

The previous extracts contextualise how *L'Éphéméride* was presented as 'reserved' for people living with an MND and show the consequences of such an announcement. They also show how excluding a category of people from using the object sparked two main reactions among the audience:

- A longing to keep communicating with people with an MND (that is, "making them express themselves, give their opinion or desires").
- Being concerned by their own bodily degeneration (aging).

I now further the interpretations of these comments to refine my understanding of the social norms that was brought in a state of dissonance. I expand this within three steps.

First, participants strongly contested and rejected to be separated from the category of people allowed to use *L'Éphéméride*. This was definitely a trigger for the audience. Given the fact that the audiences were for the most part composed of people who did not have a disease themselves, I suggest that the members refused to be symbolically separated from the ones they cared for. Through these kinds of feedback, the participants demonstrated a belonging to the philosophy of Care which has become increasingly popular—under this phrasing—in France since 2010¹⁵ and which is also heavily espoused by *Espace Éthique* itself (given the title they chose for our workshop,¹⁶ the programme of their Summer University,¹⁷ and other documents found during my residency among their team).

Thus, the participants and the commission seem to be both in a stance of Care.

Second, under this perspective, Participant's feedback can be seen as a questioning of the identity of the whole audience, by themselves—i.e. 'do we belong to one same group that stands against the adversity related to the MND conditions?' For instance, one of the participants (the video actress's neurologist) expressed two opinions. She first pointed how much different is the (commonly accepted linear) perception of time for people with an MND condition.¹⁸

¹⁵ The notion of Care is rooted in the attention to others and designates both an informal relationship (a concern for solidarity and empathy towards family and friends) and a formal one (a way of rethinking social protection but also hierarchical relationships, in the company, management and, finally, the sum of human relationships). | About the coining of the concept: **Carol Gilligan**, *In a Different Voice* (Cambridge, MA: Harvard University Press, 1982). | Regarding the French context, see: **Agata Zielinski**, 'L'éthique du care,' *Études* Tome 413, no. 12 (28 November 2010): 631–641, www/

¹⁶ "Workshop of ethical creation: building together the *Espace Éthique* MND 1/2." Extract of the Summer University booklet: espace-ethique.org/sites/default/files/programme_univ_ete_2015_BD_0.pdf

¹⁷ "[The Summer University] is also rich in the confrontation of knowledge, those that bring us back to immediate realities as well as those that allow us to find height, to better think the meaning of practices, to rediscover the happiness of acting for others." Extract of the editorial of the Summer University booklet.

¹⁸ When she proposed an explanation of why the actress in the video (which is her patient) did not seem to see the colour gradient as deterministic, she said, "I think what may hurt some people [in the audience] is the imposition of colour progression, which is difficult—as a western person, with this western philosophy pegged to time—to disconnect from a temporal symbolism" Quotes from Day 1 of the debate session (15 September 2015). By the video actress's neurologist.

Then, she acknowledged that some dimensions of MNDs (aging and the ineluctability of time) in fact concerns everybody.¹⁹ This way, this participant actually redefined the boundary of whom is a legitimate candidate to be concerned by the artefact and by these medical conditions.

In my interpretation, the stance of Care led the participants to consider both the people who have and those who do not have a disease as part of the same group, thereby erasing the boundary between them.

Third, a paradox arises from such a stance. Indeed, being permitted to be alienated from the group is actually one of the struggles faced by the people who have a disease. *The Dingdong Manifesto* gives a poignant example of this when the author reflects on her training as a psychiatrist compared to her relations with psychiatrists when she was diagnosed. The author takes the Autistic Culture Movement as a source of inspiration. She questions what she wins and loses by celebrating her new condition. She stresses how, “[...] some people with autism not only accept but uphold their autistic status...” This, she says, leads to the discovery of the “[n]eurotypic culture, which is to say normal people’s culture, which they cheerfully conceive of as some kind of incurable pathology.”²⁰

I put forth that **the stance of Care** as observed among the participants may **impinge upon people’s living with MND’s struggle to legitimate their difference**, their non-normality. Hence, the normativity implied by the points of view of the peoples that do not have an MND may intervene in the people living with an MND’s fight against the normalising stance of the medical establishment and its discourses.

¹⁹ She actually took her own example to say, “I’m starting to join you on this one, it could be an object for all of us. Our patients finally... it’s all of us, we’re sick of life, which is the deadliest disease.” By the video actress’s neurologist during the same debate session.

²⁰ Dingdongdong and A. R., ‘Dingdongdong Manifesto,’ 19.

29.B Interpretations

29.B.1 The Values of People Who Do Not Have an MND Can Be Normative for People Living with MNDs

I report the knowledge generated on the social values at stake within the debate audiences within three-folds.

Firstly, among debate participants, it appears that **the social values I aimed at seem to be in place** among the participants of the experiment. This interpretation draws from two design features that strongly (or even literally) embodied an infringement of the chosen social values. My interpretation also stems from the correspondence observed between the attention given to these two features (Table 5) and their negative interpretation—related to fatalism and determinism (Table 7).

Secondly, **the acknowledgment of deterministic and fatalistic discourses, their rejection and the setting of another paradigm of representation for the MNDs** seem to compose a typology of **three kinds of stances adopted when facing deterministic representations made of time and of the MNDs**, among the participants.

Before formulating these categories as such, I initially reported stances of rejection, acknowledgment and challenge of the deterministic representations made of MNDs. This was done by reviewing (marginal, yet clear) disagreements among participants regarding the justifications of their negative and positive interpretations of the artefact (Table 8). I refined the typology thanks to analysing Participants' way to restore normality, which is, by suggesting alternative uses and alternative designs regarding *L'Éphéméride* current design features (Table 9).

Thirdly, the social values at stake are comparable to a **stance of Care that may in fact impinge upon the peoples who live with MND and who struggle to legitimate their difference**, their non-normality, in the face of the normalising stance of the medical establishment and its discourse.

The breaching experiment method as much as the current approach articulates around a set of features (of an artefact, of a behaviour, or of a situation) that are expected to be subject to contestation and rejection. By turning my attention to unexpected features that crystallised the audience's comments, I observed another topic of contestation against the fact of excluding people that do not live with an MND from using the object. I drew on additional qualitative data (quotes and extracts of documents published by the Commission). I thus formulated this third interpretation by reporting that the participants and the commission both tended to neglect and erase the boundary existing between people who have and those who do not have a Motor Neuron Disease—as a way to stand together against adversity.

Finally, my third conclusion seems paradoxical and may not be shared by all people concerned with MNDs. Yet, it makes it possible to formulate three questions open for further work:

- If the stance of Care impinges on some people's struggle against the normalising stance of people who do not have an MND and of medical discourses, could a **stance of Care also impinge upon the commission's work of ethical reflection?**
- Subsequently, could **dissonance bring a benevolent disagreement to challenge the stance of Care** and the "illusion of consensus?"
- And behind this, could dissonance bring a benevolent *dissensus* that reaches beyond a matter of opinion, to a **matter of identity, creating a space favourable to the expression of one's difference**—alterity?

29.B.2 A Research Approach Comparable to the Breaching Experiment

Drawing from the demonstration of generating the previous knowledge, I now ask if this research approach can be affiliated to a form of ethnomethodology.

I use three arguments to answer this question.

First, the protocol put in place to conduct the field work and analyse the results included the three main steps of Garfinkel's method. It started with making a hypothesis on the existence of social values. It was followed by performing an infringement of the given values. Then, it was punctuated by participants' rejection and restoration of normality, whose analysis made it possible to match their comments to the initial hypothesis.

Second, the participants' comments corresponded to the social values initially aimed at—and to the issues deliberately embodied in the artefact.

Third, the type of knowledge generated seems to be comparable to the one generated by a breaching experiment. Indeed, the results given just before were strongly related to the social norms at stake within the audiences. This argument is all the more relevant considering the fact I did not find similar results in other contexts. Indeed, I here bring a complementary piece of data that was not reported in the thesis until now. In fact, after 2015, I had several opportunities to present my work in public events related to art and design. I hence decided to organise debates triggered by presentations of *L'Éphéméride*—three more times, with random audiences. In two of these occasions, some key comments publicly formulated by the participants indicated a complete disconnection from the issue and/or an absence of the effects of the social norms being studied.

For instance, some participants' comments seemed to miss the point linking the artefacts' features and the loss of capacities.²¹ Other comments clearly showed how participants did not perceive the artefact's dissonance at all.²² As there was not enough time and resources to analyse these episodes in depth, the debates analyses are not included in the thesis. Rather, this information is given as a counterpoint. It allows me to confirm that it is not the discourse conveyed by the artefact that imposed a discussion topic on given social values. It is rather the artefact that entered in resonance (and in fact, in dissonance) with pre-existing social norms—thereby confirming their existence.

While further work is to be done to replicate the approach in different contexts, **the application of the design tactic of dissonance to conduct social research seems to be comparable to a form of ethnomethodology** for three reasons. **The protocol** is similar, **the type of knowledge** too, and **its use proved successful** (once), in the task of confirming the existence—and to unravel the underpinnings of—a studied social norms, among a specific set of participants, for a specific occasion.

29.B.3 Differences with Ethnomethodology, a Designerly, Discursive, Agonistic and Reflective Approach

I now wonder what was different from the breaching experiment approach in the way design dissonance was used to study the social norms. Answering this question will bring material to discuss the specificity of using the design tactic of dissonance to feed an adversarial debate activity.

In order to reply, I compared the two methods. I regrouped the differences I found in four groups. For each groups, differences revealed at two specific steps of the method—the way the norm is infringed and the type of normative reaction demonstrated by the participants. These four groups of differences between the breaching experiment and the tactic of dissonance are now detailed.

²¹ The participant I observed did not interpret the “Today I will...” inscription as an encouragement to fight the disease progression but as a mood-indicator: “Okay, but what about the ‘Today I will...’ inscription [that she translated, in French, as ‘Today I’m going... well, or not’]? I understood one had to declare if they were okay or not.” Quoted from a debate participant on February 2, 2018, during a debate workshop chaired by the *Dingdingdong Institute*, at the event launching the *Chaire Art et Sciences*, Cité des Arts, Paris, chaire-arts-sciences.org/nous/ (Accessed Dec 2019).

²² “For someone like me who has already experienced a serious illness, we are already aware of death. I have trouble seeing the difference between this thing and a classic agenda to organise one’s life, what more does it bring to these people?” Paraphrased from a debate participant on Nov 15, 2018, at the Design fiction club S01#02, Gaîté-Lyrique, Paris, youtu.be/U2-JmwIWwG4?t=4795 at 1:19:57 (accessed Dec 2019).

First, the element that planned to ‘trigger’ the participants’ normative comments were rooted in the field of *design*:

- Rather than submitting to the participants a ‘situation’ or a ‘behaviour,’ as a breaching experiment would, **the use of a design artefact** is an important difference.

This manner of infringing the social norms had two consequences on the kinds of normative reactions observed within participants:

- In the place (or together with) expressing the desire to reset a ‘normal’ situation—e.g. ‘You should do this’—participants formulated normative responses, but in a designerly way, either by **suggesting alternative uses**, or by **imagining alternative designs** (See Table 9).

Second, the infringing artefact in question, being *discursive*, it involves two shifts from a classic ethnomethodological approach:

- Instead of an actual infringement, the artefact offered a representation of an infringed social norm,²³ it was a form of **simulation** of a distant situation in which the participants may project themselves.
- But also, the infringement was not performed by a human, it was **conveyed by a mediating-artefact** (or it was performed by a designer through an artefact).

As a consequence on the audiences’ feedback, respectively:

- Participants were expected to reset the normal situation. Some participants did; by rejecting the artefact. Others suggested **keeping adapting to and negotiating with the abnormal situation.**²⁴
- But also, rather than interacting and discussing with the people or with the person that infringed the norm, **an artefact was part of the discussion** (it even played a central role).

The infringement of the social values during the experiment was, third, done in an *adversarial* way:

- Breaching experiments are deployed in life situations. Here, the experiment was **based on a debate activity** (that is collective and participatory).
- Moreover, instead of a brutal and unilateral infringement, the experiment offered an **arguable situation** (non-persuasive, embodying multiple and contradictory values).

This was not without consequences on the way participants expressed normative responses to the infringement of social values:

- Quite evidently, the normative response was not formulated within a life situation but, like the infringement phase, it took place in a debate-driven activity that is **collective and participatory**.

²³ The artefact is not actually used by participants, and the user testimony video is fictional.

²⁴ In Table 06 and 07, several participants expressed appreciation and support for some features of *L'Éphéméride*. In for instance, in Table 08, I mention one person who suggested using a glitter pen, implying one can bare the abnormal situation and overcome it.

- Participants of a breaching experiment are expected to express rejection (which is a form of consensus) and to restore the group's social values. In my experiment, **mutual contestation** (disagreement) was observed among participants. The group's social values were challenged, which generated *dissensus* (the questioning of the consensus). Also, (disagreeing) **marginal points of view** were expressed.²⁵

Last, the present approach also seemed to have been drawing on the *reflective* property of designing for debate:

- Unlike the conventional breaching experiments, a brutal unambiguous infringement of the social norms was not performed. The infringement was **careful, tempered and ambivalent**.

In contrast to the adversarial nature of the approach, that generates disagreement, the experiment generated normative responses that were closer to self-doubt:

- The expected reaction for a breaching experiment is a refusal, rejection or outrage. But here, **doubt, contradictions or changes of interpretations and opinions** were observed.²⁶

To conclude this section, it seems that **using design dissonance to conduct social research is an approach comparable to ethnomethodology** (essentially because, the protocol and the type of knowledge **are similar**, and because its use proved successful, once).

The way the infringement of the social norm is performed and the kinds of normative reactions generated among the participants are specific steps where **the two methods display distinctions**. These differences can be regrouped into four categories—the *designerly* nature of the approach, and the *discursive*, *adversarial* and *reflective* properties of designing for debate. These categories correspond to a part of the core properties of design for debate initially identified in Chapter 1. I suggest that **these differences are valid both for the application of the dissonance tactic to stimulate agonistic debate and to study social values**.

Further research must be done to consolidate and replicate the approach in different contexts—both to spark mutual contestation and to conduct social research. I suggest to consider **the empirical account** given until now (including the data and the demonstration of the analysis process) **as a first contribution** of the present chapter.

²⁵ See the disagreement reactions listed in Table 07.

²⁶ For instance, one of the participants (the video actress' neurologist) expressed two opinions. She first pointed how much different is the (commonly accepted linear) perception of time for people with an MND condition. Then, she acknowledged that some dimensions of MNDs (aging and the ineluctability of time) in fact concerns everybody.

30 *DISCUSSION* Four Contributions of Design Dissonance to Agonism

I now discuss the four categories in which my interpretations were gathered in order to draw conclusions on the two research questions of the present chapter—which are, how can designing for debate and the design tactic of dissonance be used: to feed agonistic debates? And, as a form of social research?

Answering those, my aim is to discuss what can design for debate bring to agonism.

30.A A Designerly Approach: A Spur to Step into a Designer Stance

In the current experiment I expected participants to reduce the cognitive dissonance and to reset ‘normality’ over the conflicted social norm embodied in the artefact. I found that participants’ comments were not plain normative ones (e.g. ‘this artefact is *wrong* because...’). These reactions appeared in two forms—propositions of alternative use and alternative designs.

Shedding light on this designerly way of formulating normative responses to dissonance can be done by looking at the normative nature of design itself.

Design can be considered as normative because it constantly intends to offer visions of the ‘better’ and of the ‘preferable.’²⁷ Moreover, the judgement of what is collectively considered as right or wrong is the very essence of social norms and normativity. Extending this thinking, Richard Buchanan’s work on the rhetoric of design discusses the influence of design artefacts in terms of normativity. Buchanan observes:

“In approaching design from a rhetorical perspective, our hypothesis should be that all products—digital and analog, tangible and intangible—are **vivid arguments about how we should lead our lives.** [...] Products embody cultural values and knowledge drawn from many fields of learning, and products express values and knowledge in a complex debate conducted not in words but in nonverbal language.”²⁸

²⁷ **Alexandra Daisy Ginsberg**, ‘Better: Navigating Imaginaries in Design and Synthetic Biology to Question “Better”’ (Ph.D. Dissertation, Royal College of Art, 2018), www/

²⁸ **Richard Buchanan**, ‘Design and the New Rhetoric: Productive Arts in the Philosophy of Culture,’ *Philosophy and Rhetoric* 34, no. 3 (8 January 2001): 194, [doi.org/](https://doi.org/10.1080/00332020108839288) | In the original context, Buchanan advocates for the consideration of ‘making as a domain of significant problems and expertise that also require investigation’ and for its scholarly enquiry as a liberal art through the humanities. Hence he sees design as a contemporary form of rhetoric. But he also advocates to apply his vision to a larger situation—as done in this section.

In order to stress the influence of artefacts on potential users, he adds:

“Design [...] employs **rhetorical doctrines** and devices in its work of shaping the products and environments that surround and persuasively influence our lives to an unprecedented degree.”²⁹

In short, when design is perceived as aiming at an ‘improvement’ of any sort, and at the ‘preferable,’ its artefacts may work as normative rhetorical arguments, that is, as value judgements about what is ‘good’ and what is not. Hence, using the formal language of product design to spark debate installs a relation of domination between the designer and the audiences (as a user). There is a form of hegemony of designers’ position as being the ones able to impose rhetorical argument to others through normative objects.

There are two ways to understand Buchanan in relation to my experiment. First, *L’Éphéméride* imposed a vision according to which the deterministic thinking associated with the MNDs diagnoses appeared as ‘good’ and commonly accepted. Second, the designer themselves—myself, in *L’Éphéméride*’s case—may participate in imposing this value judgement. As a way to make this point I offer this quote, taken to two participants who came, outraged, to speak to me privately after the session—thereby starting a 15-minutes informal interview.

— We feel like we’ve been influenced, manipulated. Even if it was not explicit, I had the impression that I was in a psychology experiment of **submission to authority, because you are a designer** and because of [the Commission Member 1]’s presence.

— **MM** Why didn’t you express it?

— I couldn’t do it. I felt like I was being paranoid. The lid was quickly put on by [the CM1]. I feel like I’m being ripped off, right to the end. Because **I was out of step with the others**, who found that ‘[*L’Éphéméride*] is a transfer object.’ I don’t even know how to verbalize it. [...] **Because you are a designer, that the majority hold this opinion**, that we are in an *Espace Éthique* in Nantes, for which I have a deep respect. I was disconcerted.”

Extract from an informal group interview with two participants (only one talked, here) conducted by myself (MM). After the debate session’s end. 15 September 2015. Nantes, France.

On the one hand, this outraged debate participant’s feedback provides additional proofs to one of my arguments formulated in Chapter 6. It indeed exemplifies the use of rhetorical strategies by designers for debate—namely here, the strategy of establishing the designer’s legitimacy, helped by the stakeholder. On the other hand, this comment echoes Buchanan’s concept. In fact, both the Commission Member 1 and myself appeared to stand as **figures of authority** that imposed the legitimacy of the artefact.

Another form of legitimation of the design artefact comes from its status as a product. Dunne and Raby's last book elaborate on this:

“We have recently become interested in the idea of **critical shopping**. [...] We get the reality we pay for... In a consumer society like ours, it is through **buying goods** that reality takes shape. The moment money is exchanged, a possible future becomes real.”³⁰

The authors seem to value one of the qualities of the design medium, that is, its status in consumerist society as a consumable product. As outlined in [CH1 | Section 1.B.1](#), this argument was already carried in the 1960s. The impact of merchandise on society was indeed what led the practitioners of Radical Architecture to prefer the language of product design over architecture in order to communicate their contestation messages.³¹

In our case, *L'Éphéméride* had such a status of viable design ‘product’—that is, potentially industrially mass-produced and therefore massively supported by industries, suppliers and institutions.³² The public has been imposed a vision of the good, but this vision is unacceptable—or at least partly unacceptable. In reaction to this dissonance, the participants formulated counter-propositions to *L'Éphéméride* under the form of alternative design propositions.³³ I see this as a demonstration of a form of struggle against the rhetorical arguments imposed on the audience. But also, **I propose to understand these counter-propositions in terms of actual acts of designing**. Hence, I suggest seeing this act of struggle as one of **freeing oneself from a ‘user’ role so as to actively take a political role as a designer, and citizen**.

Consequently, when designing for debate is deployed in a participatory debate setting, **the challenging of hegemony that is enabled by agonism**—according to Mouffe—**does not happen against a clearly visible adversary, but against design and the hegemonic position of the designer themselves**.³⁴ It opens situations for dialogue in which designers do not necessarily have the final word on the finalisation of the artefact, that is, they are not the ones in power.

Now that this argument is established, I shall point to a major limitation that stems from sparking debate through design ‘products.’ This argument neglects other ways of being part of the audience, beyond being a designer or a consumer—e.g. as citizens, or simply as human beings.

³⁰ Dunne and Raby, *Speculative Everything*, 37.

³¹ Quinz, ‘Prologue, A Slight Strangeness, 20. | Fed by Marcuse’s theoretical insights, architects realised that, within the rising consumerist society of the 60s, merchandise (and the economic exchange of goods) had more influence on shaping society than urban planning and architecture.

³² I invite to see the artefact as belonging to an entire (fictional) world where it is a mass-produced good. In this world it is supported by a whole network of actors (from the designer, the seller, the industry producing it, the hospitals using it, etc.). This whole world of people—that is off-frame and suggested by a testimony video, for instance—implicitly share the artefact’s set of values by supporting its very existence.

³³ For example, participants proposed to start using *L'Éphéméride* from the end—which offered a completely different paradigm of non-deterministic values. See other propositions in Table 9.

³⁴ It is relevant to note how this perspective brings design for debate closer to its self-critical roots—exposing design’s unquestioned assumptions, like Critical Design intended in its early days.

When designing for debate entices the audience to behave as ‘product’ designers, a form of (Gramscian) cultural hegemony³⁵ comes into play. The audience is invited to think critically and to defamiliarise from their known situation. Yet, packaging a critique in the shape of a product cannot offer the audiences clues to deconstruct the status of the design ‘product’ itself and to devise situations that exist outside of this (capitalist, industrially mass-produced and consumerist) value system.³⁶ As Tiphaine Kazi-Tani³⁷ observes (borrowing from Audrey Lorde), “[t]he master’s tools will never dismantle the master’s house.”³⁸ This critique does not prevent from designing for debate, but it constrains the critical scope of the process, especially if this limitation is unconscious.

Two research avenues emerge from this conclusion.

First, in order to deal with the consumerist and capitalist culture carried by the visual language of design products, how to develop a ‘product-less’ design for debate? Further, how to develop a ‘design-less’ design for debate—e.g. a form of fiction for debate? Or, at the opposite, can Radical Design’s cynical strategy of self-destruction of bourgeois interiors be applied to developing a ‘design-less’ design for debate?³⁹

The second avenue echoes the work of other scholars, notably the one of Mahmoud Keshavarz and Ramia Mazé. In the conclusion to their work on Rancière’s dissensus and design, they observe:

“Design must be queried at the ‘political frontier,’ in which other, situated forms of knowledge are embodied in social- and change-oriented practices. Concepts such as ‘dissensus’ open onto a range under-explored issues and approaches that may be interrogated within and through design research.”⁴⁰

My research therefore advocates not only for further work on design for debate but also for further enquiry into how to challenge and redefine the designer’s stance in Participatory Design (and debate) practices.

35 Antonio Gramsci, *Selections from the Prison Notebooks of Antonio Gramsci*, ed. Quintin Hoare and Geoffrey Nowell-Smith, [Written 1929–1935] (New York: International Publishers, 1971). | Laclau and Mouffe, *Hegemony & Socialist Strategy*.

36 Find other echoes of this critique, in Cameron Tonkinwise’s review of Dunne & Raby’s last book: Tonkinwise, ‘How We Intend to Future,’ 14.

37 I would like to acknowledge the work of the French design researcher Tiphaine Kazi-Tani who brought a lot to my framing of the present argument. Find a (brief) presentation at Centre Pompidou youtu.be/d1XfzFbn3m0?t=3040 and (a larger one) at the Design Fiction Club S01#07. Video soon uploaded on designfictionclub.com/ (both URLs accessed Dec 2018). | See also: Tiphaine Kazi-Tani et al., ‘Good People Behave, Bad People Design. Misbehaving as a Methodological Framework for Design and Design Education (Poster),’ in *Proceedings of IASDR ’15* (Brisbane, Australia, 2015), www/

38 Audrey Lorde, ‘The Master’s Tools Will Never Dismantle the Master’s House. Comments at “The Personal and the Political” Panel. (Second Sex Conference October 29, 1979).,’ in *This Bridge Called My Back: Writings by Radical Women of Color*, ed. Cherrie Moraga and Gloria Anzaldúa (Albany, NY: State University of New York Press, 2015), 94–103, www/

39 Quinz, ‘Prologue, A Slight Strangeness, 25 | Reminder from CH1 | Section 1.B.1: Quinz describes as “banal objects” the Radical Design’s 1960s strategy to push the kitsch aesthetic (which became fashionable while initially developed as a means to raise critical awareness about industrial standardisation) to its maximum. It acted as a negative resistance, a somewhat dystopian attempt to destroy the good taste of middle-class homes.

40 Keshavarz and Mazé, ‘Design and Dissensus,’ 23.

30.B A Discursive Approach: a Non-Human Diplomat Chasing the Audiences' Blind-Spots

Within participants' feedback, I observed forms of struggle, but also, forms of acceptance of the deterministic and unacceptable situation imposed onto them.

Indeed, as argued during my analysis, using a light-coloured ink on the dark pages is actually a way to acknowledge the relevance of the dark pages. In contrast, beginning using the artefact from the end is a real emancipation that defines a non-deterministic representation of the MNDs.

Instead of (or in addition to) resetting normality by rejecting the artefact, other participants suggested keeping with the abnormal situation. While this could be perceived as a pitfall of the experiment, I rather suggest contrasting this kind of participants' feedback to the one of usual breaching experiments.

Under this light, rather than restoring the immutable social norms, the design tactic of dissonance seemed to have opened an opportunity to question, discuss, and change the established initial situation. **The design dissonance makes the social norms questionable.**

A second observation, regarding the discursive nature of the design dissonance can be discussed here. In Chapter 6, I considered the agency of the artefact in terms of prompting recognition of an issue. I offered concepts of the mediating-artefact—i.e. a simulation means which distances usage in order to leave room for reflection—and of 'bridging'—i.e. the projection into the others' points of view. I now extend this thinking.

I observed how normative comments were not solely expressed by discussing with people or with the person that infringed the norm—like in a breaching experiment. The artefact was part of the discussion. It even played a central discursive role by conveying an under-represented discourse (co-created in an inclusive stance with Sophie). While being composed of multiple facets and arguments, the artefact stressed the point of view of a person living with an MND, on the debated issue. So I offer to understand the artefact not only as a carrier of discourse, but as a megaphone, a spokesperson, a representative for under-represented points of view, a **non-human diplomat**. The diplomat is a concept brought by the Belgian philosopher of science Isabelle Stengers in 2006.⁴¹ In the words of Bruno Latour,

“The diplomat isn't the one who pacifies but he's the one that doubts values, including the values of the people who sent him there in the first place! In this sense, his task is first and foremost the intensification of conflicts.”⁴²

⁴¹ Isabelle Stengers, *La Vierge et le neutrino: les scientifiques dans la tourmente* (Paris: Les Empêcheurs de penser en rond, 2006), 82.

⁴² Elie During and Laurent Jeanpierre, 'Bruno Latour : "L'universel, il faut le faire" (Interview),' in *Critique, N° 786, Novembre 2012 : Bruno Latour ou la pluralité des mondes* (Paris: Les Éditions de Minuit, 2012), [www/](#)

It is necessary to precise that I propose a design and object-oriented perspective on the diplomat concept. I draw this perspective from the French design researcher and artist Benoit Verjat, and his coauthors, who offer to understand the medium of the graphic design poster as a form of “visual diplomat,” spread on the walls of a city’s public space.⁴³

In my case the agonistic and diplomatic mission of the mediating-artefact—the ‘mediator’ artefact (!)—is left to be specified. As said in Chapter 6, the dissonant artefact is ‘arguable.’ The issue embodied in the artefact is therefore ambivalent. It means the artefact is not persuasively supporting the point of view of one party. Dissonance does not necessarily make the voice of the ‘oppressed,’ the remainder⁴⁴ or the unaccounted⁴⁵ heard. Rather, the definition of who is unaccounted might change depending on the situation. As a caricatured example, if Monsanto’s point of view remains under-discussed within the scientific discourses of a specific agronomic research communities, their point of view may be brought to the debate table throughout a dissonant artefact. Considering Monsanto’s impact on the biosphere, it is relevant to make their discourse heard in such debate arenas despite their hegemonic position in industrial farming and GM crops. The non-human diplomat is not from either side, they do a work of translation to bridge worlds.

Hence, dissonance makes under-discussed visions visible, in a given consensual environment. It is here, in my opinion, where the agonistic stance of design for debate stands out. Its singularity is to shed light on the audiences’ blind spots—often due to the audiences’ homogeneity. It means giving to see alterity, the other, the third party.

To summarise, the discursive property of design for debate, and especially, of the design dissonance, contributes to agonism in a specific way. **When issuefying an artefact from specific standpoints, the mediating-artefacts can be understood as a non-human diplomat. It makes under-discussed visions visible, in a given consensual situation.**

⁴³ According to personal communications with the author Benoit Verjat (Online messaging, Sept 2019), the original text is not published. The concept was developed for Bruno Latour’s exhibition *Reset Modernity* in Shangaï (2019) to which Benoit Verjat and the Collectif G.U.I. (Graphic User Interface) participated. g-u-i.net/projects/reset-modernity-shanghai-perspective/ (accessed Sept 2019). | First appearance of the terms ‘visual diplomat’ is to be found, in French, in the call for participation for the 24th graphic design poster contest of the Chaumont Design Biennale in France: **Nicolas Couturier, Benoit Verjat et al.**, ‘Faire assemblé,’ in *Concours Étudiant.e.s tou.te.s à Chaumont ! 2019, 24e édition (Flyer PDF)*, ed. Jean-Michel Gériidan, Le Signe, centre national du graphisme (Chaumont, 2019), 2, [www/](#) (Web archive).

⁴⁴ **Bonnie Honig**, *Political Theory and the Displacement of Politics* (Ithaca, NY: Cornell University Press, 1993).

⁴⁵ **Jacques Rancière and Davide Panagia**, ‘Dissenting Words: A Conversation with Jacques Rancière,’ *Diacritics* 30, no. 2 (2000): 124, [www/](#)

30.C An Adversarial Approach: Boundary Objects Revealing Political Frontiers

I now address a sub-topic of agonism, *dissensus*.⁴⁶ Especially, the setting of a dissensus thanks to the expression of a minority and marginal points of view.

I observed, during the experiment, the expression of dissent from a minority of people, or from marginal points of view (i.e. often from one person at a time). This could be read as a lack of robustness in my data regarding the ability of design to spark mutual contestation, but I rather suggest that these marginal comments are just the point that had to be made. Marginal voices found a way to express themselves, which is a basic principle of Mouffe's *dissensus*.

In her work, Mouffe points out the absence of a “political frontier,” between left and right political parties, in the model of participatory democracy.⁴⁷ More importantly, it is the absence of an arena to express disagreement that is part of what facilitates the clustering of marginal and extreme identities and opinions (ethnic, religious, nationalist, or anti-democratic ones). In terms of identity, she underlines the importance of revealing the border between “we” and “they”⁴⁸ as a basis for delineating a political frontier and for her principle of agonism.

In order to discuss the unique way through which dissonant designs make this political frontier visible, I suggest diving in the concept of boundary objects. Boundary objects sit between people and allow meaning to move between the people standing on the two sides of the boundary. An application of this in the field of healthcare includes, for instance, medical identification jewellery. These bracelets allow paramedical staff to know a patient's medical condition if they are unable to communicate in the case of emergency situations. On a more generic plan, such boundary objects would allow people from different backgrounds to interact. In this respect, the American sociologist Susan Leigh Star and the American philosopher James R. Griesemer described boundary objects as those which:

“inhabit several intersecting social worlds [...] and] satisfy the informational requirements of each of them. Boundary objects are objects which are both plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites.”⁴⁹

⁴⁶ Reminder: Agonism defines a recurrent state of contestation that defies the power in place, while Mouffe's *dissensus* is understood, in this thesis, as the disruption of a consensus, or a hegemonic situation, which serves as a start for setting agonistic relations and experiences.

⁴⁷ Chantal Mouffe, *The Return of the Political* (London; New York: Verso, 1993).

⁴⁸ Mouffe, 'Deliberative Democracy or Agonistic Pluralism?' | Chantal Mouffe, 'Artistic Activism and Agonistic Spaces,' *Art & Research* 1, no. 2 (2007): 1–5, www/

⁴⁹ Susan Leigh Star and James R. Griesemer, 'Institutional Ecology, "Translations" and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39,' *Social Studies of Science* 19, no. 3 (1 August 1989): 393, doi.org/

Drawing from this concept, what if dissonant artefacts could be considered as forms of ‘dissonant boundary objects?’

Let us take the example of the *Montre-Éphéméride* experiment. The difference of feedback that were observed between Sophie’s outrage and Marion’s acceptance indicated that fatalism or determinism were not the only interpretations to be made of the Motor Neuron Disease conditions. Questions of identity, appearance, misinterpretation, misunderstanding, and stigmatisation seemed more salient to the second person (Marion). The gap between their interpretations give an idea of their representations of degeneration and MNDs respectively—a need for hope versus a need for public understanding.

What if the interviews would have been conducted together with Sophie and Marion? Instead of debating the relevance of the artefact, my hypothesis is that the clash of their representations would have been a pretext for discussion towards mutual understanding. This would happen with respect to their mutual standpoints and by celebrating the boundary (the frontier of difference) between them. **The unacceptability of the artefact would have work as a boundary object that reveals a political frontier.** I therefore suggest that such a confrontation of representations and interpretations happened when a participant publicly declared appreciating the way *L’Éphéméride*’s linear gradient allows planning ahead—which instantly provoked general discontent.⁵⁰

I finally advance that **dissonance’s careful way to breach norms is what may have bridge people’s disagreements and standpoints. It is what allowed minority groups/voices to express themselves and to be heard.** Otherwise, remaining a silent minority would have provoked their marginalisation and extreme radicalisation, according to Mouffe. But also, elaborating on my previous subsection, I pose that once seen as a boundary object, dissonant artefacts may be further used to organise **critical intermediation activity between people with decision-making power and others**, through an artefact that cannot be accepted as it stands.

These remarks open new research questions—if boundary objects are seen as “agents that socially organize distributed cognition,”⁵¹ what difference would dissonant boundary objects’ make? Would they organise distributed cognition by confronting people’s interpretations? Or would this specific type of design *things* prompt people, not simply to recognise issues, but to recognise other people’s difference? Would it make it possible to agree on the components of disagreement, thereby turning sterile discord into productive debates?

⁵⁰ See Table 8 for other examples of disagreements.

⁵¹ **Susan Leigh Star**, ‘The Structure of ill-Structured Solutions: Boundary Objects and Heterogeneous Distributed Problem Solving,’ in *Distributed Artificial Intelligence*, ed. Les Gasser and Michael N. Huhns (San Francisco CA: Morgan Kaufmann, 1989), 37–54, doi.org/

30.D A Reflective Approach: Self-Doubt Makes Political Frontiers Versatile

Within my analysis section, I reported on the types of normative responses that were elicited by design dissonance. In that respect, I contrasted the adversarial and reflective nature of the approach. Resepectively, I contrasted the stimulation of disagreement with the one of reflection, which generated comments closer to self-doubt.

Regarding self-doubt, I would like to comment the example of a participant changing their opinion as being a matter of collective identity.⁵² Indeed, in a similar situation, while the breaching experiment would regroup people and trigger a collective refusal, rejection or outrage, dissonance elicited **doubt, contradictions or changes of interpretations and opinions**. I suggested that this reaction is due to the **careful, tempered and ambivalent nature of the infringement elicited by the artefact**.

Drawing from Mouffe's we/they dichotomy, I invite to examine the change of opinions as the revelation of zones of disagreements, *within the unquestioned consensus of a majority*. It is like if such a participant that initially identified to the whole group suddenly felt like being part of another one (Fig. 58).

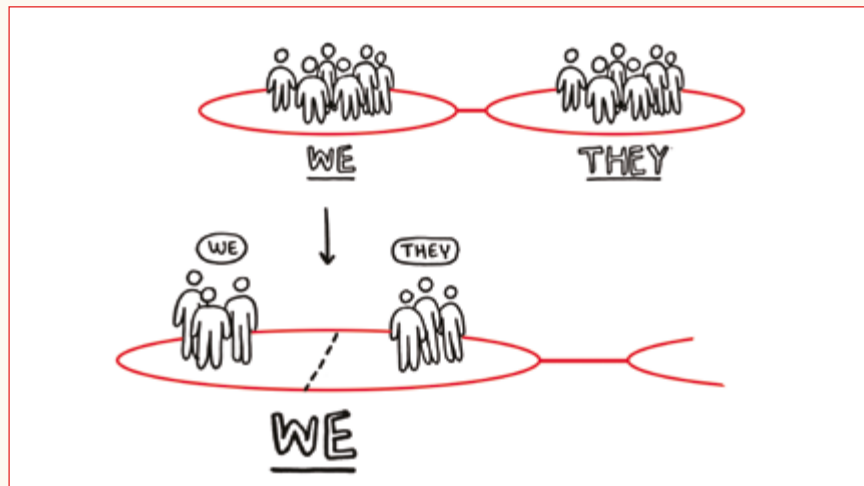


Figure 58 | Schematic representation of the revealing of a political frontier, and the subsequent split in the identity of a consensual group. The top image opposes two groups. The bottom image is a zoom-in on the 'we' group.

For instance, this is like moving from a position such as 'we are all against determinism and *they* (the designers) made an unacceptable artefact' to 'among the whole group, *we* find this hidden page cheerful and *they* (other participants) cannot bear it.' I interpret the expression of this change of opinion as if the political frontier moved.

⁵² I proposed this interpretation in [Section 29.A.5](#), when I reported how the video actress's neurologist publicly moved from challenging how much 'shared' the linear representation of time is, to acknowledging that aging and the ineluctability of time in fact concern everybody.

Consequently, drawing on Mouffe, I now reconsider the contribution of dissonance to an agonistic debate. I advance that, **by provoking self-doubt within the public’s interpretations and opinions, the reflective property of the design tactic of dissonance can deconstruct the dichotomy of ‘we/they’ by making the political frontier versatile.**

One limitation arises from such a perspective—self-exclusion. Indeed, during the experiment, while the reactions generated were rich, meaningful, and abundant, a minority of people did not join the conversation at all whereas others tried but did not succeed in getting their disagreement taken into account. Both groups actually excluded themselves from the conversation. I could not make an estimation of the exact number, but I identified three distinct cases:

- One of the three patients present in the room decided to express themselves through the questionnaire together with a note on an additional piece of paper.
- According to the questionnaires, one person refused to talk because their (disagreeing) opinion, “would have shocked others.”
- A group of two participants did try to contest the whole crowd but their remarks were instantly dimmed and contained by another participant. They finally came to talk to me in private after the session—becoming the occasion for a 15 minutes informal interview.

My intention is not to identify the different forms of group dynamics but to show how these cases are direct examples of self-exclusion. Mouffe refers to marginalisation as the main risk of a democracy based on consensus. However, works by Georges Canguilhem or Michel Foucault⁵³ offer other useful viewpoints on the question. As summarised by the French philosopher Pierre Macherey, “the fundamental spirit of Foucault’s research [has been to pursue] the understanding of what it means to live, and to live in society, under norms.”⁵⁴ Foucault, as a historian and social theorist, sought to highlight how norms embody power relations that underpin a dynamic of “normalisation.” By contrast, while “normativity” is the phenomenon of designating some actions as good or bad, permissible or impermissible, “normalisation” defines the consequences of publicly formulating these value judgements. Foucault confronts two opposing normalising effects of the establishment of social norms—a principle of “inclusion” or “exclusion.”⁵⁵ The effects of normalisation include attracting or excluding fringe groups of ‘abnormal’ people towards or outside normality—that is, inside or outside social groups.

⁵³ Stéphane Legrand, *Les normes chez Foucault* (Paris: Presses universitaires de France, 2007).

⁵⁴ Pierre Macherey, *De Canguilhem à Foucault: la force des normes* (Paris: La Fabrique, 2009), 104.

⁵⁵ Foucault studies this in three different works. In *L’Histoire de la folie*, the general hospital segregates people considered as insane, while the asylum frees them. In *Surveiller et punir*, punishment is an exclusion of humanity while prison exercises control through transparency. In *L’histoire de la sexualité*, finally, sex-related pleasure may be ‘contained’ by external rules, or released but regulated by ‘biopower’ (populations control). | Michel Foucault, *Histoire de la folie à l’âge classique: folie et déraison* (Paris: Gallimard: Union générale d’éditions, 1961). | Michel Foucault, *Surveiller et punir: naissance de la prison* (Paris: Gallimard, 1975). | Michel Foucault, *Histoire de la sexualité* (Paris: Gallimard, 1976).

For instance, in the debate situation of the current experiment, some people may have felt left out of the social norm, and in an effort of ‘inclusion,’ they may have dissimulated themselves and remained in a silent margin. In this case, some participants did not communicate extreme opinions in public by virtue of being part of an under-represented standpoint, such as reported by one of the patients’ questionnaire. Another example is when participants’ comments of appreciation of *L’Éphéméride* triggered collective reactions of discontent—which stood as a form of (soft, but nonetheless actual) exclusion. The participant was rejected by the majority as someone holding dissident or inadmissible opinions.⁵⁶

Consequently, Mouffe promotes the idea that a pluralist democracy requires to find times and places where disagreements can be expressed. However, in practice, **the biggest challenge** of creating such a thing as “agonistic public spaces”⁵⁷ is **to ‘design’ ways to ensure that people resist the normalising steamroller of consensus.** One of the **next steps** of designing for debate might be to not only design artefacts, but **design the conditions of a debate.**

I would like to conclude this discussion by opening another research avenue to address the previous challenge. Elaborating on the frontiers between identities evoked earlier, I draw on the words of Audrey Lorde—albeit she was working from a different perspective, i.e. struggles against patriarchy, racism and homophobia in the 1970s. Lorde observes how frontiers between ‘we’ and ‘they’ or, in her words, “differences” are essential to the self-construction of identity. But more interestingly to the question at stake, she frames how the fact of not belonging to the majority in power, and standing beyond the boundaries of what is acceptable, mainly becomes a source of segregation. But it is also a force to build struggles:

“Those of us who stand outside the circle of **this society’s definition** of acceptable women [...] know that survival is not an academic skill. [...] It is learning how to take our **differences** and make them strengths.”⁵⁸

I ask, what if debate participants could all experience how it feels to stand in the margin, at some point of an agonistic debate session? I pose that it is possible to systematically work through a social values oxymoron approach, aiming at the participants’ individuation from the rest of the group. Such approach could allow members of the social norm to experience the ‘we / they’ dissociation mentioned earlier. **They would experience *dissensus* by being the one standing on the margins.** It would allow the audiences to **confront each other on a new basis.**

⁵⁶ I am referring to Table 8’s example where the linear gradient was interpreted as an invitation to plan ahead the evolution of the disease and instantly provoked general discontent.

⁵⁷ **Harvard GSD (Graduate School of Design)**, Chantal Mouffe, ‘Democratic Politics and Agonistic Public Spaces’ (Cambridge, MA), accessed 23 September 2019, youtu.be/4Wpwwc25JRU.

⁵⁸ **Audrey Lorde**, ‘The Master’s Tools Will Never Dismantle the Master’s House,’ 95. | The quote continues with Lorde’s famous quote, “For the master’s tools will never dismantle the master’s house.” Which summarises her question, “What does it mean when the tools of a racist patriarchy are used to examine the fruits of that same patriarchy? It means that only the most narrow perimeters of change are possible and allowable.” The text critiques the absence of consideration for lesbian and “third world” women during a (white) feminist conference of the New York University in 1979.

Finally, I formulated that **the ambivalence of design dissonance, by the fact of enabling critical reflection and self-doubt, makes political frontiers versatile.** This tactic expands the interstitial space between ‘we’ and ‘they.’ It **allows to reveal gradients of different political positions to arise instead of only one blurred or polarised dichotomy.** This way to challenge established consensus may be seen as a form of Mouffe’s *dissensus* that is **especially turned towards mutual contestation.** By tackling social values, this approach therefore puts the foundations of what holds a collective together in question. To use a Deweyan terminology, the design dissonance seems to be a **tactic that constructs publics within publics**—dissident ones—in order to reveal internal frontiers in an implicit, indistinguishable and consensual group. I further add that design dissonance allows to consider **situations of consensus as priority context in which to prompt recognition of latent and under-discussed issues made of untold disagreeing opinions.**

30.E Conclusion

In this section I offered the **second contribution of the chapter**—i.e. a discussion of what can be brought by the practices of design to the experiential and theoretical dimensions of agonism. More precisely, I identified, listed and discussed the specificities of employing design for debate, and especially the tactic of dissonance for agonistic ends.

To summarise, I focused on four properties characterising design for debate and advanced the **four following arguments:**

- The designerly and normative nature of design dissonance stands as a spur for audiences emancipation, towards a stance of designer and citizen.
- The discursive property of design for debate offers non-human diplomats that make under-discussed visions visible.
- The adversarial property of design allows minority groups/voices to be heard instead of remaining silent, unheard and subject to marginalisation. This form of boundary object makes political frontiers visible.
- Being reflective, the ambivalence of design dissonance enables critical reflection and self-doubt, thereby making political frontiers versatile—and disrupting consensual situations.

I believe these four arguments help to better characterise how design dissonance contributes to installing agonistic relations and experiences. They also contribute to grasping how design may participate to the *political*—on an experiential level.

In addition to this, I would like to reflect on how this discussion provided elements of understanding on what design may bring to the theory of agonism. My discussion, by relying on the practical experience of organising a debate situation, proposed a concrete articulation between an abstract concept and its potential applications. Indeed, the strength of agonism is its generic dimension, it is applicable to a great number of situations from local groups, to mass media debates, up to democracies. Yet, its abstract dimension makes it, sometimes, difficult to grasp in practice.

My approach has made it possible to question the ‘dychotomy’ of Mouffe’s work, which she recently questioned herself by formulating the concept of poly-hegemony.⁵⁹ Also, the discussion allowed to connect issues of political philosophy with issues of norms and group identity. These issues have a special place in Europe, at a time when political extremism is on the rise in the public sphere, thus reviving public debates on national identity. Furthermore, the questions I raised, about Foucault’s inclusion and (self-)exclusion concepts, bring a useful light on the challenges that the *political* holds, in practice.

Considering a designerly perspective to the theory of agonism, in my discussion I suggested further research to understand design artefacts as actors of the debate. These actors would have the capacity to prompt the formation of publics within publics. This perspective allows us to see the debate as an arena for simulation, questioning and actively creating the conditions that cement a collective (from a group to a democracy). While doing this, it also allows to recognise the unresolvable frontier that separates us from others.

⁵⁹ Chantal Mouffe, Vive le dissensus ! in Caroline Broué (ed.)’s La Grande Table, Radio France Culture, interview by Mathieu Potte-Bonneville, Radio show, 7 April 2016, franceculture.fr/emissions/la-grande-table-2eme-partie/vive-le-dissensus/

31 EMPIRICAL REFLECTIONS The Design Tactic of Dissonance and Its Use as a Bridging Experiment

I will now review the design process I have undertaken throughout my experiments until now. This section provides two contributions under the form of methodological guidelines about: the design tactic of dissonance; and its application to researching social norms.

31.A Definition of the Design Tactic of Dissonance

The design tactic of dissonance—also called design dissonance—is a means to feed critical reflection and *political* debate by unsettling the public emotionally and cognitively. It relies on setting a collective (or public) situation in which confronting an audience to an ambivalent set of social values, carried by a design artefact.

Dissonance intends to propose a critical intermediation activity between people with decision-making power and others, through an artefact that cannot be accepted as it stands. The unacceptable and irresolvable nature of the artefact is an invitation to join the participatory debate, to express mutual contestation, to agree onto points of disagreement, and to emancipate from a stance of user to uptake one of citizen or designer.

It does not primarily aim at refining the design of a prototype. The debate activity rather intends, first, to benefit the debate audiences (which includes the stakeholders). It may be used for many purposes—community organising, citizen assembly, deliberation, research, etc. It can serve to accomplish participatory, collective and inclusive knowledge making (through mapping controversies, for instance).

31.B Definition of an Ethnomethodology Research Method Employing Design Dissonance

Once combined with a rigorous analytical phase, the design dissonance tactic can be used as a means for social research. It can then generate knowledge on social values and norms within a specific audience, on a debate topic, and on a given situation.

The difference between the tactic of dissonance and such a research approach are the intention to produce knowledge and the method to do so.

Although highly inspirational among his students, Garfinkel's breaching experiment approach was also highly critiqued by the academic communities of his time due to a lack of methodological rigour. While additional research is required to avoid the same critiques in the future, I still attempted to provide a first set of methodological guidelines.

In recent years, design research saw the rise of a number of design-erly approaches to conduct research. The pictorial and the annotated portfolio publication formats mentioned in my Chapter 4 are part of them. Other examples include the vast family of design probes.⁶⁰ The main point in common between the probes and the current research is to aim at generating qualitative data about people through the use of design artefacts. Unlike the probes, my method is not meant to feed designers' creativity and practice. This is what distinguishes the present research approach from technomethodology—which is, the breaching of people's usages through an unconventional design artefact in order to study people's feedback and improve the given design artefact.⁶¹ Hence, how to name this approach that uses the tactic of dissonance to conduct social research?

To the light of the present experiment where marginal opinions were expressed, and where the political frontier that separated participants may have been made visible and versatile, the term 'bridging' takes a peculiar meaning. Bridging, was defined in [CH6 | Section 25.A.2](#), as the adoption of the public's standpoint in order to make an unfamiliar proposal familiar, and make an unfamiliar standpoint available to others. Here, bridging is opposed to the term 'breaching' in 'breaching experiments.' Breaching describes the violent infringement of a social rule, or of social values proper to a specific group of people. Bridging is rather about making social norms questionable, ambivalent, dissonant, open to interpretation, to debate and to change. Breaching experiments allows to study social norms by violating them. In contrast, what I now suggest to call *bridging experiments* **allow to study social norms by experiencing other people's points of view and by simulating how social norms may change**. I pose the bridging experiment as **a form of design-driven ethnomethodology based on the use of the design tactic of dissonance**—namely, making alterity ambivalently familiar for specific audiences, regarding social norms, which results in a prompt to step into a debating activity. Deployed within a project-grounded research approach (i.e. based on action research) and through an inclusive stance, its process requires to set a debate situation with established audiences (including the stakeholders when there is one).

⁶⁰ Together with the original Cultural Probes by Gaver and coauthors, a great number of variant of the approach are listed by Hutchison and coauthors in the Technology Probes paper. One of these approach addresses people's values—the Value Probes by Volda and coauthors. Value Probes aim at eliciting the expression of people's values in order to feed a design process and they do not employ adversarial means. | [William W. Gaver et al.](#), 'Cultural Probes and the Value of Uncertainty,' *Interactions* 11, no. 5 (September 2004): 53–56, [doi.org/](#) | [Hilary Hutchinson et al.](#), 'Technology Probes: Inspiring Design for and with Families,' in *Proceedings of CHI '03*, (New York, NY, USA: ACM, 2003), 17–24, [doi.org/](#) | [Amy Volda and Elizabeth D. Mynatt](#), 'Conveying User Values Between Families and Designers,' in *CHI '05 Extended Abstracts* (New York, NY, USA: ACM, 2005), 2013–2016, [doi.org/](#)

⁶¹ [Crabtree](#), 'Taking Technomethodology Seriously.'

31.C Methodological Insights for Setting a Design Dissonance and Using it Within a Bridging Experiment

Below, I retrospectively outline the key steps that I followed during the setting of the dissonance design tactic within *L'Éphéméride* project. Then, I retrieve the steps taken to turn this approach into an actual bridging experiment.

31.C.1 Method for Setting a Design Dissonance

THE PUBLIC AND ITS SITUATION :

- Targeting or inserting oneself in a specific situation where to **meet an audience**. Or even set up a collaboration with this public—which may include stakeholders. (Then, try to do the following steps in a participatory and inclusive manner.)

ISSUES TO BE DEBATED AND SOCIAL VALUES :

- **Identify a general theme** to be debated (or a latent controversial issue) related to the public's concerns. E.g. via a field study. This theme will be reviewed and refined through the next steps;
- Formulate the **hypothesis of the existence of a social value** related to the target audience. In order to identify this value, it is useful to imagine what kinds of situations could supposedly 'cross the line' from the point of view of this audience, on the previous topic.⁶²

FICTION AND INFRINGEMENTS OF VALUES :

- Imagine a world where the previously identified **unacceptable situation has become the new normal**. (The following steps will ensure not to fall into mere provocation.)

ARTEFACT

- **Artefact concept:** Designing an artefact and its use case scenarios, built on this set of values—and therefore in conflict with those of the public. It will therefore be a question of designing normally in an abnormal world, as in the "value fiction" approach.⁶³
- **Communication material:** Communicating the artefact through prototypes, use case videos, fake advertisements, websites and other productions aimed at giving credibility to the existence of the artefact.

ADJUSTMENT OF DISSONANCE

- The artefact can embody a careful dissonance with the public:
 - By valuing a situation/social value that is **unfamiliar and in conflict** with those of the public;
 - Or, by **juxtaposing** two discordant values in the artefact.
- Depending on the approach used, the adjustment of the social value infringement can be done :
 - By **reducing the intensity** of a too extreme non-familiarity;
 - Or, in addition to the previous non-familiar value, by reinforcing the presence of an additional discordant value, thus **increasing the ambivalence** of the proposition (user-testing helps to adjust these choices);
- In both adjustment approaches, the design work can :
 - Embody (non)familiarity by playing with the different **dimensions of dissonance** (i.e. the 'semantic bridges' that are knowledge, culture, psychology, aesthetics and societal values—as described in Chapter 5);
 - Or, to deploy the work of '**issuefication**' at the different levels of the scale of the Diagram of the communication system.⁶⁴

DEBATE SITUATION

- Create a debating situation in which to place the artefact ;
- Document the process and the debate (photo, video, audio recording, questionnaires, interviews, etc.).

⁶² Like in Garfinkel's breaching experiment method: 1. making the hypothesis of the existence of norm; 2. performing a behaviour that is out of this norm (for instance, in a public space); 3. collecting reactions (rejections) as a material to evaluate the hypothesis and qualify the norm.

⁶³ Dunne and Raby, *Design Noir*.

⁶⁴ This step is drawn from Chapter 9.

31.C.2 Method for Interpreting a Bridging Experiment

The steps I took to set the debate phase of my bridging experiment are the ones of the dissonance design tactic. The only difference is that each steps are documented with academic rigour. On the top of them, I added an analysis phase that followed these steps.

Coding the artefact and the interviews (based on Grounded Theory and open coding approach):

- Before the debate session:
 - Semio-pragmatic analysis of the artefact to list the potential interpretations that will be made of its design features, by the debate participants.
- After the debate session:
 - Use of open-coding to sort the participants' comments:
 - What is the nature of the comment:
 - A clarification question.
 - A critique (an opposition).
 - An improvement suggestion?
 - What are the design features or the usages of the artefact addressed by the feedback?
 - Does the comment target:
 - An expected (previously listed) feature
 - An unexpected one?
 - Is the person's interpretation of the feature or the usage:
 - Negative.
 - Positive?
 - According to other participants' comments on the same feature or usage, does the formulated interpretation make:
 - A consensus.
 - A disagreement?

Interpreting the experiment:

- **Describing the hypothesis previously formulated regarding the social values** presumably existing among the participants—and brought into dissonance via the design artefact.
- Identifying what the participants rejected/supported:
 - **Comparing the list of design features** of the artefact expected to be commented on, with the list actually commented on by the participants (and ranking of the features according to the frequency of comments).
 - Sorting through participants' **interpretations** of the features' meaning: positive and negative ones; then, sorting them in two categories: agreements and disagreements.
 - Based on this, identifying blind-spots and margin(alised) opinions.
- Seeking why they rejected/supported these elements:
 - Searching for why and how participants **restored normality** by identifying participants' **justifications** of their interpretations (e.g. replies to questions such as 'why do you think this?').
 - Based on this, unravelling tensions and beliefs underpinning the studied set of values.
 - Unravelling tensions and beliefs underpinning the studied social values by contrasting the analysis results with additional material (e.g. quotes extracts, questionnaires, interviews and focus-group). **Searching for recurrence or paradoxes** regarding the analysis' results in other contexts.
 - In a dedicated section, regrouping the **unexpected** features addressed, the unexpected interpretations made of the features, and the unexpected topics and values discussed.⁶⁵

The experiment interpretation phase, put into a diagram.

Guess the studied social norms/values >	> DESIGN FEATURES: > ↓	> PARTICIPANTS' INTERPRETATIONS: ↓	PARTICIPANTS' JUSTIFICATIONS: >
	List features expected to be addressed	List all reactions and verbal comments >	List why and how participants restored normality : • Rejections • Suggestions for improvement (alternative use and redesigns) • Others
	< < > > • List the features actually addressed and their interpretations (compared to features expected to be addressed) • Also list the features unexpectedly addressed	< < > > Regroup by: • Positive • Negative And then, by: • Agreement (+/-) • Disagreements (+/-) • Unexpected interpretations made of the design features	
• Outcomes on the studied set of values < < • Outcomes on unexpected (untargeted) issues		Blind spots and marginalised opinions	Search for recurrences and paradoxes regarding the analysis results in additional material taken to other contexts

Table 10 | Table of the bridging experiment analysis steps. It is read in a half-circular movement—from top-left, to middle-right, to bottom-left—following the arrows. Yet, steps can also be used in another order.

Please note how, in the table above, I leave room for unexpected elements and also anticipate the emergence of marginalised opinions. Most importantly, steps are only indicative and this method can also be taken in another order (like in Chapter 8).

32 KEY LEARNINGS Challenging Political Frontiers Through Design

This chapter queried how can designing for debate and the design tactic of dissonance be used to accomplish two functions attributed to these practices: enabling mutual contestation; and being a form of social research. I provide a three-fold reply to my questions.

I forward that the tactic of the design dissonance can be used both as a form of design practice (to organise debates as a professional, for instance) and as a form of design-driven ethnomethodology.

I believe this because, in my experiment, my method shared the main steps (based on the infringement and restoration of normality) and delivered the same kind of knowledge (the underpinnings of social values in a given situation) as a breaching experiment.

I also argue that this form of design-driven ethnomethodology is a distinct method compared to the breaching experiment.

I gathered proofs of this by empirically testing the bridging experiment and comparing it to the breaching experiment method. I mainly observed differences within the ways the social norm was infringed; and within the kinds of normative reactions generated. I regrouped the differences in four categories which correspond to the core properties that characterise designing for debate—being designerly, discursive, adversarial and reflective. I offered to name this application of design dissonance to ethnomethodology, the bridging experiment.

Finally, at the core of this research method is the tactic of design dissonance (which can be used independently of a research endeavour). I hence argue that using this tactic to spark debate fosters (at least in the present experiment) four elements:

- Emancipating the audience from its passive condition of users (through unacceptable artefacts, in a designerly approach).
- Conveying under-discussed visions like a non-human diplomat would (through mediating-artefacts in a discursive approach).
- Making room for marginal voices, thereby making political frontiers visible (through arguable artefacts in an adversarial approach).
- Enabling self-doubt to stimulate dissensus and to make political frontiers versatile (through an ambivalent artefact in a reflective approach).

I was able to reach these conclusions by noting the nature of the normative reactions formulated by the participants to dissonance. These reactions were different from a breaching experiment. Respectively, some participants suggested counter-proposals of uses and of design in the place of formulating normative comments; not all of them restored the normal situation but sometimes accepted it, moreover the artefact acted as an interlocutor (a carrier of discourse); rather than a collective and consensual rejection, mutual disagreements were expressed, as well as minority and marginal opinions; and finally, the debate was the occasion for contradictory statements and changes of opinion.

These elements are summarised in a table, in the next page.

While further work must be done to guarantee the reliability and reproducibility of these findings, four contributions were proposed.

- An empirical account of conducting a bridging experiment (it comprises the corresponding data and an analysis demonstration).
- A discussion of what can be brought by the practices of design to the experiential and theoretical dimensions of agonism (this is summarised in a table in the following page).
- The definitions and methodological guidelines of the bridging experiment method,
- And, the ones of the design dissonance tactic.

	Designery	Discursive	Agonistic	Reflective
The breaching experiment approach differs from the present approach (i.e. Design Dissonance) regarding the kind of norm infringement performed towards an audience	The norm is infringed via: A behaviour, VS An artefact	The infringement is: Actual VS Simulated (by a mediating-artefact) Performed by a human, VS Performed/conveyed by an artefact (or by a human through an artefact)	The infringement is a: Life situation VS Debate activity Brutal and unilateral VS Arguable (non-persuasive, multiple and contradictory values)	The infringement is: Brutal and unambiguous VS Careful ambivalent and tempered
The breaching experiment approach also differs from the present approach regarding the kind of normative reactions formulated by participants in reaction to an infringed norm	Normative comment VS Suggestion of alternative use or alternative design	Reset of the normal situation VS Suggestion of (partly) keeping with the abnormal situation Discussion with other people VS The artefact is part of (and central in) the discussion	Life situation VS Collective and participatory (debate) activity Consensual rejection VS Mutual contestation, dissensus, the expression of marginal points of view	Refusal, rejection or outrage VS Doubt, contradictions or changes of interpretations and opinions
Summary of the present chapter's Discussion section, regarding the four properties of a design for debate artefact	The unacceptableness of dissonant designs is a spur, emancipating the audience from a stance of user/ audience, towards one of a designer and citizen. It challenges the design(er)'s hegemony.	When issuefying an artefact from a specific inclusive standpoint, the mediating-artefacts can be understood as a non-human diplomat. It makes under-discussed visions visible, in a given consensual situation.	Design dissonance allows minority groups/voices to be heard, otherwise, remaining a silent minority would have marginalised them. This form of boundary object makes political frontiers visible. It may organise critical intermediation activity between people with decision-making power and others.	The ambivalence of design dissonance, by the fact of enabling critical reflection and self-doubt, makes political frontiers versatile. It constructs dissident publics within publics.
Research avenues identified within the Discussion section	What other kinds of practices can be developed to install agonistic experiences that do not rely on the creation of a (fictional or diegetic) 'product' or on 'product design'?		Would these specific type of design things prompt people, not simply to recognise issues, but to recognise and respect other people's difference? Would it make it possible to agree on the components of disagreement, thereby turning sterile discord into productive debates?	How to design the conditions of a debate in such a way that members familiar with a social norm can also feel the effects of marginalisation?

Table 11 | Summary table of the Chapter 7's findings, which makes the difference between a Breaching Experiment approach and the present approach (i.e. the design tactic of Dissonance). Note that Designery, Discursive, Agonistic and Reflective (together with Participatory) are the main properties of discursive design for debate practices, as identified in Chapter 1.

« [A]vec la rage, l'incompréhension et la douleur venaient aussi des moments exaltés d'émerveillement et de révélation, de compréhension mutuelle et de sagesse neuve – les joies de la zone de contact. À différents moments, tous les étudiants faisaient l'expérience de ces souffrances et de ces révélations. Aucun n'était exclu, aucun n'était en sécurité. »

“[W]ith rage, misunderstanding and pain came also exalted moments of wonder and revelation, of mutual understanding and new wisdom—the joys of the contact zone. At different times, all the students experienced these sufferings and revelations. None were excluded, none were safe.”⁶⁶

— Mary Louise Prattz

66 Mary Louise Pratt, 'Arts of the Contact Zone,' *Profession*, 1991, 33–40, www/ | Pratt, a Professor of Literatures at New York University, is known for her work on what she calls contact zones, which are social spaces where cultures meet and clash—often in contexts of highly asymmetric power relations, such as colonialism.

CH8 STAKEHOLDER'S POINT OF VIEW **Enabling Mutual Contestation as a Professional Design Practice?**

In Chapter 8, I deliver a reflective look at my one year-long design residency to account for the impact it had on the *Espace Éthique* commission. I discuss the potential roles of a designer for debate and deliver an updated definition of designing for debate.

33 AIMS & PROTOCOLE Drawing on a Year-Long Participant Observation

33.A Introduction

If Chapter 7 was dedicated to unravel how the agonistic nature of *L'Éphéméride* has been perceived by the audiences, in Chapter 8 I rather look at what this debate and the whole collaboration changed for the stakeholder—in their practices, discourses, and in the audience's perception of this change. Following Chapter 3's review of the literature about existing means to spark debate, I address the same function attributed to design for debate than in Chapter 7—enabling mutual contestation.

Yet, now I seek to better understand how practices of design for debate could be professional practices. What are their own qualities? And their singular inputs for a stakeholder whose aim is to develop a reflective work?

These questions will help to develop a more systemic and global understanding of designing for debate—as argued in Chapter 1¹—but I also ask this because the design tactic of dissonance is not only a research practice. In accordance with the epistemological position of project-grounded research, rooted in action research, *L'Éphéméride* project did not only inform my study on design for debate. From the stakeholder's point of view this approach to organising debate is a professional practice whose effectiveness is supposed to contribute to their activities—here, their work on the National MND Plan. Or from the participants' point of view, it is supposed to allow a frank, engaged debate, making room for the expression of disagreement. In this chapter, I will focus on the stakeholder's point of view.

After outlining, just below, what kind of data was used in this experiment (notably, the longitudinal observations extracted from the year-long design residency), I analyse four elements:

- The stakeholder's initial practices.
- The qualities they attributed to our collaboration.
- The ones they implemented.
- And, their comments during *L'Éphéméride* debate.

I then discuss the results of these four analyses and reflect on what this experience allows to learn on design for debate's definition and qualities—from a stakeholder point of view.

¹ Stemming from the typology or research objects relative to the design for debate research field (Chapter 1), the present chapter focuses on *L'Éphéméride* project's *ground and outcomes*. I am especially interested in the project impacts on the stakeholder's activities, during and after the debate conducted at their Summer University.

33.B Looking at the Situation From Four Angles

I developed four analyses to address my questions.

First, longitudinal open observations of the Commission's activities were conducted as a background task throughout the year of the residency and the three additional months when I came back episodically to the office in order to study the evolution of their discourses, methods and activities.²

Drawing on these observations, I carry out an analysis of the situation in which I started the residence—that is, the Commission's key activities in terms of involving the public in their work of ethics reflection. In particular, I compare four working formats before any design intervention on my part. I seek to find out how *L'Éphéméride* debate brought something new to the stakeholder's practices.

Secondly, as the difference observed in the first analysis were significant, I wanted to know what the stakeholder thought of this design practice.

I studied their statements. Among the material accumulated during the residency, listed just before, I did a speech analysis of the qualities conferred to the practice of design for debate in the stakeholder's discourses. This qualitative analysis is based on a semi-structured interview extract from Commission Member 1 (CM1), in reaction to a dissonant prototype (March 2015), and on extracts from two informal interviews conducted with the Commission Member 1 and 2 (May 2015). In a preponderant way, I had to use excerpts from verbatims collected when the CM1 described the qualities of our collaboration to other people. It turns out that these statements were much more complete and well-argued compared to the interviews I had the opportunity to conduct during the residency. These extracts are taken from the Summer University debate, supplemented with the statements of the other members (CM2, 3, 4 and 5) in the questionnaires filled by the debate participants, after the session.

Third, it is important to look at which of the previously listed qualities the Commission applied to its own practice of reflection, publication and meeting of their audience. I am also interested in how the team's practice evolved after our debate, and after the end of my residency. For this purpose, I drew on the material of my longitudinal ethnographic study again. I have isolated four moments when these practices have changed (in November 2015, February 2016, May 2017 and January 2018). Each situation included the documentation of a participant observation via photo and/or video, note-taking, and audio recording. One of them was supplemented by extracts from questionnaires, and two others were studied in terms of the speeches used in the Commission's public communication (website).

² Reminder: the study counts 32 interviews (informal ones and 9 semi-structured one-to-one interviews of members of the Commission), the reading of 70 documents they produced, attending 16 weekly meetings, 17 events they organised (including 5 in other institutions). A part of the study allowed to conceptualise the three categories of issues related to the conditions of people living with an MND presented in Chapter 5.

Finally, to understand the differences between the qualities that were declared and the ones that were actually applied, I examine how the stakeholder and the participants actually experienced the debating activity of *L'Éphéméride*.

Going back to the data analysed in Chapter 7—the participants’ feedback during the debate session—some recurring comments patterns led me to use ethnomethodology methods again. I started from the same generated dataset via the same method.³ However, instead of using Grounded Theory and open coding to look at comments related to the design features of the artefact, I studied comments targeting the overall debate experience. These comments were qualitatively analysed throughout the following steps:

Guess the > studied social norms/values	> DESIGN FEATURES:	> PARTICIPANTS' INTERPRETATIONS:	PARTICIPANTS' JUSTIFICATIONS:
	List features expected to be addressed	List all reactions and verbal comments	
	<ul style="list-style-type: none"> List the features actually addressed and their interpretations (compared to features expected to be addressed) Also list the features unexpectedly addressed 	Regroup by: <ul style="list-style-type: none"> Positive Negative And then by: <ul style="list-style-type: none"> Agreement (+/-) Disagreement (+/-) Unexpected interpretations made of the design features 	List why and how participants restored normality : <ul style="list-style-type: none"> Rejections Suggestions for improvement (alternative use and redesigns) Others
<ul style="list-style-type: none"> Outcomes on the < studied set of values Outcomes on unexpected (untargeted) issues 	<	Blind spots and marginalised opinions	Search for recurrences and paradoxes regarding the analysis results in additional material taken to other contexts

Table 12 | In the present experiment, I employed the bridging experiment analysis method in another order compared to Chapter 7, as annotated above with the red arrow.

³ I used participant observation, documenting the 1h15 sessions through videotaping, photography, audio recording, and note-taking. This was complemented, for the first day debate session, with questionnaires and informal interviews with two small groups of participants. The second day session served as a focus group. But comments collected on the second day did not prove to be useful in the present chapter.

Following the previous table, I employed (and will unfold) my analysis in a different order than in Chapter 7:⁴

- Spotting unexpected participants comments of rejection/support.
 - To which feature of the dissonant experience did the audiences react?
 - Are these comments showing rejections of appreciation?
 - How did participants restore the norm made dissonant?
- Formulating a hypothesis about the social norms (unexpectedly) made dissonant.
- Unravelling the underpinning tensions of the social norms by searching for recurrences or paradoxes in other contexts.

This last phase of the analysis is fed by an informal 15-minute interview conducted with two outraged participants who came to talk to me in private at the end of the Summer University's debate session. I also report on a semi-structured interview with the CM1 (March 2015), an informal interview (brainstorming session) conducted with CM2 and 3 (May 2015) and a second informal interview (weekly team meeting) with the whole team, including the CM5—the Director of Public Relations and Communication.

Before to proceed, I would like to point out that the use of informal interviews, which are numerous in this chapter, is sometimes the most relevant choice. Indeed, taken in the heat of the moment, it is often important to be both an 'observer' of the participant observation and a 'participant.'

⁴ Previous order: 1) Stating the norm to breach; 2) Comparing the artefact's design features addressed by participants to the expected list of features; 3) Sorting participants' interpretations; 4) Searching for participants' justifications of their reactions; 5-Unravelling tensions and beliefs underpinning the studied social rule. Here, I rather followed the order: '2)+3)+4),' then 1), 5).

34 FIELD EXPERIENCE & DATA The Ambition of Developing a Field-Work Ethics

I now provide some background information on the four analyses that will be conducted in the next section.

As said in the introductory chapter to the experiments on dissonance, I was integrated into the Commission team for a year. In this context, my relation with the Commission Member 1 (CM1) may be clarified as it took a peculiar importance in the present experiment. Their⁵ role along *L'Éphéméride* project and during the whole residency was manifold.

The CM1 was, first of all, the person to whom I reported my work and who was the decision-maker on it. As a privileged interlocutor, they became my 'translator,' to the public. They often made the choices of words to use when talking about my work to people from the worlds of health, hospital, ethics, hard and social sciences, who were often foreign to my practice. They also occupied a role as a guide and mentor, in the choice of sources of information and experiences to explore in order to discover the relational, historical and social depth of the environment that is *Espace Éthique*. Finally, they are also the person who took responsibility for my activity and, as a result, took a certain risk. Indeed, I am not just an observer (as in ethnography), I started a design residency in order to change the stakeholder's participatory debate practices and their way of exploring ethical issues, at the heart of their work. This privileged relationship with the CM1 implies to consider the residency as more than a fieldwork, I had the 'authorisation' to conduct experiments. Thus, in this chapter, most of the interview elements reported come from our discussions, because first, the design choices were discussed with them.

In addition to this focus on the CM1's feedback, the material extracted from my longitudinal study includes feedback from other members of the team and from the study of the Commission's practices, as a group.

In addition to this, *L'Éphéméride* debate was part of the state-supported and funded MND National Plan (2015-2019). Being the Commission's first Summer University on the Plan, the stake and the pressure was high for the stakeholder. After four months of observation and four months of a design-making phase that led to the debate, the project continued in another form for six months, until the final publication. The publication displayed the mind-mapping of the topics addressed during the debate session.

In this context, I would like to remind that no formal brief has been formulated by the team of the ethics commission. As detailed in the Introductory Chapter to chapters 5–8, I understood the Commission's request as an expansion of their usual activities, the development of new (more inclusive) activities, and doing this through design.

⁵ Reminder: the gender-neutral pronoun is in use throughout this chapter.

Regarding inclusiveness and participation. During the months of preparation for the Summer University, the Commission repeatedly demonstrated the will to develop a participatory and inclusive approach in their work. This approach—which the Commission Member 1 phrased as a ‘field-work ethics’—became symbolic of this stance of getting closer to people concerned by medical conditions. This stance also came as a reply to observing limitations pertaining to working among experts, through mediums of experts (conferences, papers, books, etc.).

Participatory processes among experts were already in place at the Commission. But it was not the only practice they wanted to develop. The stakeholder wanted to further involve the ‘non-experts’ in the reflection about ethics and knowledge creation.

The term ‘inclusive,’ here, refers to the involvement of so-called ‘non-experts’ by the Commission and, above all, of the people living with an MND. The ‘non-experts’ also include the Commission’s usual audiences—relatives, care-givers, care professionals, medical practitioners. Assuming that experts include thinkers (philosophers and other researchers in the social sciences and humanities), scientists (hard sciences, biology and health), and decision-makers (heads of health departments, politicians, etc.).

35 ANALYSIS & RESULTS Four Analyses of the Stakeholder's Relation with Designing for Debate

Four very different analyses, by their nature and methods, will be articulated in my four next subsections.

35.A Initial Situations: Commission Held Either a Participatory or an Inclusive Posture in Their Activities

In order to understand how our collaboration impacted and was perceived by the stakeholder, I first ask: What differences were observed between the initial practice of the commission and that developed together? Below, I took from my longitudinal study four initial situations, observed prior to any of my design interventions.

The first situation is a format I call the experts-workshop. The workshop I observed happened two months after the start of my residency on the 16th of April 2015. These sessions follow the same protocol and are organised on various topics every four to six months in specific venues (outside the Commission's office). Each of them deliver a booklet: the *Cahier de l'Espace Éthique* (50 pages, A4 format). Based on one-to-one interviews with team members, I took the example of the April 2015 workshop and analysed the making process of the booklet in question (actors involved before, during and after the workshop). The protocol goes as follows. First, a shortlist of (an average of) 6 experts are invited to participate to a preliminary meeting over the phone to decide of the precise topic of the upcoming workshop. A list of potential attendees is put together by the Commission, sometimes with recommendations from the 6 experts. 'Experts' include scientists, thinkers, health professionals, head of institutions and members of the extended network of the Commission's collaborators. Between 10 and 20 experts are invited to join the workshop. It comprises a day-long session articulated around 4 talks given by 4 participants on a specific question. Each talk is followed by collective discussion (i.e. a series of interventions on the microphone). The verbatim of the session is typed and sent to the participants for eventual editing. Critical essays, written by experts that did not attend the event, are added to the verbatim to form a coherent and contrasted corpus of material. It is then given to a graphic designer for layout design and printed. The book is self-edited by the Commission. It is given as a PDF throughout the Commission's website and as a printed version, for free (being produced with public funding). Its dissemination is done at each of the Commission's event (and in their offices), to their usual audiences—there is no publisher involved in the dissemination of the booklet.



Figure 59 | View of *Espace Éthique* experts-workshop, gathering scientists and health professionals on 'Big Data & Medicine' on April 16, 2015 at *Fédération Hospitalière de France*, Paris.

Another format I observed is what I suggest to call a general public workshop. It often takes the form of a talk and a Q&A session between a speaker and the audience. Sometimes the speaker is presented as having the status of an 'expert-patient.' Most of the time the speaker choice is curated by the Commission and fits the category of 'experts' outlined earlier.⁶ The talk is generally part of a larger event, organised by the Commission. It is a public and free event publicised through *Espace Éthique*'s website and their mailing lists. These workshops often have a similar room configuration. The audience is seating frontally to the speaker, the speaker uses microphones, a microphone is necessary to participate from the audiences' side. No publication is made of these specific talks but a video recording is very often released online. In comparison to the experts-workshop, it appears that the room configuration of this second format is appropriate for top-down knowledge transmission (from 'experts' to 'non-experts').



Figure 60 | View of a general public workshop, September 15, 2015 (a couple of hours before *L'Éphéméride* debate, at the Summer University) | Photo © <http://flickr.com/photos/espace-ethique/>

6 I.e. scientists, thinkers, health professionals, heads of institutions and members of the extended network of the Commission collaborators—to which can be added members of the commission themselves.

Meetings of patient associations are regularly organised by the Commission as part of the MND National Plan (every six months, on average). They aim to identify key issues to be addressed and key actions to be taken during and in-between each Summer University. The attendees comprise the head or spokespersons of the six associations concerned with the MND Plan. Participants stand as a provider of information for the work of the Commission. It is not a public event but a working session of 2–4h. I observed that the room configuration is akin to the experts-workshop one (round table). The difference is that there is no microphone, no recording, the session is not called a ‘workshop’ in the Commission’s language, no publication is released of these sessions. (See Figure 61.)



Figure 61 | View of a patients’ associations meeting in *Espace Éthique*’s offices on April 15, 2015.

The annual seminar is composed of monthly from October to May of the following year. The seminar is not a participatory working session. It is one of the main formats for the Commission to interact with its audience. It has been organised since 2014 by two philosophers. Since 2015, a sociologist has been added to the organisation team. It takes place at the Commission’s premise once a month. Each session includes the presentation of one or more guests followed by a discussion with one of the members of the commission, on stage. This takes at least 80% of the session’s time. Then a question-and-answer session is opened with the audience for the remaining time. A video of the speaker’s presentation and a video of the conversation with the audience are (separated and) posted on the Commission’s website and YouTube account

According to my observations, out of ten sessions I was able to attend, the (frontal) configuration of the room and the speaking time ratio are similar to those of the general public workshop. The small size of the room allows for mic-free expression—the presenter is equipped with a recording device for the video, the audience’s questions are hardly audible in the video recording. It is free and is open to any kind of audiences. (See Figure 62.)



Figure 62 | View of a session of the annual seminar. A member of the Commission operates the camera. Standing up, a commission member introduces the speaker. April 16, 2015

For *L'Éphéméride* debate session, the Commission agreed to create a more participatory format titled *Atelier de création éthique* (Workshop of Ethical Creation). It aimed (and happened to be)⁷ a collective debate where experts and the general public would talk with each other, prompted by a design artefact. Before the debate session, we hence reconfigured the room in an agora-like setting (See Figure 63). Allowing people to face each other intended to leave the participants discuss among themselves instead of having a question and answer session (only) with the moderator. The collective discussion lasted for three quarters of the event.

The debate comments were used as material to create a mind-mapping of the debated topics. This map was then reviewed and updated through four iterations. Contributions of the Summer University attendees were gathered: during a dedicated 1h15 workshop the day following the first debate session; via email (9 replies were collected); via a dedicated working session with philosophers of the commission; and through a meeting of the patients' associations in the Commission's office.⁸ The resulting map was published online and in print, added as an appendix in the end of an expert-workshop booklet publication dedicated to the topic of MNDs. Compared to the other formats presented just before, it is the only one that is fed by the presentation of a dissonant artefact, and more particularly, that is debate and conflict-driven (deliberately adversarial).

⁷ According to the data reported in Chapter 7.

⁸ See the online appendix: maxmollon.com/permalink/PHD_Appendix-CH8-Mind-Mapping.pdf



Figure 63 | View of the room reorganisation for *L'Éphéméride* debate workshop. Bottom: view of the debate, while participants watch the testimonial video. September 15, 2015.

When comparing these different situations, what are the recurring and contrasting elements? In order to better distinguish them, I compared the five situations within the next table.

	Participatory	Inclusive	Adversarial
Experts-workshop	<ul style="list-style-type: none"> √ Gathering of 'experts' from different disciplines √ Exchange during collective discussion sessions √ The verbatim is contrasted with external sources (critical essays) 	X Only 'expert' participants	X
General public workshop	<ul style="list-style-type: none"> √ Q&A session X The Q&A represents a quarter of the event's duration 	<ul style="list-style-type: none"> √ Open to 'non-experts' audiences √ Free event 	X
Patients' associations meeting	<ul style="list-style-type: none"> √ Collective discussion X Not a public event X No publication 	√ 'Non-experts' participants	X
Sessions of the annual seminar	<ul style="list-style-type: none"> √ Q&A session X The Q&A represents a quarter of the event's duration 	<ul style="list-style-type: none"> √ Open to 'non-experts' audiences √ Free event 	X
Workshop of Ethical Creation (<i>L'Éphéméride</i> debate)	<ul style="list-style-type: none"> √ Collective discussion √ For three quarters of the event duration √ Participatory knowledge making through the mind-mapping of debated topics, based on the debate session and reviewed by the Summer University communities √ Publication of co-created knowledge (mind-mapping) in an experts-workshop publication and online 	<ul style="list-style-type: none"> √ Open to 'experts' and 'non-experts' √ Involving of patients' associations in the mind-mapping making process √ Free event . 	√

Table 13 | Comparative table of the features of different workshop formats studied among the Commission's critical reflection and knowledge-making activities. I took these initial situations as samples which I compared to *L'Éphéméride* debate.

While the Commission might have developed other approaches in the past, the main activity observed during my residency and throughout interviews were seldom at the same time inclusive and participatory. **The Commission's critical reflection and knowledge-making formats rarely enable both 'experts' and 'non-experts' to publicly participate on the same level**—as members of the audience, as speakers, for equivalent amounts of time, or as authors of a publication.

In conclusion, the 'Workshop of Ethical Creation' format (i.e. *L'Éphéméride* debate) seem to have resonated with the Commission's strong will to develop a 'field-work ethics.' But, compared to other formats, **it may have represented a considerable change in the usual practices of the Commission and its public**, because it brought together 'experts' and 'non-experts' in a participatory and inclusive debate, and in the resulting publication. But also, **it is the only format that aimed to enable an agonistic experience.**

35.B The Qualities of the Approach as Declared by the Stakeholder

The differences brought by our Summer University workshop are great, compared to the Commission's other formats. So I think it is now relevant to look at what stakeholders are saying about these differences. More generally: what are the qualities of the practices of design for debate that the Commission perceived and valued, according to their declarations?

35.B.1 Stakeholder's First Contact with the Approach

I first extracted arguments from a key moment of the early days of my residency—the very first mission given to me by the commission. This mission became a way to gain the Commission's trust, but most of all this request helped me to understand the potential qualities a stakeholder could confer to designing for debate.

The stakeholder reported its audience seemed to find it difficult to grasp what ethics is. The Commission Member 1 therefore asked me for a representation of the concept of Ethics (through the making of a discursive design).

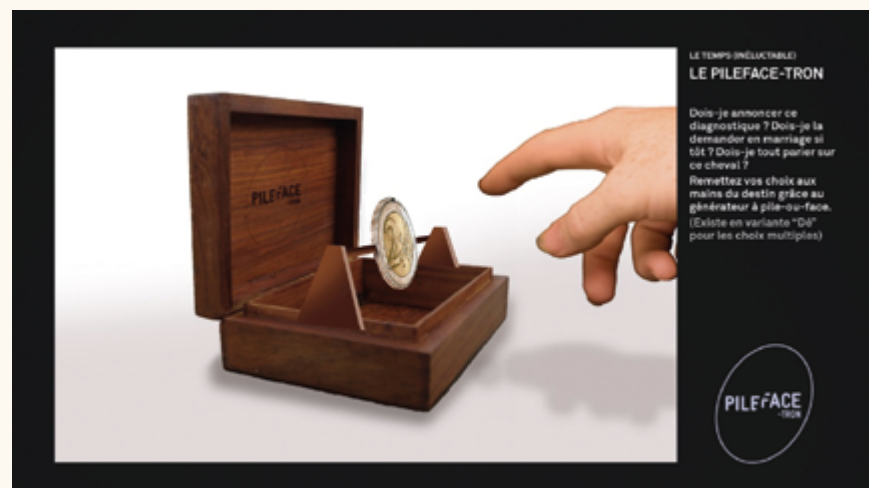


Figure 64 | The image came with this caption, “Should I announce this diagnosis to my patient, considering the fact that there is no known cure to this disease? Hard choice. Leave it to chance, thanks to ‘Le Pileface-Tron’ (The Flip-a-Coin Generator) available as a dice version for multiple choices.”

This artefact is a flip-a-coin generator. Its primary function is to assist the doctor with difficult tasks, choice dilemmas, as can be the announcement of a bad news to a patient. Rather than deliberately making this choice of announcement (or non-announcement) and upholding an ethical position, this object proposes to put this choice in the hands of chance, absolving the doctor of any responsibility and therefore of any ethical positioning. Unless chance is an assumed form of ethics? This remains to be discussed.

Thus, I presented the concept of Ethics through a situation where ethics *should* be required and is perhaps absent. This (arguable) absence is intended as a reflection trigger. For a doctor, using the artefact as in the caption above would exemplify either a very unusual ethical position or (from the stakeholder’s point of view) a lack of ethical positioning.

When commenting on this approach, the CM1 hardly ever used words such as ‘critical,’ ‘dissensus,’ or even ‘design.’ Here is a sample of the Commission Member 1’s feedback about my “profession:”

“— **CM1** I didn’t know your profession existed. This is interesting because it is **both very conceptual and practical** (1). Between **communication** (2), deep **reflection** (3), finding **the right idea that will ‘click.’** (4) From our side, we are in the concept, we sometimes have trouble explaining something. Here, one sees the image and it comes across. Scientific **vulgarisations** can fall into something simplistic, with you there is **a complexity** (5) which is remarkable.”

The Commission Member 1 (CM1) reacting to the artefact. Extract of a semi-structured interview. St-Louis Hospital, Paris, 18 March 2015.

Le Pileface-Tron is an example of what the Commission Member 1 called a “strong image” that “clicks,” a piece of information that is **instantaneous**—i.e. as in (4)—as opposed to extended textual reports. Such artefact provokes **reflection**—i.e. as in (3). The artefact seems to *connect* **different scales of abstraction** (1). Being both conceptual and practical, it **makes complexity accessible** (5) (vulgarised, but not simplistic). It therefore seems to be a useful tool for **communication** (2).

The following quotes date from a meeting two months later. During this meeting, members of the team discussed the reasons behind employing design for debate rather than their usual approaches:

“— **CM2** Why not let you speak in plenary, a TedX ‘MND and speculative design’ which would change of [the usual] ‘people’s vulnerability,’ something crazy, and spicy. [...] There is not enough heterogeneity, or **dissensus** [...] the **productive controversy**; the **reasonable dispute** (6); there are many terms like that.”

Words spoken by the Commission Member 2 (CM2), St-Louis Hospital, 21 May 2015.

As presented earlier, my teammate suggested that ‘strong images’ could be a way to enable **disagreement** (6) and productive controversies or reasonable disputes.

“— **CM1** If we can create the elements of a questioning, your approach will be available for further action. In some conferences, for instance in palliative care, they bring in clowns to explain the meaning of what has been said. I think it will be interesting if we succeed—including **researchers, not just caregivers** (7)—if we manage **to burst in** [to surprise them]. (8)”

The Commission Member 1 (CM1), St-Louis Hospital, 21 May 2015.

Our collaboration could be a way to **surprise (8)** (to provoke questions and destabilise certitudes) and **to involving ‘experts’ and ‘non-experts’ (7)** (for instance, healthcare workers as well as medical scientists).

35.B.2 Stakeholder Feedback on *L’Éphéméride* Project

Then, I extracted arguments from another key moment of the residency—*L’Éphéméride* debate workshop.

In addition to the previous reactions, the following verbatim extracts are presented as a group in order to immerse the reader in the stakeholder’s discourse. Following the same principle as in the previous paragraphs, the declared qualities of our collaboration are numbered, extracted, and regrouped (in the following pages).

“— It’s not a matter of opinion. Everyone **expressed** (9) something quite strong about **their conception** (10) of the disease through this document [*L’Éphéméride*] which was a **pretext** (11)—with one’s conception more or less tragic, optimist, etc.—[...] there is a challenge to fight against something that is visualised—in order to re-appropriate the present moment. Anyway, you’re very good at ethics.”

“— On these three bases, we said to ourselves, here is an **object of ethical reflection, which will allow us to approach [things] differently** (12)—this morning, what we heard is captivating, it’s the Human—what is interesting enough is Max, with a **physical object** (13), of which I can observe **the symbolism that it carries** (14).”

“— **It is a support of enquiry.** (15) One could almost spend a seminar, even a thesis, to ask **questions that, for us, are difficult to ask.** (16) That is where we see we are in ethics. Through this object, we could spend hours challenging the questions **we would not have asked ourselves without** this object. (17)”

“— Max has got the whole session on tape. You will see tomorrow, **he will draw from our discussion a number of issues** (18) which are important in the process of an *Espace Éthique*, from which we will work on **proposals for action** (19)—thanks to your contributions. You’ll be surprised. It will be a **much more useful work in a short time** (20), than if we had spent a weekend together talking about Motor Neuron Disease issues. We will make a document **to which you can contribute** (21)—even if it still seems enigmatic, you will see that you have not lost 1h30.”

“— When we start to think about the object itself, **we can discuss the form, but the content questions us on 1,000 questions** (14), and this is what I found interesting in the approach of the designer. We take an object, which is **not a concept**, (13) we put it before our eyes and **everyone has something to say** (5) about it. And **the more we pull the thread, the more we see—whatever the object—what we want to say** (22), to share, to say to the other or not, to think about our illness.”

“— We talked about the urgency of living, we could have had a more philosophical theme, we could have talked about it in an intellectual way. We would like people to be involved in our creation. What is important is to **facilitate the debate** (23). And that’s what’s extraordinary about what he [i.e. Max] showed us. We are going to have a Summer University totally devoted to this kind of debate.”

Words spoken by the Commission Member 1 (CM1) towards the end of the collective debate session on *L'Éphéméride* conducted in Nantes, France, 15 September 2015.

On the following page, all these numbered arguments are arranged according to the core properties I listed regarding the practices of designing for debate, throughout my research. I suggest viewing this list as a **list of the qualities of designing for debate as declared by a stakeholder**.

What designing for debate can offer, according to a stakeholder (ordered along the core properties attributed to design for debate):

Designerly

- (13) A **physical object** that stands “before our eyes.”
- (15) It works as a **support** for enquiry.
- (11) A **conversational piece** (a **support**, a prompt, a “pretext” to express oneself).⁹

Discursive

- (4) **Instantaneous** information as opposed to extended textual reports.
- (14) A **carrier of discourses and issues** to be unfolded (e.g. the artefact “questions us on a thousand questions” with “the symbolism that it carries”).
- (20) A **concrete usage situation**, an **aid to project oneself** into it, which is more efficient than abstract talking (this was reformulated thanks to questionnaires).¹⁰

Adversarial/Debate

- (6) **Enabling disagreement**, “productive controversies” or “reasonable disputes.”
- (16) **Exposing** (untold) **troublesome issues**.¹¹
- (23) **Facilitating** debate and therefore **confrontation** with each other.¹²

Participatory

- (9) **Stimulating self-expression**.¹³
- (21) **Collective and participatory**.

And inclusive

- (1) Connecting **different scales of abstraction**. It allows a start from the object’s features, and enables conceptual thinking, that is, “both conceptual and practical.”
- (5) Making **complexity accessible** (vulgarisation, but not simplistic).
- (7) Involving **experts and non-experts** (e.g. healthcare workers as well as medical scientists).

Reflective

- (3) **Initiating reflection**.
- (8) **Surprising** people (by provoking questions and **destabilising certitudes**).
- (10) Allowing to **externalise one’s subjective representations** (i.e. making explicit).
- (17) **Excavating** (unthought-of) **questions**.
- (22) **Deepening reflection** further.

This approach may be applied as:

- (2) A means of **communication** (e.g. a tool for communication campaigns).
- (12) A **different approach to ethics** (which can feed their work, i.e. seminars)
- (18) **Identifying and collecting issues**.
- (19) Laying the **groundwork for further action**.

⁹ This quality and others in the whole page were confirmed via the questionnaires filled out by the team after *L’Éphéméride* debate. *These extracts and the following footnotes are all replies to the question: What more does the approach bring? “Sparking debate, a shared attention, on a shared subject” (Commission Member n°4). | Here and below, emphases are my own.*

¹⁰ Confirmed and reformulated thanks to the questionnaires: “The capacity to **project oneself**, to envisage a **concrete future** [...]” (CM5).

¹¹ “It made it possible to create space to talk about **taboo subjects** or with **people who express themselves little**.” (CM3); “[...] to make latent conflicts emerge” (CM5).

¹² Confirmed via questionnaires: “It raised my awareness on the value of debating.” (CM2).

¹³ Confirmed via the questionnaires: “What did the approach allow? The ease of expression in the room!” (CM2); “This is an ‘icebreaker’ for discussion.” (CM4).

Finally, **designing for debate was perceived as a “profession” that has a number of designerly, discursive, adversarial, participatory (and inclusive), and reflective qualities.** I highlighted this through the Commission Member 1’s declarations formulated to the Summer University participants and, drew on complementary declarations by the CM2, 3, 4, and 5 (notably throughout questionnaires).

Now **I wonder which of these qualities did the stakeholder implement in their practice after September 2015** (i.e. after the Summer University).

35.C The Qualities of the Approach Implemented in the Stakeholder’s Practices

I hope that examining the evolution of the Commission’s practices will shed light on what qualities were the most valued by the stakeholder. This relatively open-ended aim led to the collection of the following material, arranged chronologically.

I took four key moments from my longitudinal study. It is to be noted that two situations were set aside because, while they corroborated the conclusion drawn from this analysis, they did not provide supplementary elements. The first one is the appearance and regular practice of collaborative brainstorming activities.¹⁴ The other one is the occasional facilitation of a 20-minute adversarial debate during a session of the Commission 2014–2015 seminar (moderated by myself, based on *L’Éphéméride*). Both situations showed, alike the cases analysed below, the Commission’s interest and aptitude to rapidly change their practices towards participatory and adversarial practices.

35.C.1 November 2015, Three More ‘Workshops of Ethical Creation’

After *L’Éphéméride* experiment, the Workshop of Ethical Creation was commissioned three more times. Consistently, this format was characterised by the use of a dissonant artefact to start a 1h30 participatory debate session between ‘experts’ and ‘non-experts’ on a theme explored by the commission’s philosophers—predictive algorithms and health. These were similar to the one conducted in Nantes, but with new design productions, on a new debate issue.¹⁵

Rather than detailing the content of the debates or the dissonant nature of the artefacts produced, it is interesting to note how this format came to intertwine with the Commission’s existing set of activities.

¹⁴ After a brainstorming working session that I organised in May 2015, I have observed (since 23 July 2015) that the members of the commission have been using this participatory practice as ‘an aid to reflection and coordination’ for their work, according to the CM3.

¹⁵ The productions included: a fictional campaign advertising an app for people statistically condemned to contracting a serious disease (see [Intro CH9–10 | Section 38.C](#), project *Épicure*. app); two general medicine Ubberisation services (a tea-room-pharmacy and a medical-advisor-in-home-consultation); and a daily personal assistant app based on full access to all our data platforms (banking, health, transport) named Google Groom. The limited time of the residency did not make it possible to finalise the maps of the themes discussed with the participants and did not make it possible to analyse the feedback generated during these sessions.

Indeed, this format was deployed after our first successful collaboration, at the Summer University. The Commission Member 1 proposed to organise a weekly debate in several town halls across several districts of Paris in order to get in touch with the public. This was a proposition to integrate the format to a new activity that is not actually part of their current activities. Instead, at a more sustainable pace, commission members 2 and 3 suggested the setting of three debate workshops in the months of October, November, and December of the year 2015. It would be part of their yearly seminar, happening in the Commission's office. This would target the usual seminar attendees—health professional practitioners, thinkers, people living with a disease. According to questionnaires filled out in the end of each debate sessions, the kinds of audiences that finally attended the debate included health practitioners (physiotherapists, nurse, psychologist), one person living with a disease, designers, researchers in the humanities, relatives to people with an illness. But more interestingly, the commission members themselves attended and actively participated in the sessions (philosophers, the Co-Director, the Head of Public Relations and Communication, the Medical Intern, the person in charge of video documentation).

From my observations and the analysis of the three observed situations, there were, until then, no recurring formats where the members of the commission conducted their reflection work, publicly, in collaboration with 'non-experts,' and mixing different disciplines among the team members.



Figure 65 | Debate workshop on the future of healthcare and predictive algorithms. A timeline of future events related to the creation of two speculative design products is placed at the table's centre. The person with the arms open is a medical practitioner, she is sitting next to two nurses that are working in the St-Louis Hospital in the adjacent building. Half of the people included in the picture's frame are members of the Commission. Most of them do not usually attend events related to the annual seminar as participants. St-Louis Hospital, Paris, November 17, 2015.

It therefore seems that the commission members have been able to **integrate a new format into their public programs**. They also experienced and developed more **working sessions with non-experts, through agonistic debates**.

35.C.2 February 2016, a Patients' Associations Co-Design Meeting

The patients' association meetings are one of the Commission's working formats that evolved in the continuation of the *L'Éphéméride* project. As said earlier, the debate comments generated at the Summer University were used as material to create a mind-mapping of the debated topics, which was redesigned, reviewed and updated through four iterations.¹⁶ One of these iterations is a meeting of the six patients' associations related to the MND Plan in the Commission's office. The Commission invited them, in their office, to rework the mind-mapping of debated topics during a 30-minutes, out of a 2h session. After this, nine members of the associations sent written comments, suggestions of textual modifications, or even brand new designs of the map's layout and content. These contributions were sent to the Commission's office via e-mail or by regular mail. This map was then improved in a close-collaboration with the team. Commission members decided to present this document as the map of ethical issues related to MND, from the point of view of people having them. I also mentioned earlier how, according to my months of longitudinal ethnographic observation of the Commission's practices, this project is the first to deliver a publication that gathers the work of 'experts' and 'non-experts.' This was done through an appendix added to the expert-workshop booklet publication dedicated to the topic of MNDs.



Figure 66 | Six patients' associations of the MND Plan invited to work on the map created during the Summer University's debate workshop. The A3 coloured papers on the table are printed versions of the mapping. 9 people on the pictures are the spokespersons of the associations. 8 people are members of the commission. The person talking is Françoise (*L'Éphéméride* video testimony actress), which has a status of expert-patient. St-Louis Hospital, Paris, February 1, 2016.

When comparing previous patients' associations meeting to this one, the Commission appears to have incorporated a more inclusive approach than before. 'Non-experts' do not stand as information providers anymore, but **they occupy a place as co-creator of knowledge**. Even if this attempt has been occasional, its publication in an official expert document shows that **the commission attributes value to publicly supporting such an inclusive approach**.

¹⁶ See the online appendix: maxmollon.com/permalink/PHD_Appendix-CH8-Mind-Mapping.pdf

35.C.3 May 2017, a Yearly Seminar Fuelled by Self-Written Speculative Dystopian Fictions

The new season of the annual seminar, from October 2016 to May 2017, has seen its format transformed. The speaking time between speaker and audience was reversed (20% of the time was devoted to presentations, it was followed by 80% of the time, dedicated to discussions with the audience). After Q&A sessions, the discussion time brought together the guest speaker, the commission members present and the public in a collective discussion. The content of the presentations, the involvement and the role of the commission members have also changed. Instead of discussing the content presented by the speaker, the commission members acted as fiction writers. Each session theme was explored through the writing of a thought-provoking speculative scenario—which was often dissonant or even dystopian. Every session was launched by reading the scenario, as a thought-experiment, exploring the consequences of a hypothesis, for example ‘healthcare without doctors.’

This intent to change methods was initially spotted in the questionnaire the team filled after *L’Éphéméride* participatory debate, in September 2015:

What did this experience bring you personally?

“— CM2 *The discovery of a new method, and the importance of fiction.*”

What would you do with this approach, in the future?

“— CM2 *Building desirable futures. Or, using it for our seminar on the topic of anticipation.*”

Answers to the questionnaire given on 15 September 2015 during *L’Éphéméride* debate session, Summer University, Nantes.

Thus, one of the top-down knowledge transmission formats employed by the Commission was transformed, for a year, in an attempt to incorporate dissonance and speculation (through fictional narratives), and participation (through agonistic collective discussions).

That being said, in their official online programme, the seminar is named “Anticipating the Future of Healthcare: An Ethical Issue.” Their intention is described as “exploring a ‘future of health’ by proposing to the speaker to react to a fiction constructed by sub-determination (an operation which consists in subtracting a structuring element from a set).”¹⁷ Here, ethics, future-oriented thinking and anticipatory fiction appear to be the focus of the Commission’s online communication. But no reference is made to the adversarial debates.



Figure 67 | View of the Commission's website. Blog post titled, "Seminar, Anticipating the Future of Healthcare: an Ethical Issue." The page announces the date, topic and speaker of each session of the annual seminar, but no mention is made of adversarial debates.
| espace-ethique.org/seminaire16/

Without actually surfacing in their public stance in communication documents (such as their website), the **commission practices oriented towards adversarial stances of conflicts and agonism**. I see it as a sign that **they valued using unfamiliarity** through speculative fictions as a means for familiarisation and reflection.

35.C.4 January 2018, Supporting the General Citizen Assembly of Bioethics

The General Citizen Assembly of Bioethics was an event aimed at providing a report on public opinion to inform legislators about the upcoming revision of laws on bioethics. This process takes place every seven years in France and is managed by the National Ethics Advisory Committee.¹⁸ In 2018, it was supported by a professional actor of citizen consultation.¹⁹ For the first time, the government decided to involve the *Espace Éthique* of each French Region in this initiative. The stakeholder—the *Espace Éthique Île-de-France*—provided the visual identity of their own website to serve as the visual identity for the online platform of the national event. For the Île-de-France Region, they provided their expertise (the members of the commission joined as speakers), their network of partners (experts also participated as speakers) and their community (via communication with their usual audiences).

¹⁸ CCNE: *Comité National Consultatif d'Éthique*.

¹⁹ This actor was Cap Collective. In addition to conventional (in presence) debates, they employed a commercialised version of their online platform *democratie-ouverte.org*. This platform was later used to support the Grand Debat National in France, in 2019.

The commission integrated these participatory debates to their annual programme. Moreover, throughout their online communication means, the Commission took a strong public stance turned towards inclusiveness—in the sense of including the citizens to the creation of knowledge, rather than professional politics. Their website indeed announces,

“These coming months of citizen assembly bring together an issue, a challenge and a risk whose scope we must measure. Without a political mobilisation that concerns all of us, our democracy could find it difficult to live with the failure of this consultation. — By: Emmanuel Hirsch, Director of the *Espace Éthique de la région Île-de-France*.”²⁰

In this text, the Commission induces that participation is so crucial that the revision of bioethics laws could be a tragedy for the French society and democracy, if citizens do not take part.



Figure 68 | Blog article entitled “General assembly: reinventing bioethics, a political matter.” The article announces the general assembly initiative as part of the Commission’s programme of events. Extracted from the commission’s website. January 18, 2018.

It seems to me that the presence of this strong positioning, in the stakeholder public communication, shows that **inclusive participation is valued to the point of making it a central value of their public image.**

²⁰ espace-ethique.org/ressources/editorial/etats-generaux-reinventer-la-bioethique-un-enjeu-politique/ (accessed Jan 2019). | My emphases and my translation from French.

35.C.5 Interpretations: Organising Adversarial Debates, by Themselves

While it seems that lot of the qualities of design for debate was fully endorsed by the Commission, a number of elements were not implemented.

First, the stakeholder developed two kinds of participatory and inclusive practices that were not adversarial:

- The co-design phase during the patients' association meeting mainly demonstrated participatory, inclusive and reflective qualities attributed to designing for debate. This working session format was not adversarial.
- Regarding the Commission's support and organising of debates sessions during the General Citizen Assembly of Bioethics, three groups of qualities were not employed—the designerly, discursive and adversarial ones.²¹ Indeed, no artefact was used as a prompt to debate.

Second, the development of three more Workshops of Ethical Creation demonstrates the Commission's interest for adversarial practices. I would like to focus on the format of the annual seminar. It is perhaps the one that has seen the greatest self-initiated change in practice. As discussed earlier in this chapter, this format was one of the least collaborative and inclusive of the commission. It was essentially dedicated to the top-down transmission of knowledge from commission members and their network of experts, to the Commission's public. During this practice transformation, almost all the qualities attributed to design for debate were employed.

However, since the team did not use a design artefact, I wondered if they felt they were lacking something (or not). So I interviewed them at the last session of the annual seminar in May 2017. During this informal interview, the team stated to drawing their inspiration from our collaboration. In particular, from a 3h co-design session with the CM2, 3, 4, 5 and 6, where I facilitated an exercise of speculative fiction scenario creation. My aim, through this session, was to further involve the team with co-designing the dissonant artefacts that would be used during the upcoming Workshops of Ethical Creation. Nonetheless, according to the interview, this session apparently served as a warm-up to develop their own practice.

²¹ This corresponds to the designerly qualities (11) (13) and (15), the discursive ones (4) (14) (20) and the adversarial ones (6) (16) (23).

More interestingly, while the team did not report precise examples of participants' feedback, they expressed the regret to use dystopia in their fictions. It was perceived as too provocative to articulate elements of a critical reflection with the participants—as reported in this verbatim extracts.

“— **CM4** See, we started writing fiction! We had the idea thanks to our work with you, the speculative scenario workshop, we have to thank you for that.

— **CM2** However, we have tried dystopia—a little too much sometimes.

— **CM4** We should have been less provocative. Discussions with the public would have been of better quality, I bet.”

Commission Members 2 and 4, interviewed in the Commission's office after the last session of the yearly seminar. May 2017, St-Louis Hospital, Paris.

Two lessons and one question can be drawn from this feedback. First, it can be seen that **requiring a design artefact was not necessary to set up a practice of participatory, inclusive and adversarial debate**. Second, the team's experience with conducting the sessions seems markedly turned towards the misuse of provocation and overwhelming dissonance. That said, it can be assumed that a more thorough methodological introduction to the careful tactic of dissonance could have allowed the team to overcome this obstacle.

So, a question arises. Changes in stakeholder practices demonstrate that certain elements present in the practices of design for debate have value for a stakeholder such as an ethics commission. Agonism, among other qualities, presented enough value to transform one of their most recurrent (monthly) working formats. However, I noted a little earlier in the stakeholder's online communication that participation and inclusion are displayed as strong values in their public image (i.e. for the occasion of the General Citizen Assembly). But **while the adversarial qualities have been declared as having value for the stakeholder, why are they not publicly claimed in their communication?**

To clarify this point, I have once again explored what seems to be the tipping point of the stakeholder practice's evolution, the Summer University debate of September 2015. This question adds to the chapter's main question—what specific inputs may the practices of design for debate and dissonance offer to a stakeholder?

35.D Looking Back at the Stakeholder's Reaction to the Bridging Experiment

How has *L'Éphéméride* debate been experienced by the stakeholder (in contrast with the participants)? When looking again at it, the feedbacks seem to suggest that another social norm was unexpectedly brought into a state of dissonance. It led me to use the bridging experiment analysis process a second time in a different order.

35.D.1 Identifying What the Participant Rejected/Supported

To which feature of the experience did the participants react? While answering this question, I found that the CM1's comment seldom addressed the features of the artefact.²² For instance CM1 said:

- P1 [...] Do you provide the pen? Because it seems difficult to me to write on the dark. It's a commitment to have ended with the dark, I'm not sure I'll want to have an *éphéméride* that ends with a dark colour.
- P2 **Me neither.** We're gonna have to take a clearer and clearer ink.
- P1 Why choose to go darker? Is that death coming?
- P3 Yes, why?! **[Repeated by other participants]**
[People getting more and more agitated]
- CM1 We are talking about neurologic degenerative diseases through this object—I say this **for people who are already tempted to escape the room.**

Quotes by 3 participants (P), the Commission Member 1 (CM1) and myself (MM), from Day 1 of the debate sessions, held on 15 September 2015, in Nantes, France.

In this quote the CM1 seems to be reacting less to the dissonance of the artefact than **to the reservations and indignation of the audience** (which may seem dissonant to them). And, the audience seems to react **to the overall debate experience**.

Are these comments showing rejections of support? I compared this extract to other audience's comments. In fact, as soon as tensions arose during the session (i.e. the **participants rejected the debate experience, its process and purpose**), the **CM1 supported it**, as a reply.

How did participants restore 'normality'? I observed that this rejection-support interaction was a consistent pattern throughout the debate session. The reassuring took different forms.

First, in the previous quote and in the following one, the Commission Member 1 answered the reservations expressed by participants by stressing the relevance of the artefact regarding the topic of MND and ethics.

²² All the quotes provided in this section are taken to the debate session of 15 September 2015, except when notified. Some quotes were already given with different emphases.

[The audience is silent. End of the screening of the video testimony.]

“— **CM1 Did you understand** [the presentation just given of the artefact]? As we are pedagogues, we prefer to ask.

— **P** We're not necessarily convinced, but we got it.

— **CM1 It's not a matter of opinion. Everyone expressed something quite strong about** their conception of **the disease**, through this document [*L'Éphéméride*] which **was a pretext** [...] there is a challenge to fight against something that is visualised—in order to re-appropriate the present moment. Anyway, **you're very good at ethics.**”

Here, the CM1 tended to compliment participants to encourage them.

The second category of comments aimed at reiterating the goal and usefulness of the session, claiming that the approach will serve the Commission reflections:

[The audience is silent. End of the last discussion session, start of filling in the questionnaires]

“— **CM1 Max has got the whole session on tape. You will see tomorrow**, he will draw from our discussion a number of issues which are important in the process of an Espace Éthique, from which we will work on proposals for action—thanks to your contributions. **You'll be surprised.** [...] We will make a document to which you can contribute—even if it still seems enigmatic, you will see that **you have not lost 1h30.** [...] The 'Today I will' is **extremely well constructed.**”

The CM1 also underlined how everything was under control and complimented the artefact to strengthen their point.

A last category of comments intended to restore the legitimacy of the session:

[Very start of the session]

“— **CM1 When we were asked to take charge of the national plan on MND diseases, we questioned our legitimacy**, the complexity of the subject in relation to our Alzheimer expertise, and the many differences between these diseases. Among the initiatives implemented to address these issues, there is the collaboration with Max. [...].”

[Later, after the video screening]

“— **CM1 When talking with [name of the video actress's neurologist who is an expert and was a speaker earlier that day, at the event]**, one of the challenges she said to convey—when giving results of a diagnosis, for an MND disease—is to live in the present moment. And the real ethical question is what do we do with these sheets [*L'Éphéméride ones*]?”

These comments express the seriousness of the project. To this end, they stress the qualitative nature of the approach and the fact that it is comparable to those of the commission's collaborators and peers (such as the video actress' neurologist).

They also reiterate that the workshop is supported by the government. Indeed, the comment stresses the role of the Commission in the MND National Plan, which follows the Alzheimer National Plan, for which they were commissioned by the French Ministry of Healthcare.

I understand these reactions as proof of the fact that both the CM1 and the participants were in a state of dissonance, but not regarding the artefact. Indeed, the CM1 did not formulate a single rejection comment against *L'Éphéméride*, it is all the contrary. Rather, **something, in the debate experience itself** was perceived as dissonant. The CM1 restored 'normality' by **reassuring the audience regarding the session's relevance—its topic** (MND and ethics), **its usefulness** (contributing to the Commission's reflection) and **its legitimacy** (being experts-fed and state-supported).

35.D.2 Formulating a Hypothesis About the Social Norms (Unexpectedly) Made Dissonant

Why did the debate experience elicit a rejection? What was wrong? What was the social values that were not respected?

Several hypotheses can be formulated. These comments may mean that the CM1 is trying to legitimise my position as the main moderator of the debate without revealing that I am part of the authors of *L'Éphéméride*.²³ It could reveal a desire to make the experimentation work. A deep conviction that *L'Éphéméride* and this debate are relevant tools for ethical reflection. Perhaps they are trying to stimulate the public to experiment or to play along with new methods—e.g. when saying, “You’ll be surprised.” Their reactions may be evidence of a special attention and respect for the public. Or it could be a matter of legitimacy and credibility of the *Espace Éthique* institution itself. But I propose to focus on a different interpretation.

First, it seems that the commission member wanted to avoid any strong feelings from the audience. Their formulation about the audiences’ “attempt to flee the room” was one example of this, given above. This is another one:

“— CD, off the microphone You don't show the watch, right?!”

This comment was formulated, off-record, a little after the video testimonial had been screened to the audience. The CM1 repeated to not show the *Montre-Éphéméride* pictures on two more occasions (before to start the session and just before the end), revealing that the CM1 seemed really concerned about the audience's distressed feelings about the provocativeness of the session.

A similar kind of precautions were manifested in the CM1's reply to an agitated participant. This participant's comment was followed by five others, formulating vivid critiques about *L'Éphéméride* and its relevance regarding three things: its usage reserved to people having an MND, the topic of MND, and ethics.

²³ Reminder: I pretended not to be the project's designer, so that the video testimony of 15 years of life with the object would be credible until the end of the debate.

The comment goes as follows,

— P1 I may be the only one here, but I don't understand why this object should have a link to MNDs. If you hadn't said it at the beginning, it would be an object like any other, which may be pretty for some, not for others, which can be used and misused at any age, without being sick. I am sceptical about this link, as is the link with ethics.

— P2 I have a similar feeling...

— P3 Could it be for everyone?

[Many affirmative reactions and whispers from multiple participants]

— P4 Why would it be reserved for patients?

— P5 Well, yes!

— P6 Completely.

— P1 I even feel a little uncomfortable, I feel like I'm being ripped off.

— CM1 It is perhaps the most fundamental since the beginning of the meeting that you have just said. Perhaps that's the whole point of the object you just described."

Quotes by 5 participants (P) and the Commission Member 1 (CM1), from Day 1 of the debate sessions, held on 15 September 2015, in Nantes, France.

In a very subtle way, the CM1 turned negative comments into a positive feedback, restoring the 'normality' of a conventional *Espace Éthique* workshop.

The CM1 normative replies were formulated in such an insistent way throughout the workshop that the previous participant came to speak to me privately after the session, thereby starting a 15-minutes informal interview. During this interview, the participant formulated their difficulty to express disagreement because of the CM1's reassuring remarks—also because of my status as a designer/moderator of the event—and because of the "deep respect" she has for the Commission. Here is an extract of the interview (given in Chapter 7 with different emphases).

— We feel like we've been influenced, manipulated. Even if it was not explicit, I had the impression that I was in a psychology experiment of submission to authority, because you are a designer and **because of [the CM1] presence.**

— MM Why didn't you express it?

— I couldn't do it. I felt like I was being paranoid. **The lid was quickly put on by [the CM1].** I feel like I'm being ripped off, right to the end. Because I was out of step with the others, who found that 'It's a transfer object.' I don't even know how to verbalise it. The link [to the MND] is forced! They try to convince me my brain has to think that. It is pushed to think that there is a link. Because you are a designer, that the majority hold this opinion, that **we are in an ethical space in Nantes, for which I have a deep respect.** I was disconcerted.

— MM [I explained the whole project and my role in the experiment]

— You are working on the expression of disagreement. I didn't feel comfortable expressing **my disagreement with the workshop itself.**"

Extract from the informal group interview with two participants, conducted by myself (MM). After the debate session's end. 15 September 2015. Nantes, France.

In the light of this testimony, I suggest that the participants’ defiance regarding the debate experience is in fact based on the pre-existing relation between the stakeholder and its audience.

The following figure—based on the debate session questionnaires—supports this interpretation. It shows that more than half of the debate participants already attended an event organised by the stakeholder in the past; 6 people have come to at least six Commission events in the past.

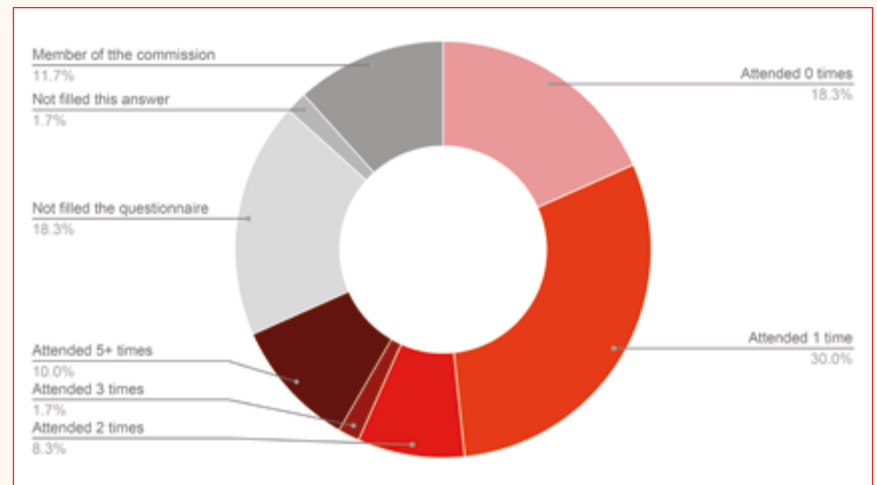


Figure 69 | Count of responses to the multi-choice question, “How often do you attend *Espace Éthique* events per year?” | Attended 5+ times: 6 people, Attended 3-4 times: 1 person, Attended 2 times: 5, Attended 1 time: 18, Attended 0 times (this is the first time): 11, Not filled this answer: 1, Not filled the questionnaire: 11, Commission members: 7, Total 60. | Collected through questionnaires during *L’Éphéméride* debate session, September 15, 2015, Nantes.

Following the bridging experiment method (in another order) **I now formulate the hypothesis that** the social values restored by the CM1 pertains to this strong relation: ***Espace Éthique’s workshops should not alter this existing relation.*** I will now attempt to draw on my previous analyses to qualify this relation.

35.D.3 Unravelling the Underpinning Tensions of the Social Norms Made Dissonant

Returning to data obtained from my fieldwork within the commission’s team, I noted that the different members of the commission shared a feeling that their audiences did not understand the notion of ‘ethics:’

“— CM1 **We see that people do not know what ethics is**, people have intuitions, but without knowing precisely. We thought about a comic book to explain the concept of ethics, but why not doing that with you.”

Commission Member 1 (CM1), our very first meeting (and interview). Held on 18 March 2015 at the St-Louis Hospital in Paris.

This was corroborated on several occasions but with greater critical intensity by other members of the team:

- “— **CM2** A person who leaves out the Summer University still **doesn't know what ethics is**.
- **CM3** **There is a confusion, ethics is used as a generator of hope** in the face of the tragedy of diseases.
- **CM2** **Ethics can be overwhelming**, it does not have a therapeutic function.
- **CM3** **It begins when we accept doubt, discomfort**. [Yet, in Summer Universities] There is no doubt, everyone goes in the same direction.”

Two of the commission members during a brainstorming session. Session held on 21 May 2015 at the St-Louis Hospital in Paris.

It is relevant to link this feedback to one of the conclusions made during Chapter 7 according to which the social values at stake among participants is comparable to a stance of Care.²⁴ From this perspective, the critical feedback given by the Commission team seems to indicate that the Commission's audiences make a confusion between 'ethics' and 'a generator of hope,' or rather between ethics and Care. In the rest of the discussion, the interviewees go further by suggesting that the use of adversarial means would be an appropriate response to this criticism, but that this stance is delicate:

- “— **CM2** There is not enough heterogeneity, or dissensus [...] the productive controversy; the reasonable dispute; there are many terms like that.
- **CM3** We often talk about this. But the problem with dissensus [in a plenary session] is that there are already a lot of latent tensions. [Notably] Between nurses and doctors, or caregivers and nurses.
- **MM** We can also have a workshop format dedicated to that.”

Two of the commission members and myself (MM). Continuation of the extract given above. 21 May 2015 at the St-Louis Hospital in Paris.

Throughout the discussion, the CM2 and 3 formulated how consensus is a major component of the audiences' expectation. Hence this is during this brainstorming session that we finally decided on the format of the Summer University workshop—an adversarial debate dedicated to “productive controversy,” in the word of the CM2. From this, I deduce that **a strong relation based on consensus and Care is in place between the Commission and its audience**.

²⁴ In CH7 | Section 29.A.5, I suggested that the social norm is comparable to a stance of Care that may, in fact, impinge upon the peoples who live with MND's struggle to legitimate their difference. But here, I wish to focus on the notion of Care and consensus.

L'Éphéméride debate format was—and agonism is—not only about conflict. It implied the use of a highly participative and inclusive debate process.

However, while developing a ‘field-work ethics’ was one of the Commission’s objectives, the following dialogue reveals that adopting such a stance was indeed a drastic change for *Espace Éthique* and their audience:

“— CM1 We are going to **transform the communication** around the Summer University to something like ‘**you are co-constructor of the MND Plan.**’

— CM5 [Yes but,] Taken globally, the people who come are consumers of knowledge. [...] Within a usual workshop of 70 people, it is the same 3 people who always speak. Therefore, in a creativity workshop [...] **the public will not naturally be convinced and interested in participating.**”

Conversation between the Commission Member 1 (CM1) and CM5, Team meeting held on 2 June 2015 at the St-Louis Hospital in Paris.

According to the CM5, adopting a participatory inclusive stance implied a shift in the culture and expectations of the commission’s audiences, something which is not a trivial matter. I deduce that the strong relation established between the Commission and its audience **is also a relation of top-down expert knowledge transmission which is expected by both the commission and the audiences.**

The report of experience phrased by CM2, 3, and 5, indicates that the expectations of *Espace Éthique*’s public seem to limit the Commission’s mission to two demands. First, developing a stance of Care and consensus (rather than asking unpleasant questions, in an upsetting way). Second, being a provider of expert knowledge (and not to seek the opinion of the general public). The debate organised in Nantes not only appears to be a change regarding the Commission’s practices and relation towards the audience, in fact:

- The debate experience itself was dissonant with the **commission-audiences usual relationship and practices**
- This relationship was built on **Care, consensus and top-down knowledge transmission.**
- Consequently, I offer that the Commission, its collaborators and its audiences can be understood **as forming a communication situation characterised by specific social relations and practices**—here, top-down and consensual ones.

Indeed, by reaffirming the relevance of the workshop (i.e. claiming that it is very useful to the work of the Commission, it is state-supported) the CM1 tried to restore the ‘normality’ of this top-down relationship. When subtly turning critiques into compliments (i.e. “that’s the whole point of the object you just described,” “you’re very good at ethics”) they may have restored the ‘normality’ of a relationship based on Care and consensus. The CM1 perhaps tried to legitimise the Commission’s right to use such practices and to change their relationship.

35.E Reflections

My four analyses point to two things.

First, the qualities of the debate experience conflicted with the relations and practices established between the actors of the debate. The ones of Care and consensus were disrupted by the adversarial quality of the debate experience. The one of top-down knowledge transmission was disrupted by participation and inclusiveness. Hence, the dissonance installed was not about the artefact, here:

- **The form of the debate can be dissonant by itself, depending on the situation where it is deployed.** For instance, *L'Éphéméride* debate was dissonant with Care and consensus (being adversarial), and with top-down knowledge transmission (being participatory and inclusive).

Second, I come back to a question that was asked earlier. Why didn't the stakeholder value adversarial stances in their public communication—unlike participatory and inclusive ones?

Many interpretations and answers can be formulated here. Perhaps the stakeholder, learning from the non-satisfying experience of using dystopian provocations in their seminars, has drawn a line on the use of adversarial debates. They may not have had enough time to develop this activity. They may have wanted to keep the surprise effect of capturing an audience through an unexpectedly agonistic debate, as was the case during the Summer University.

The answer is probably composed of elements of these various hypotheses. I especially think that the non-respect of the established relationship between the actors involved in the debate situation bore on the Commission. Hence, it seems to me that:

- Organising an agonistic debate is equivalent to **publicly supporting the values of agonism**, from a stakeholder's point of view. **The stance** can be a dissonance in itself.
- In some environments, **it therefore seems difficult**, and possibly counterproductive, **to display a public image that is firmly against the values of the stakeholder's audiences.**

We will therefore remember two things for the discussion. *The form* of the debate can be agonistic in itself, depending on the situation where it is deployed. But also, organising an agonistic debate involves the public stance of the stakeholder.

36 DISCUSSION The Design Artefact is Maybe Not the Most Crucial Feature That Designing for Debate Can Bring to a Stakeholder

What can a professional practice of design for debate bring to a stakeholder?

The question arises all the more so since the evolution of their practices showed that the absence of design artefacts was not a problem. This observation raises the question of the specific input of design to the *political*. Two points are to be discussed.

For the first point of my discussion, I come back on the fact that involving the public in a participatory, inclusive, and adversarial practice was not self-evident. It partly led to rejection. It is the form of the debate itself that has become dissonant with the ‘normal’ practices of audiences—here, social values and top-down practices of knowledge circulation. In other words, dissonance and agonism are not only formalised in the artefact, but in the form used to connect artefacts and audiences. We can deduce from this that a designerly approach to agonism, in addition to embodying itself in an artefact, implies the organisation of a situation of debate, taking into account the social environment in which it is embedded, and the practices that are in place. This means **going beyond the design of an artefact, and considering the design of a communication situation** in which seat these different actors.

In Chapter 6, I evoked the matters of how to ‘communicate’ design for debate proposals. I notably referenced Bruce and Stephanie Tharp’s *Discursive Design* as being closely related to Matthew Malpass’s ‘rhetorical uses,’ or ‘narratives of use.’ I also linked these two recent works to Dunne and Raby’s 2001 book *Design Noir*. Throwing a second look at Dunne and Raby’s argument is, here, relevant. According to the authors,

“critical design must avoid the pitfalls of the 1970s by developing strategies that link it back to everyday life and fully engage the viewer. [...] designers will need to develop new communication strategies.”²⁵

In addition to narratives of use, or “aesthetic of use”²⁶ in the authors’ terms, the book suggests that professional design organisations and associations may play a part in these renewed communication strategies. These institutions could perhaps “encourage diverse visions [of the future] through competitions and workshops for practising designers, as well as trying to engage the public through more challenging exhibitions and publications.”²⁷

The authors propose exhibitions and publications as the main means to engage audiences. This corresponds to the means they employed in their own work.

²⁵ Dunne and Raby, *Design Noir*, 59-60.

²⁶ Dunne and Raby, 60.

²⁷ Dunne and Raby, 65.

Yet, addressing this second part of Dunne and Raby’s argument entices to consider the limitations I listed in Chapter 3 about attempting to reach a debate audience through dissemination means—i.e. exhibitions, online and mass media. Indeed, beyond the exhibition or mass media, what does it imply to consider—what I called until now—the context in which artefacts and audiences meet, in terms of a communication situation?

Dunne expressed in a 2009 interview his attention to avoid comparing their production to a message that viewers have to decode.²⁸ I also consider the relation of communication set between the audience and the artefact as, indeed, a bit more complex.

The model of communication, that Dunne attempts to avoid, corresponds to Claude Shannon and Warren Weaver’s.²⁹ After the World War II, Shannon is an engineer at the Bell Telephone Company working on optimising the transmission of telegraph messages. He came up with an information theory based on a mathematical model. This theory was simplified and extended beyond the scope of telecommunications. Its simplicity made it a ‘universal’ model of communication that spread widely in linguistics, sociology, and anthropology. Beyond Shannon, anthropologists and psychiatrists in the 1950s began to study the non-verbal aspect of communication and proposed an alternative model of interpersonal communication. In their proposition, communication was no longer seen as the sending of a message with a pre-constructed meaning but the common elaboration of a meaning alongside an ‘interaction.’ There is not one but multiple channels of human expression.³⁰ Scholars who agreed on this “new communication” model included Edward T. Hall, Gregory Bateson, and Ray Birdwhistell, to which the French academic, expert of Irvin Goffman, Yves Winkin adds Don Jackson, Albert Schefflen, Stuart Sigman, and Paul Watzlawick.³¹ Drawing on pragmatist theory, they stressed the importance of considering communication activities as a “situation of communication.”³²

The situation of communication in which artefacts and audiences meet are comparable to Goffman and the Chicago School of ‘new communication’ because the debate situation entails face-to-face interaction—when debates are not conducted online.

²⁸ “We don’t view the object as a transmitter of meaning to be decoded by a viewer, but as a prompt, a thing to be engaged with.” **Anthony Dunne**, *Interpretation, Collaboration, and Critique*.

²⁹ **Claude Elwood Shannon**, ‘A Mathematical Theory of Communication,’ *The Bell System Technical Journal* 27 (July 1948): 379–423.

³⁰ Such as prosody (vocalisation means that do not involve speech), proxemics (physical distance related to social proximity, including private space), or even movement (interactive postural synchrony). | **Edward T Hall**, *The Silent Language* (Greenwich, Conn: Fawcett Publications, 1959). | **Erving Goffman**, *Interaction Ritual: Essays in Face to Face Behavior* (New York, NY: DoubleDay, 1967). | **Ray L Birdwhistell**, *Kinesics and Context: Essays on Body Motion Communication* (Philadelphia: University of Pennsylvania Press, 1970).

³¹ See Yves Winkin’s 1981 book. Winkin, expert of Goffman and theories of non-verbal communication, is a French professor in information and communication sciences. | **Gregory Bateson et al.**, *La nouvelle communication (Textes recueillis et présentés)*, ed. Yves Winkin, trans. D. Bansard (Paris: Seuil, 1984).

³² **Bateson et al.**, *La nouvelle communication*. | **Louis Quéré**, ‘La situation toujours négligée ?,’ *Réseaux. Communication - Technologie - Société* 15, no. 85 (1997): 163–192, [doi.org/](https://doi.org/10.1007/s102070100000) | **Louis Quéré**, ‘D’un modèle épistémologique de la communication à un modèle praxéologique,’ *Réseaux. Communication - Technologie - Société* 9, no. 46 (1991): 69–90, [doi.org/](https://doi.org/10.1007/s102070100000)

That said, the situation is slightly different because it comprises discursive designs that carry and mediate discourses (from an Information and Communication Sciences perspective). Furthermore, these artefacts are issued, they have the agency to prompt recognition of issues, and the one to prompt a public into being, when relevant (from an STS perspective).

This perspective raises many questions that range beyond the matter of design's input for a stakeholder. In Chapter 9: I will ask how can designers borrow from discursive design to orchestrate communication situations where artefacts and audiences meet and participate in an agonistic exchange? How to use design to organise communication situations suitable for debate? In Chapter 10: I will wonder what does a multidisciplinary perspective bring to understand the communicative and *political* qualities of design for debate?

For the second point of my discussion, I focus on the consequences of my earlier argument—i.e. organising an agonistic debate is, for the stakeholder, hardly removable from publicly supporting the social values of agonism.

However, because agonism is destined to challenge hegemonies, it is likely that this type of practice will conflict with any given consensual and top-down situation. I even suggest that it is one of the primary objectives of designing for debate. Thus, **the specific contribution of design practices to the *political*** goes beyond the creation of an artefact. **It is the deliberate implementation, or negotiation, of an agonistic public stance for a stakeholder.**

This conclusion opens to several research questions. Displaying such a public image could prove to be a difficult task for a stakeholder, if it is done in a way that is contrary to the values and practices of its audience. What is more: how can a stakeholder publicly uphold an ambition to question the power structures in place when they are themselves in this position of power? How may a stakeholder initiate a self-critical process *from within* their power situation?

I suggest that the experience lived at the Summer University and its consequences on the evolution of the stakeholder's practices and their pre-established relationship with their audience is an example of such an approach. **It is an example of the opening of a breach of mutual contestation and self-criticism in a consensual and top-down environment.** Or at the very least, it was a first attempt, where the fact that I was a designer—a third party—seemed to have been key.

What if the designer can contribute to the development of a *political* stance for a stakeholder, thus challenging hegemonic and consensual relationships? From my experience, I think the designer can take on two roles. I summarise them by the figures of the Trojan horse and the diplomat. These two positions are formulated as hypotheses, open for further research.

The **diplomat**, in the sense (so close to agonism) of Latour was mentioned in [CH7 | Section 30.B](#) to describe the ability of dissonant artefacts to use their arguable nature to thwart hegemonies and consensus in all camps—‘we’ or ‘they,’ majority or minority, even if a once minority audience were to take a position of majority power. It seemed to me that I played the role of a diplomat by playing the role of agonistic agent that helps to create dialogue, and to construct worlds, that do not speak to each other. I highlighted latent and under-discussed disagreements.

The **Trojan horse**—understood as a minority breakthrough in a majority field, rather than a war practice—is a more incisive position, which could be endorsed by a design for debate professional. It could respond to the case observed at the Summer University where participants in a debate—or members of a group, or citizens of a democracy—resist and reject an agonistic process. They reject the challenging of the top-down stance in order to claim their place as spectators or recipients of information (this is reminiscent of Gramsci’s description of expected reactions to the phenomenon of cultural hegemony).³³ The role of a Trojan horse would be to provoke a kind of surprise effect by confronting the public with an adversarial and self-critical workshop experience, from within the context of an event endorsed by the representative of power. Would something close to that have taken place at the Summer University? How can we allow the agonistic stance—necessarily inclusive and participatory, since it is supposed to create space for minority voices—to flourish in an oppressive environment that dispossess actors of their desire for emancipation? I leave these questions open to further enquiry. Notably, I will further address the Trojan horse position in Chapter 10.

This discussion of the professional dimension of design for debate, and the questions generated, are one of the three contributions of this chapter.

33 The fact of opposing to the disruption of a hegemony in place (e.g. the Commission gives up its place as a provider of knowledge), when formulated by a member of a group that is not in a position of power, is comparable to the phenomenon of reclaiming one’s position as a ‘servant,’ in Gramsci’s theory of cultural hegemony. | **Gramsci**, *Selections from the Prison Notebooks of Antonio Gramsci*.

37 KEY LEARNINGS **Agonism—Beyond the Artefact— Setting a Communication Situation and a Public Posture**

In this chapter, I looked at design for debate's function of being a professional design practice.

I hence pointed at 22 qualities of a professional design practice for debate, as declared by a stakeholder. Listing these qualities allow to put forward the relevance of articulating the adversarial, participatory and inclusive properties of these practices.

I also intended to pinpoint the specific inputs that a designerly approach to agonism may provide to a stakeholder—here, an ethics commission.

I now argue that, in addition to foster agonistic experiences by crafting the form of an artefact, designers can deliberately address the 'form' in which artefacts are brought into relation with audiences—i.e. the communication situation. They can also support stakeholders in the setting or handling of an agonistic public stance—which may often conflict with the stakeholder's values when they are oriented towards consensual and top-down relations with their audience.

I came to think about communication situations by observing the stakeholder's initial practices, which were not—at the same time—participatory and inclusive before our collaboration. This allowed me to see the stakeholder's normative comments, during *L'Éphéméride* debate, such as the fact that the format of the debate we had organised was dissonant with the audiences' social values (oriented towards Care and top-down knowledge transmission). I deduced from this that the very form of the debate (agonistic, participatory and inclusive) had been a dissonant feature with regard to this precise communication situation. I suggested that designers may further develop the taking into account of the situation in which their debate is embedded.

I reached my argument on public stances within three steps. Among the qualities of our collaboration that were declared (and partly implemented) by the stakeholder, I first remarked that the adversarial qualities were not displayed publicly as part of their communication—unlike other qualities, such as inclusive participation. I then reported that *L'Éphéméride*'s debate format was conflicting with the established relationship linking the Commission to their audience. I hence proposed that the very fact of organising an adversarial debate may be equivalent, for the stakeholder, to publicly supporting the values of agonism. I added to this that one of the designer's crucial role, being a third party, may be to assist the stakeholder regarding the development of an agonistic endeavour with respect to their public stance. This may be done throughout the diplomat position (i.e. being an agonistic intermediary and thwarting hegemonies and consensus in all camps); or the Trojan horse position (i.e. working as an infiltrator, enabling a minority voices breakthrough from within the comfort-zone of a majority opinion audience).

In terms of contributions, this chapter presents:

- A discussion on the professional dimension of design for debate, informed by a critical feedback on a year of qualitative empirical data. It is completed with a series of research questions.
- A refining of the definition of these practices, based on a list of perceived qualities, as declared by the stakeholder of my experiment.
- A methodological refining of the analysis phase of the bridging experiment method. It allows to study social norms that were unexpectedly made dissonant.

In the chapters 9 and 10, I will pursue the exploration of the situation through which artefacts and audiences meet—namely, the concept of situation of communication.

—

As a take away I provide, in the next page, the 22 qualities listed by the stakeholder regarding designing for debate. The list is combined and summarised within one text, which can be read as a complementary definition of the designing for debate practices.

For the sake of legibility, the numbers used in [Section 35.B](#) to draw up this list were kept and placed in superscript positions. Please note that the relevance of the listed qualities is probably limited to the context in which they were formulated. They stand as a ground for further enquiry.

Definition

Designing for debate works through artefacts that embody issues, which initiate or deepen individual reflection by fostering the expression of disagreement in a participatory and inclusive debate setting.

Within more details, **the practices employ designerly and discursive artefacts.** It means they carry discourses and issues⁽¹⁴⁾ through physical⁽¹³⁾ supports for enquiry⁽¹⁵⁾ and conversation,⁽¹¹⁾ which instantaneously⁽⁴⁾ project the viewer into concrete usage situations.⁽²⁰⁾

Through their reflective and agonistic qualities, these artefacts may be used either to initiate,⁽³⁾ deepen⁽²²⁾ reflection or to excavate unthought-of questions.⁽¹⁷⁾ They enable the emergence of productive controversies⁽⁶⁾ beyond certitudes⁽⁸⁾ and expose untold troublesome issues.⁽¹⁶⁾

Being participatory and inclusive, this self-expression⁽⁹⁾ activity leads to make subjective representations explicit⁽¹⁰⁾ in participatory⁽²¹⁾ and confrontational debates⁽²³⁾ in an inclusive way because it makes complexity accessible⁽⁵⁾ to experts and non-experts⁽⁷⁾ through different scales of abstraction (from artefacts to concepts).⁽¹⁾

Its applications may include communication⁽²⁾ or the identification and collection of issues.⁽¹⁸⁾ These practices can also be used as a self-reflective tool for an organisation, as a groundwork for action,⁽¹⁹⁾ or to do the work of ethical reflection.⁽¹²⁾

Aujourd'hui
je vais :





L'Éphéméride

Acknowledgement

By | Max Mollon (design), Sophie, Marion, the *Espace Éthique*'s team (co-design), Victoria Darves-Bornoz (film), Alexandre Mayeur (photographs), Gautier Mallet and Réanne Clot (design assistance)

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License | All images, video and texts of *L'Éphéméride* project, presented in the pictorial sections of the chapters 6 and 7 are available material to organise similar debates—with due carefullness. This material is placed under license CC BY-NC-SA 4.0: *L'Éphéméride*, Max Mollon (2015).

**Experiments
on
Communication
Situations
(CH9–10)**

INTRO

FOUR PROJECTS
Challenging the Ways Artefacts Meet Publics

This introductory section to my two last experimental chapters presents four projects specifically developed to explore different approaches to reaching and engaging publics when designing for debate.

38 *FIELD EXPERIENCE & DATA* Exploring Four Different Communication Situations

In the course of the previous experimental chapters, answers were provided on how to describe and put into practice some of the functions attributed to design for debate. These functions included, feeding critical reflection on known situations (Chapter 5), conveying and prompting recognition of a chosen issue through an artefact (Chapter 6), triggering mutual contestation and using it as a means of social research (Chapter 7), or using it as a professional practice (Chapter 8). These answers were related to one of the approaches to design for debate—the tactic of dissonance. While these experiments focused on the creation of an artefact, my second set of experiments focuses on the situation in which artefacts and audiences meet—namely, the communication situation. In particular, I seek to know: how to ‘reach’ and ‘engage’ chosen audiences with issues? This is respectively addressed in the chapters 9 and 10.

I ask this question because some of the existing means to achieve these two functions attributed to design for debate are limited, according to my review of the literature from Chapter 3. On the one hand, trying to reach an audience by circulating a project in exhibitions, mass and online media often results in the decontextualisation of the project. It generates superficial comments (except from niche audiences already exposed to the subject), and requires a third party to do the mediation work (but this work is often not done). On the other hand, attempting to engage audiences with issues chosen within an authorial posture has been reported as limited by the designer’s own self-criticality about their standpoint and privileged situation regarding the publics. Moreover, aiming at an unidentified audience with such author-chosen issue makes it hard to control what issues the public will construct upon in the end.

I hence want to study situations in which the artefacts meet publics (Chapter 9) and I want to better understand the designer’s relationship with this situation (Chapter 10).

To answer my question about how to ‘reach’ and ‘engage’ audiences with issues, it would be relevant to examine and compare existing projects that appear to have overcome these limitations. However, the wide variety of media, contexts, approaches and especially intentions in such projects would make the work of analysis and comparison quite difficult. An analysis grid should be put together to examine them. This grid would be based on the comparison of projects, certainly different, but sharing a similar attention and intention towards the design of communication situations.

In order to explore different communication situations, I designed four projects, between 2015 and 2017:

- The *OneHealth* (2014) project offers a fictional poster exhibition in a scientific conference.
- A fictional menu for the cafeteria of a research lab's campus is presented in the project *#Hack.my.cafeteria* (2016).
- A speculative role-playing debate in an ethics commission is introduced in *Épicure.app* (2015).
- And speculative online news articles depicting a 'post-presidential elections' context, in France, is hosted on *politique-fiction.fr* (2017).

These projects are now restituted in a pictorial format. As presented in Chapter 4, pictorials were initially brought as a new publication format in the Designing Interactive Systems conference, as a collection and articulation of annotated visuals. This format addresses the designerly nature of project-grounded research by returning “intermediary knowledge.”¹

I will present these projects using a common content organisation:

- The project's context (i.e. the issues addressed, the stakeholder's request...).
- The deliverables (e.g. artefacts embodying issues).
- The communication situation where the artefacts and the audiences met.
- The audience's experience and the project's outcomes (these 'practical outcomes' do not include the 'scientific outcomes,' given in chapters 9 and 10).

The first three projects I present were developed with specific stakeholders and by joining pre-constructed audiences in their context. In contrast, the last one (*Politique-fiction.fr*) took the form of a self-driven initiative, aiming at an unidentified audience, partly circulated through mass and online media.

The texts and pictures presented below are part of the communication material I used to introduce each project (they are designed artefacts in themselves, in some regards). I added and adjusted some of these texts to make them legible in a thesis format. In addition, presentations do not focus solely on communication situations. In this way, I intend to avoid limiting the range of possible interpretations for the reader of this thesis.

Finally, I should point out that, contrary to *L'Éphéméride* project discussed in the previous experimentations, the four upcoming projects did employ the means of future-oriented speculation.

¹ Jonas Löwgren, 'Annotated Portfolios and Other Forms of Intermediate-Level Knowledge,' *Interactions* 20, no. 1 (2013): 30–34, [www/](http://www.interactions.acm.org/)



OneHealth

38.A The *OneHealth* Project (2014)

Context and Issues

Abstract

What if death, disease, or heredity conditions could be predicted for any living being (plants, animals, human beings)? Would people begin to plan their time and optimise their behaviour in such a case?

The National Institute for Agronomic Research (INRA) based in Paris is concerned with such questions and others of its kind brought about by big data and predictive statistics technologies in the field of biology. For this reason, the President of one of INRA's research centres invited a designer to join their forthcoming conference on predictive biology.

The aim was to allow participants (scientists) to engage on a more personal level with ethical, critical, and reflective discussions. Hence, it was agreed that a 'representation of their current research object'—big data and predictive statistics for vegetal, human, and animal biology—would be submitted to the audience.

In the following pages I present: the controversies I chose to bring to this debate session; four scenarios developed to materialise them; the conditions in which the scenarios met participants; and the outcomes of the project.

The four scenarios regroup a series of representations of future applications (and implications) of ongoing research based on scientists' interviews. The scenarios were featured as a 'solo poster exhibition' during *Les journées One Health Île-de-France*, a one-day conference bringing together the INRA and its partners (two other research institutions on animal and human health).



Picture of the project's delivery context—a (fictional) scientific poster exhibition in a scientific conference.

About the Project

On | 27 November 2014.

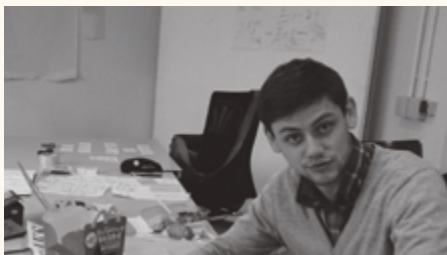
At | A one-day conference titled “One Health Île-de-France – Big Data, an evolution, a revolution, a promise for the diagnosis” at Paris-Créteil University in Paris, France.

For | INRA, ENVA, UPEC (the National Institute for Agronomic Research at the campus of Jouy-en-Josas, the National Veterinary School of Alfort, and Paris-Est Créteil University respectively).

By | Max Mollon and Jeremie Lasnier (design and production assistance).

With | Muriel Mambrini-Doudet (President of the research centre at INRA, co-organiser of the *One Health* conference), Annie Gentès (initiator of the collaboration), Annie Gentès, Emeline Brulé, Frederic Valentin, Juste Peciulyte, Tiphaine Kazitani (questionnaire-making and debate animation assistance). Interviews included: Genetic microbiota scientists at INRA-Jouy, a professor of oncology at the Henri Mondor Hospital in Creteil, the scientific director at ENVA veterinary school, and a cattle breeder working in Île-de-France. Thanks are due to the organisers of the event for their trust and benevolence.

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Project team and the logos of the stakeholders.

Theme of the Conference

Biology regards DNA as the plan of life itself. It codes how individuals grow and develop and its expression throughout life is modulated by ‘epigenetics’—the switching of genes on and off. Epigenetics makes DNA sensitive to environments and behaviours (nutrition, social as well as physical activity, and environment). In turn, DNA can influence an organism’s resistance to disease. But also, diseases can be statistically predicted by learning from the comparison of an individual’s health record with thousands of others over their lifetime.

Collecting, storing, analysing, and making sense of these massive and heterogeneous chunks of data (DNA, nutrition, sport, pollution, and so on) has been defined under the blanket term ‘big data.’ Recent developments in computing are aimed at tackling this challenge.

With the development of predictive algorithms (called ‘machine learning,’ ‘deep learning,’ or artificial intelligence), scientists and industries plan to turn this theoretical promise into reality. For instance, the Blue Gene supercomputers (shown in photo below) by IBM support innovations of machine sizes, calculation time, cost, and weight of data, all of which have drastically dropped since 1999 (for instance, in 2003, sequencing the first chain of human DNA took 13 years, the involvement of 6 countries, and 3 billion dollars; in 2014, one company could sequence it in 3 days for a thousand dollars).



A Blue Gene/P supercomputer by IBM, at Argonne National Laboratory in Lemont, Illinois, USA. 10 December 2007.
Credit: Argonne National Laboratory.

Issues Chosen to be Embodied in Artefacts

What does Big Data imply for the field of biology? Once statistics become 'predictive statistics,' curative medicine becomes a predictive one—treating illness becomes possible even before the appearance of the first symptoms.

Regarding this issue, the scientists I interviewed expressed several 'technical' challenges related to: the complexity of analysing data; crossing biological data (DNA) with behavioural and societal one (web search history, air pollution, public transports traffic, etc.); inter-connecting very heterogeneous data sets (considering their type and format); and finding the people who have the skills to make sense of these data.

According to other sources (articles, interviews with non-scientists, exhibitions, documentaries, and so on), what seemed under-discussed was the fact technical challenges come with a whole paradigm shift in health care practices towards a more holistic conception of the living. For instance:

- Living beings (including humans) can be understood as superorganisms (composed of many organisms) whose care is similar to that of complex interdependent systems. For instance, one way to study the health state of an animal's immune system is to study their intestinal flora by sequencing the DNA of bacteria present in their faeces.
- The second main issue raised by these technologies depends on their ability to predict the future. 'Prediction' comes as a new paradigm of healthcare (in addition to 'prevention' and 'therapy'). It extends the tools of diagnosis with those of prognosis by predicting either one's health status over a lifetime or the transmission of immunity, or disease, to offspring.



Deliverables

If massive statistics could turn diagnosis into prognosis, how would it impact society? This is the question I extracted from scientists' interviews, regarding the challenges or opportunities of using Big Data for the purposes of health prediction at large. I explored it throughout four scenarios.

Each scenario contains a text and a series of design artefacts. Both were presented to the audiences in the specific format of a fictional scientific poster (shown later). Please note that these texts were presented to audiences with different status: fictions, user testimonies, company hotline mail, etc.

Portraits of the scientists I interviewed, in their workplace, so as to identify relevant and under-discussed issues. From top to bottom:
 Demonstrating a gene-sequencing machine.
 A scientist that manifested strong critiques on the issues at stake and asked to remain anonymous.
 A professor of oncology explaining the cost drop of DNA-sequencing machines over the past few years.

Scenario 1

What if the reprogramming of animal DNA was accepted as a norm? Anti-counterfeiting measures and quality control labels would therefore be necessary.

From the Chihuahua to the red tomato, crossing species as a means for biological optimisation is outdated. Agro-ecology and the food industry have finally succeeded in preventing the use of pesticides and antibiotics thanks to DNA editing, thereby winning public opinion. Nonetheless, the high expectations of consumers gradually shape the market. For instance, new quality-control labels appear to guarantee GMO-quality standards, statistical validity limitations, and other anti-counterfeiting measures.

For instance, the fast-food leader caught up with this growing trend and formulated a double-arch quality-policy with an engagement to ban antibiotics. The GOC label (Genetic Origin Certified) now adorns the packaging of all burgers (Top-right images. Translation of the logo: “M” commitment, 100% pure beef, AOGC - Genetically Controlled designation of Origin. Image: Mike Wong: Counterfeit).

While some shops prohibit what is now called pet DNA-tuning (that is, choosing fur colour, leg length, and so on), others display quality tags—buying a pet comes with a lifelong guarantee of it being cancer-free; the customer is either ‘satisfied’ or the product is replaced with a ‘replica!’ (Middle-right images. Translation of the logo: Zero risk of developing cancer | ISO norm certified, satisfied or replicated, life-warranty. Image: All our animals are warranted + Logo of a pet store).

Finally, who other than Disney, leading innovator in the field of entertainment technologies, would propose certificates of authenticity for their trademark π Pet®? You can safely buy a Milou™ pet for Christmas which is guaranteed to be an exact copy of the movie star. Please note, Tintin exploitation rights were bought by Disney corp. in 2019. (Bottom-right image).



Scenario 2

What if one could be warned that their death would result from a genetic disease 10–20 years in advance? In such a case, one would arrange the time left to them before their death, and plan their ‘after-death.’

“When I turned 18, freshly out of high school, I was summoned, like everybody, to the genomic information session. I was conscious we have risk factors in the family, I decided to know everything, bad luck: Huntington will threaten me starting in my 40s. Living until 45 y.o. without making the slightest changes to my life-style meant a lot to me. Fortunately, I made the most out of my life while staying true to my values, not like deviant people from G.A.*, we don’t get along anymore! That said, I understand them, they have nothing to lose.

Four years ago, recent evolution of my condition changed my mind. Last year, we celebrated my ‘departure’ and my anticipated retirement. Everyone I knew will preserve happy and healthy memories of myself. Better than this, I planned a series of mail packages addressed to my family for the three years to come, thanks to the Post-Post services.”

Testimonial from Jacky, age 52.

*G.A.: Genetics Anonymous

Translation.

Upper right: Let’s organise your pre-funerals!



Scenario 3

What if life itself was patented? Deficient seeds would thus benefit from the same guarantees as any other industrialised good. This includes free return shipping, statistical validity limitations, and the covering of additional expenses in case of malfunction and suchlike the surrounding ecosystem.

Dear Mr X.,

In accordance to our Statistical Validity Guarantee program, we took your request into consideration and would like to offer you the best of our services. In 2012, during the creation of the batch 609BS-M2012, including your Wheat-Mediterranean-BS12 seeds, a software or a human error corrupted our prediction process. The robustness of the immune inheritance over sequential generations of this population might malfunction. In order to proceed to maintenance operations and to calculate the potential affectation of related ecosystems—plus the relative compensation—we would need you to send a product sample back to our workshops.

Regards,
Tomasonn Seeds.

Translation.
Factory return. Defective part



Scenario 4

What if I could anticipate my health risks regarding my specific life context? In such a situation, I would be in control of and responsible for my health choices. Thanks to my connected-WC and my epigenetic stress-free monitoring app, I would optimise my life expectancy and my insurance policy taxes.

I used to eat organic products only, except on a few occasions. But today, I optimised my behaviour and my lifespan expectancy regarding the interactions with my environment, thanks to my 'InnerVision' app. The app works closely with my insurer, making it very easy to manage all my 'health factors.'

For instance, I cancelled my trip to Beijing because of a rise in pollution. It also helps me filter restaurant recommendations. My habits totally changed. I talk to it and listen to it with blind confidence. However, health has a price! When I give myself permission for junk food, I've got to pay back.

Translation.

Left: InnerVision.app. 33% left before next goal. Life expectancy in progress.

Lower-left: Maps search results suggestions by the chef of 'MAIF' insurances.

Right: €7.95 total, including 10% of taxes and 5% of 'MAIF' insurance taxes.



Communication Situation

The previous material (texts and visuals) were represented in four posters which mimicked a scientific poster exhibition. It was presented to the audiences in the event's conference room.

A call for participation (asking conference attendees to join the experiment) was formulated by the chair of the conference before the opening of the event. These discussions would take place right before the coffee breaks when people would have the time to come and talk. Discussions happened among small groups of participants in front of the posters. Informal interviews, video recordings, photos, and questionnaires were used to collect their feedback.



Top: The four (fictional) scientific posters (and a video camera capturing reactions in the centre).
 Bottom: They were displayed on one side of the conference room.

Audiences' Experience and Project's Outcomes

Debate Audience Feedback

In order to present the audience's feedback, it is useful to recall that the *One Health* conference brought together scientists and professionals from the fields of healthcare, biology, and computer science around the topic of genetic material which is a common resource for human, animal, and vegetal sectors. This biennial gathering is usually an occasion to identify the central challenges faced by the communities as well as the progress made.

Here, discussions often centred on the fact that these scenarios were more than probable and part of them already existed in reality. 18 questionnaires were given to the audiences. They allowed to highlight the following elements. Ethical implications of these actual scenarios were discussed but more time was necessary to move beyond evident questions and explore other implications of the research conducted by scientists. The third scenario—on Genetically Modified Organisms (GMO) and the putting of a patent on life itself—was reported to encourage discussions which are usually considered taboo within this community. Some researchers found the pre-funeral scenario to be disturbing while others pointed to existing pre-funeral practices.

Participants were given questionnaires and their reactions were filmed while starting conversations with them (in the form of informal interviews).



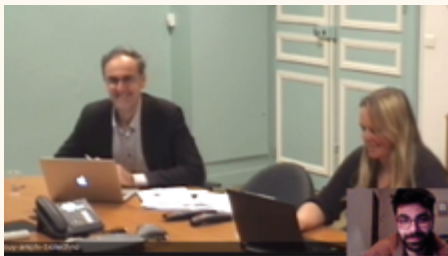
Outcomes

While the value accorded to this approach was not evident for the different stakeholders at the time of planning the project, researchers valorised our collaboration in their meetings and on their website after the conclusion of the event. In fact, although the project was not part of the official programme initially, it was invited to be a part of the debriefing meeting between the heads of three research centres who organised the conference in order to reflect on the results of the experiment.

This had two main outcomes. One participant, a Research Director at INRA, commissioned two more projects like this one over the course of the following 2 years with the doctoral students. I was redirected and introduced to researchers of philosophy by an ethics commission called *Espace Éthique* in Paris, working, among other things, on Huntington's disease (featured in the second scenario). Four more debate projects were organised with them during the year 2015.

Top: A debriefing meeting with stakeholders. Both pictures show a form of valorisation of the approach manifested by the stakeholder, in their public communication or within the change of their practices. Please note that the project's involvement in this online article and in the meeting was not planned at the start of the project.

Bottom: INRA's blog titled "A Design Perspective on Diagnosis and Big Data."



Limitations

The project resulted in very rich individual discussions. Some of the scenarios fed the main conference session and contributed to the collective discussion, but a dedicated space and time was needed for a real debate to take place. Questionnaires showed that other places could be considered suitable for the display of such posters, such as the university (83%), waiting room (56%), hospital (61%), and laboratory corridors (50%).

They also showed that the topic explored was too wide which tended to make the scenarios simplistic.

Finally, recommended design improvements included the poster layouts, which could have been brought closer to INRA's usual posters (shown below) during the later redesigning process.



Left: One of my initial (fictional) scientific posters presented during the debate session at the *One Health* conference.

Centre: A real scientific poster photographed during my visit of the INRA research campus in November 2014.

Right: A redesign proposal of my initial poster intending to make the layout of my poster more familiar to scientists—proposal made after the project's end.





#HACK.MY.CAFETERIA

38.B The #Hack.my.cafeteria project (2016)

Context and Issues

Abstract

What if doctoral students of Biology could bring their own visions on the future of research to their field? Would they confront ambiguous territories lying between scientific promises and ethical considerations?

These questions were proposed to INRA because the institution faced a major crisis when its research findings on GMO were rejected by French and European civil society ten years ago.

Today, they said to acknowledge the impact of ‘non-expert’ knowledge and science-society issues on their work. Therefore, the head of one of INRA’s animal biology departments requested to distance its doctoral candidates from their work and introducing them to science-society critical and ethical thinking.

I proposed to run a four-hour design workshop spread over three days where Ph.D. students could speculate on their own research. With their own means, Ph.D. students produced two scenarios featured in the cafeteria of the INRA campus and organised a discussion with in-house scientists about the importance of engaging them in societal and ethical reflections on their practice during a collective debate session. The debate session targeted animal biology and participants’ own research. It concluded a one-week doctoral seminar on experimental animal biology and predictive health models.

Over the following pages, I present the results of the workshop which includes two issues chosen by participants as a basis for the debate session followed by two scenarios materialised in a series of artefacts developed by the doctoral candidates, the conditions in which the artefacts were presented to an audience, and eventually, the project’s outcome.



Project release context: a (fictional) cafeteria menu in the campus of a research lab.

About the Project

On | 11 March 2016.

At | INRA (the National Institute for Agronomic Research) campus of Jouy-en-Josas, south of Paris.

For | Animal Biology department of the INRA, Corinne Cotinot and Claire Rogel-Gaillard (Head of research lab and collaboration organisers).

By | Ph.D. candidates (from the Paris Sud University, Agro Paritech University, and INRA) Diana Bartolome Carrero, Jiao Feng, Clémence Frasin, Clara Gobé, Audrey Lesage, Morgane Robles, Madeleine Spatz, and Lai Wei. Supervised by Max Mollon.

With | Corinne and Claire (Research lab director and organisers of the project at INRA).

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Project team: Microbiology Ph.D. candidates during the design workshop.



Cover Credit: Arthur Hochstein for Time magazine
| View of a doctoral week talk

Theme of the Doctoral Week Programme

The project was part of a doctoral week which was organised by INRA scientists for their students and aimed at the reviewing of a number of key trends in their field (animal health and disease prediction). 'Big data,' 'predictive algorithms,' 'microbiota' studies, 'epigenetics' studies, and holistic veterinary practices were part of the programme. One of the themes that captured the students' attention was the manipulation of the DNA of animals.

Issues Chosen to Be Embodied in Artefacts

In order to identify a relevant issue to address, the design workshop began by running a series of collective discussions about participants' research, the content of presentations in the doctoral week, and the field in general. This allowed participants to pinpoint two debate topics:

- The first research topic directly extrapolated one of the student's studies on alcoholism which addresses how to avoid the degradation of liver cells in people with a cirrhosis who are addicted to such an extent that stopping drinking would kill them. The debate topic adopted the theme of 'avoiding the risks of developing cancer despite behaving in a risky way.'
- The second issue was a combination of a doctoral seminar topic (i.e. the DNA editing technique called "CrispR-Cas9") and one of the student's research on fishes (in particular, on trout). The debate would accordingly address, 'the development of new species beyond ethics in a situation of urgent necessity.'

Subsequently, participants developed two scenarios. First, the *asyouwant.app* would allow one to order personalised medicine pills that cancel the effects of food or alcohol abuses. Second, the *Chick-owtrout* (chicken, cow, trout) was devised as a 'one-for-all' species which would resolve most food supply needs with one hybrid animal. Both scenarios contained a number of artefacts which are now presented.



Brainstorming and speculating on the consequences of biologists' research in the future.

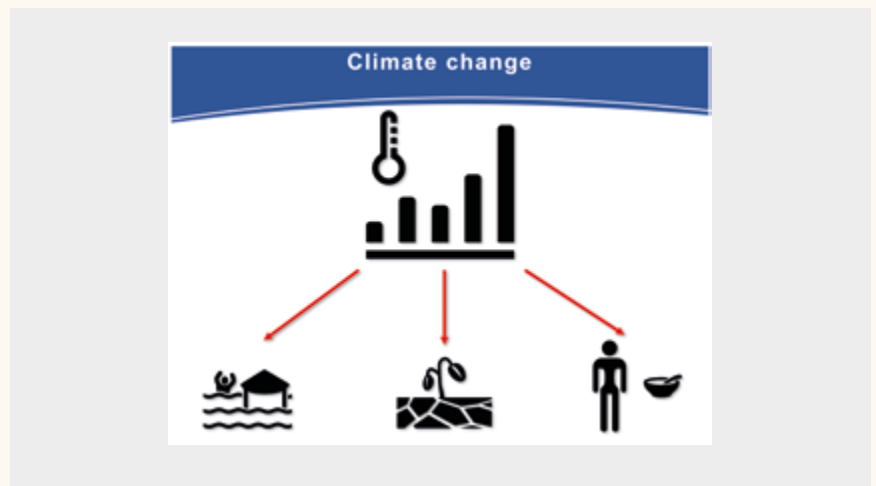


Deliverables

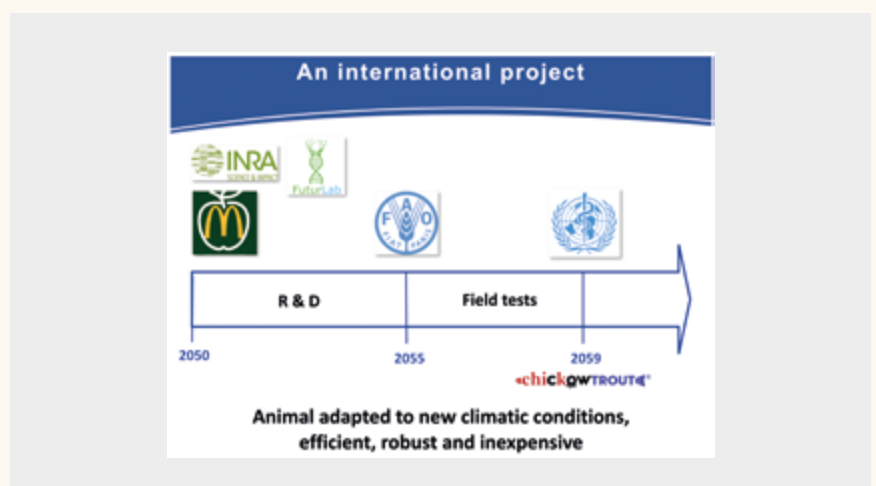
The two scenarios developed by workshop participants were notably (but not exclusively) presented in the form of a talk given to senior scientists. The slides and artefacts presented in these talks are presented below. All the visuals were made by the participants (doctoral candidates in Biology), with the exception of the two logos code-signed by students and myself.

Scenario 1: The *Chickowtrout*

The *Chickowtrout* project elaborates on some of the research trajectories of the INRA focused on DNA editing. It proposes a post-global warming research programme for meat supply by devising a new hybrid species, thereby answering most of the needs of the global food market.

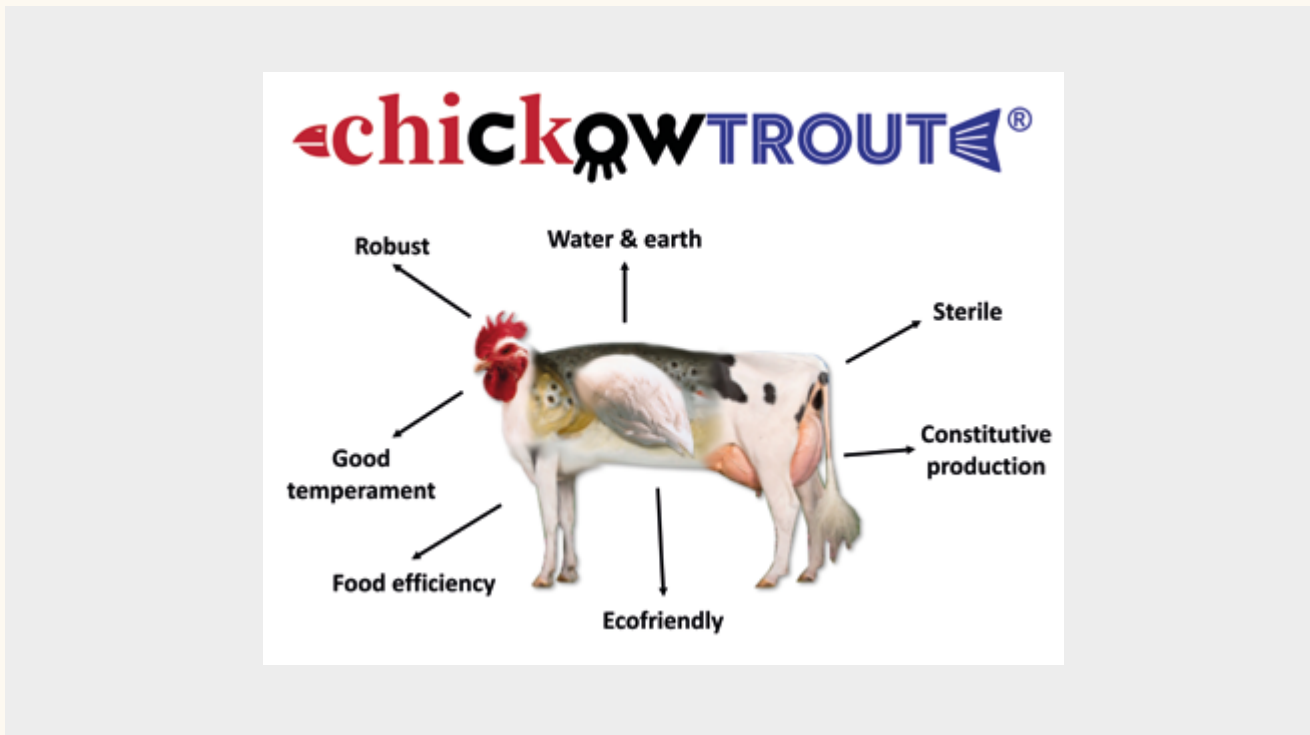


Captions of the slides presented by the Ph.D. candidates while introducing their scenario: (Upper right) In the near future, rising temperatures will impact farming conditions and trigger migrations and new fights for resources and territories. Food might be the next gold rush. (Lower right) Therefore, an international research project was started at the INRA. Scientists came up with a species that is better adapted to these living conditions. The research programme was funded by the McDonald Foundation, the WHO (World Health Organisation, or OMS in French), and the FAO (Food and Agriculture Organisation of the United Nations).



(Top) One Chickowtrout® can produce not only different types of animal flesh but also different kinds of resources, thereby fitting the requests of the food market.

(Bottom) Robust, sterile, and eco-friendly—thanks to the DNA of the trout which helps to avoid carbon dioxide emissions, the Chickowtrout® is the jewel of sustainable food production efficiency.



Scenario 2: the *Asyouwant.app*

The *asyouwant.app* draws from a Ph.D. candidate's research on alcohol abuses and explores its effects on systemic preventive medicine. It proposes a 24-hour delivery service for personalised treatments, neutralising the potential effects of occasional deviant food behaviours regarding one's personalised diet.

Captions of the slides presented by the Ph.D. candidates when introducing their scenario:

(Upper right) Evolving from healing to preventing diseases is crucial in order to optimise costs, ease access to treatments, avoid therapy mistakes, and sustain life expectancy. INRA researchers, funded by different actors (food supply and IT companies), came up with an app that allows its users to prevent diseases thanks to medicines that cancel the effects of a potentially harmful alimentary behaviour.


(Middle right 1) For that matter, 'systemic medicine' considers the body as a sum of entities interacting with each other and with their environment (organs, flesh, cells, chemicals, food, and so on) and 'personalised medicine' aims at optimising treatment efficacy by tailoring it to the individual's body, mind, and specific environment based on the genome, the epigenome, and the microbiome.

(Middle right 2) Thanks to the app, personalised treatments target bacteria to cancel any dietary misbehaviour. Indeed, bacteria present in the gut and liver of human beings can be stimulated in order to cancel the impact of alcohol on one's health. This emerging research has been planned to help alcoholic patients who, beyond a certain threshold, cannot quit drinking. The *asyouwant.app* adapts this principle to a larger scale.

(Lower right) Our health-tracking app is connected to two kinds of biosensors—epigenome analysis from your fingerprint on your tablet and microbiome analysis from your toilet bowl (don't forget to log-in before going to the loo!).


In Europe, around 2066

- Genome, epigenome and microbiome entirely sequenced
- Disease issues : obesity, diabetes...
- Genomic datas incorporates in medicine (Obamacare 2010 H.R.54400)
- Drones use on daily bases
- Massive use of communication technologies

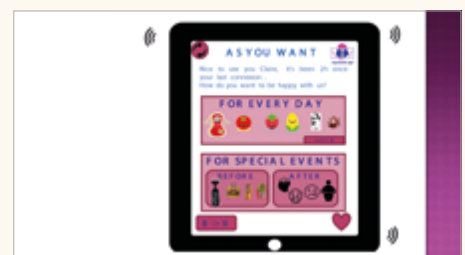


Who are we?

2060 → 2061 → 2066



- Start up from a couple of young innovators with PhD
- Crowdfunding platform 200 000 € !!
- Contract with Mac Donalds' and Bonduelle Happy* label
- Contract with Orange and Google network financing
- The Bouygues company financed the toilet bowl design by organizing an hackathon between several design schools.



Communication Situation

The previous slides were presented during a (fictional) press conference with senior researchers, thereby concluding the doctoral week. In order to promote the talk and give an exceptional preview to in-house scientists, doctoral candidates promoted their projects by hacking into INRA's cafeteria where between 600-1000 people have their lunch daily.

Students' interventions mimicked the cafeteria's usual aesthetic, including a fake menu as well as promotional ads or teasing-stickers. They also dispatched flyers inviting workers to attend the press conference later that day.

The two scenarios were presented at the same time—the restaurant menu was replaced with a fictional one and the fattiest dishes were juxtaposed with a “feeling guilty?” sticker.



Most of the choices on the menu contained cow meat, fish, milk, and eggs. While redesigning the menu, these items were announced as being products of the *Chickowtrout project*.





chickOWTROUT

Eat the future!



Poulet

Truite

Vache



Posters were displayed in the bathrooms, inviting people to update their microbiota data during a lunch break.



Flyers placed next to the cashier informed and teased people to join the afternoon (fictional) press-conference. They were supplemented with additional posters in the cafeteria and in the Animal Biology department.





Audiences' Experience and Project's Outcomes

First Feedback

The comments were collected on 11 March 2016, in the INRA campus cafeteria, through informal interviews, with 12 people among the cafeteria users.

“— Errrrkkk! it's disgusting!”

“— Is that a joke?”

“— How is it made, are you hiding something from me?”



Debate Preview

On the same day on the campus, the comments were extracted to the debate session, through participant observation, with 16 people. The debate happened in the classroom where the doctoral week were organised.

“— It is the fact of showing an actual image of the new species, that makes it scary.”

“— It's scary! It [the project] makes a clever use of elements presented along the week, but you've got something wrong—it could be very probable not in 50 years, but in 20.”



Scientists staring at the cafeteria menu; reading the flyers while eating; and reacting to the stickers displayed next to high-calorie dishes.





The presentation was given formally to give the impression that the students, who had become former INRA researchers, had founded a start-up a few years after their time at the INRA doctoral week.



Senior researchers and Ph.D. candidates debating the two scenarios.

Debate Summary

The *Chickowtrout* project brought a series of topics into the INRA scientists discussion. It included: social acceptance of cloning; how optimising agriculture threatens the genetic diversity of species; and the impact of human creations on pre-existing ecosystems.

The *asyouwant.app* project, on the other hand, fueled conversations on: carbon footprint and carbon dioxide emissions (concerning the massive distribution network necessary for 24-hour medicine delivery); discharging people from the responsibility of their actions; questioning whether science should be able to cure everything; the governance of algorithms.

Another level of topics emerged in the discussion regarding research and technologies in general:

- The role of legislation in considering ethics-engaging innovations.
- The bankability of a research topic versus the risk of social rejection.
- Impacts of funding sources on the development of research.
- Lobbying of funding institutes on general politics.
- Debating whether scientists are culprits of misuses of technology or whether responsibility should be shared with users and industries.
- Good-practice dissemination through teaching.
- Local and organic farming.ttt

Outcomes

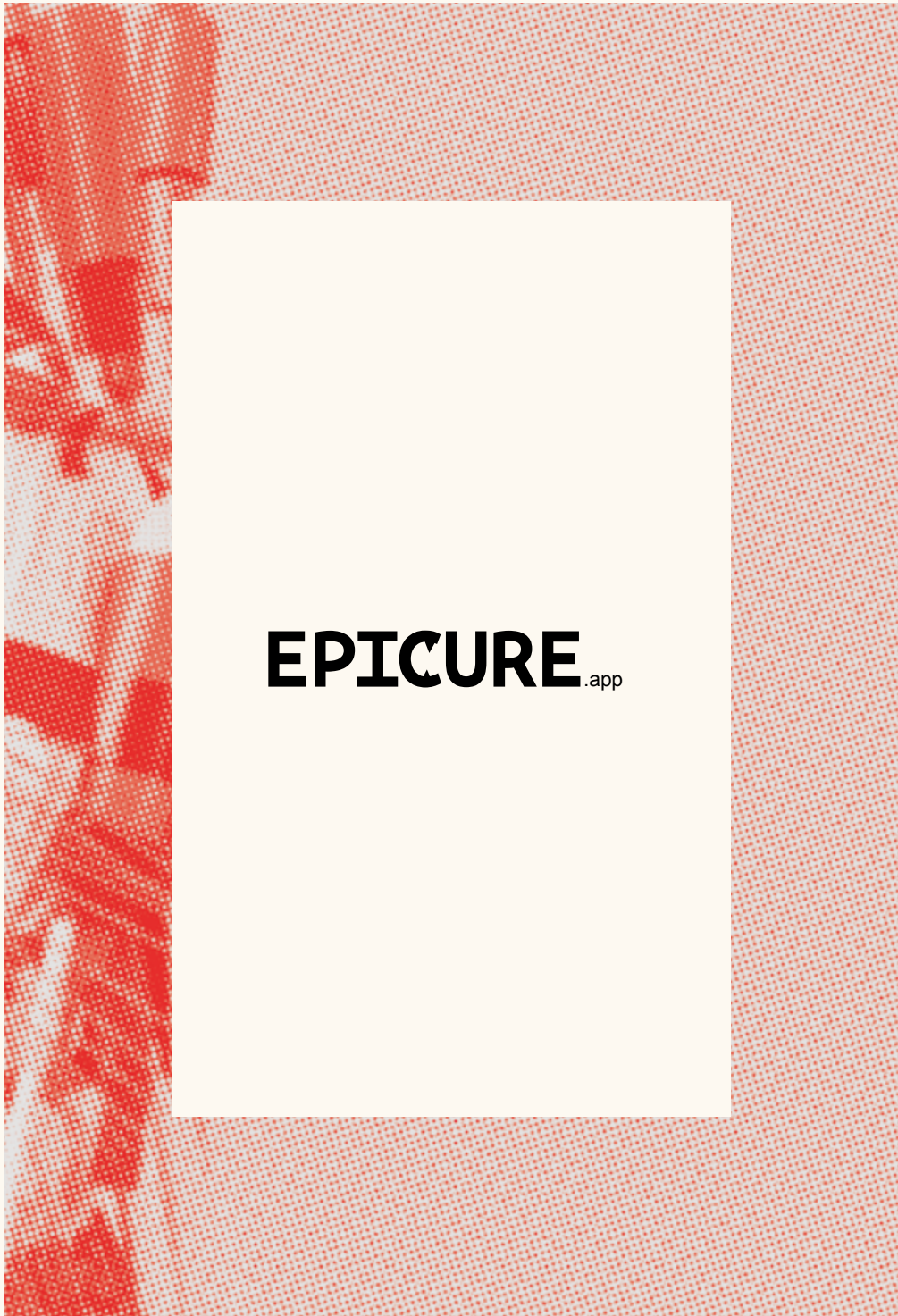
The project successfully involved doctoral candidates and senior researchers in a reflective process. According to participants, this workshop offered a time and space for reflection on their work and possible social acceptance (or rejection) of their research. Some researchers requested this kind of activity as new working practices for the generation of ideas and for starting new research projects. However, this has not yet been implemented.

From the stakeholder's point of view, the most significant outcome is perhaps the opportunity to trigger an individual reflective process carried by each participant which was not formerly monitored.

Limitations

On the other hand, the lack of time dedicated to reflective activity remained a major limitation of this project. According to scientists, free time to think is a scarce commodity. As phrased by a research director at the end of the debate, "Who should amend a research programme? I am not trained in ethics, and I don't have the time for this!" This limitation encourages the development of longer time periods of work with debate participants being integrated within a team in-situ as in a residency.





EPICURE.app

38.C The *Épicure.app* Project (2015)

Context and Issues

Abstract

What if our health records would deliver statistics of health prediction? Would the whole healthcare system shift towards practices of those who are ‘not-yet-patients’ in such a situation?

These questions were the matters of concerns of an ethics commission in Paris specialising in questions related to health—the *Espace de réflexion éthique Île-de-France*. As a complement to their 2015–16 seminar on ‘Anticipation,’ they decided to organise a series of three participatory debate to conduct their work of ethical reflection. We organised these sessions together, called ‘Workshop of ethical creation.’

The purpose of this unusual collaboration was to renew the methods of the ethics commission and to foster inclusive participation in the work of philosophers. To achieve this, *Espace Éthique* welcomed me for a residency in their team for a year. The request was to organise a series of two-hour debate workshops which would explore the ethical issues at stake in their monthly seminar. One workshop each month over a period of three months allowed to explore different facets of ‘predictive technologies in the field of human health’ (genetic tests, data privacy, connected objects, and so on).

In the following pages, the result of one of these workshops is presented. I start with presenting the issues I chose to bring to the debate session. Then, like an immersion into the debate experience, I unfold the slides presented to the debate audience which introduce the artefacts and the chosen issue. The conditions in which the audience interacted with these artefacts and issues is described and the results of the project are briefly outlined.

The artefacts and the slides stood as a starting point for (occasionally stormy) discussions. The debate was a time not only for discussion but also for creation—participants were invited to criticise the future presented and, if they did not like it, to imagine and offer alternatives.



Project delivery context: a speculative role-playing debate in a bioethics commission.

About the Project

On | 13 October 2015

At | Creative Ethics Workshop 1 of 3 in the office of the ethics commission at St-Louis Hospital, Paris.

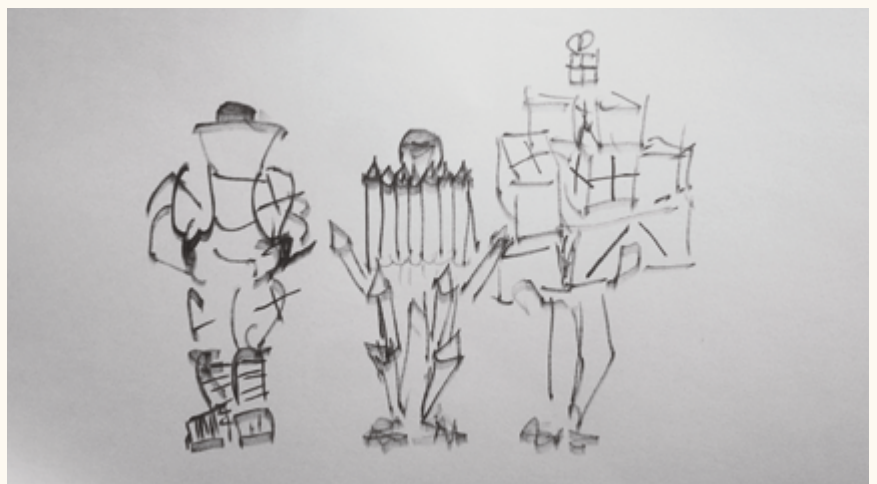
For | *Espace Éthique Île-de-France* (Space for Ethical Reflection of Paris and its Surrounding Region), part of their monthly seminar on 'Anticipation.'

By | Max Mollon (design, workshop animation), Julien Palmilha/cyclo.ch (design and photography), Réanne Clot (design assistance), Laetitia Ęido (workshop photographs).

Acknowledgement | Thanks from the bottom of the heart are due to Famille DeCastro and Réanne Clot (models), Radu Marmaziu, and Saeed Torkani.

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Members of the project's team at work; preview of the design process of the costumes; and stakeholder's logo.



Theme

The ethics commission held 7 of their seminar sessions throughout the 2015-16 academic year. The programme explored a multitude of angles on the notion of ‘anticipation’ in order to stimulate reflection on ‘Big Data and predictive health’ technologies on the part of the commission members. Topics included DNA sequencing, connected objects, diagnosis and prognosis, and suchlike.

A seminar session organised by one of the philosophers of *Espace Éthique* at St-Louis Hospital, Paris.



Issues Chosen to be Embodied in Artefacts

As a complement to the seminar sessions, the debate workshop intended to address more specific issues. After interviews, online readings, specialised literature, exhibitions, I focused on the limitations of the ‘predictive diagnosis’ and identified different plans:

- The diagnosis imposes a form of determinism (for instance, professional limitations, redefinition of identity, and so on). Prediction turns anybody into a ‘potentially ill’ person.
- It reveals a form of ‘de-synchronisation.’
- Towards the body (a betrayal of the signals usually sent by the body, accelerated by prediction),
- Towards identity (prediction reveals that we know each other poorly).
- Towards family members (revelation of hereditary diseases).

In the field of law, there is a conflictual history of:

- Prenatal anticipation of health risks.
- Cases of trials of past generations for hereditary determination.

It requires new support needs, considering the difficulty of:

- Projecting oneself into a future health state.
- Believing in predictions.
- Procrastinating on the implementation of prevention.
- Possessing the financial means to change one’s lifestyle.

However, trends pointing at the actual development of ‘predictive diagnosis’ are strong (see photo). A number of them were identified and listed in the project’s deliverable (in the form of the slides accompanying a talk presented just after).



Photo: The HAPifork (2013) and the Philips Sonicare smart toothbrush (2016).

The audience gathered together usual attendees of the seminar—in this case, philosophers, a physiotherapist, people with an illness, relatives, and so on.



Communication Situation

The issues addressed in this project were more complex than the words with which they are usually summarised ('technological determinism'). However, the commission's audience was very diverse and held very different kinds of knowledge and expertise. Therefore, the scenarios and the artefacts embodying these issues had to include a number of pieces of information about future trends and historical scientific knowledge. This information was presented through a (half-fictional) talk.

The talk surprised the debate audience who expected a conventional seminar session. Instead, participants were staged as members of a (fictional) patient association called the "Club of the 90%" Akin to performance or role-playing, the workshop started from a hypothetical date in the future (2035) and experimented with an unusual debate format.

Indeed, the introductory talk and the debate took place in a meeting room of the commission's office at St Louis Hospital. 45 minutes were spent on debating in 2035 and 45 minutes were spent on the present year (2015).



Introductory talk given by the (fictional) spokesperson of the "Club of the 90%" (myself), photographed during the (fictional) association's meeting which opened the debate session.

Deliverables

The targeted issue was embodied in artefacts presented through slides and was introduced to the debate audience through an introductory talk given at the fictional meeting of the “Club of the 90%.” Over the following pages, the talk delivered by the association’s spokesperson is presented through slides and quotes. These slides ask what would happen if predictive health technologies allowed our health record to deliver predictions about our health risks and what changes this would occasion in healthcare and society.



“Welcome to the information meeting of the ‘Club of the 90%’ (*Club des 90%*). The club is exclusively reserved for people over 90. Don’t worry, you might join us sooner or later.”



The 90% club is an association **exclusively reserved** for people with a 90%-and-above chances of developing a **serious illness** (based on genetic data statistics, cross-referenced with everyday smart-objects). We have 25000 members (+1500/month in dec. 2034).

OUR MISSIONS:
MUTUAL INFORMING,
MUTUAL LISTENING,
AND MUTUAL AID.

“The **genesis** of the association is linked to recent history. Here is a little update.”

UPDATE FOR NEWCOMERS
70 YEARS AGO, DNA WAS DISCOVERED

DNA is seen as the plan of the living and therefore, the **biological development program** of an individual.




UPDATE FOR NEWCOMERS
20 YEARS AGO (2015), HIGH-FREQUENCY DNA SEQUENCING

Scientific discovery of epigenetics, decades ago, shown how the state and evolution of an immune system depends on its **genetic heritage**, and the **physical conditions and environmental (epigenetic) factors** of an individual.

Once this data was coupled with prediction technologies*, it became used to:

- Predict and **anticipate** the onset of symptoms;
- Enable **personalised** care at the molecular level;
- And simulate/**evaluate** the effectiveness of expensive and painful treatments.



“**20 years ago**: As genome sequencing became more and more affordable, a wind of change blew through the healthcare industry—the one of prevention and prediction technologies* [...] *Algorithms of machine learning, deep learning, and artificial intelligence.”

“15 years ago, continuous sequencing and disease forecasting were democratised through probe objects (once called smart-objects—sport equipment, forks, toothbrush). They allowed continuous biometric readings and the tackling of massive and heterogeneous databases (‘big data’).”

UPDATE FOR NEWCOMERS
15 YEARS AGO, CONTINUOUS SEQUENCING AND DISEASE FORECASTING

<p>The use of “probe objects” in the daily life was slowly democratised (sport equipment, fork, toothbrush). It made it possible to update the initial risks statistics residing in DNA alone, and to predict with more precision, the variations of our future health state.</p>	<p>In particular, sensors in the toilets allowed to make the most reliable predictions by cross referencing data from DNA with ones from bacteria of the intestinal flora (through feces), making it possible to detect diseases several weeks in advance.</p>
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CLUB OF 90%

“In 2025 the state deployed the ‘digital patient’ plan, namely, the ‘Vital Profile.’ This is the digital medical profile we all know, connected to your Vital Card. Unique to each patient it is a kind of medical notebook 2.0, accessible to all practitioners and to the patient on a personal online space.”

UPDATE FOR NEWCOMERS
10 YEARS AGO (JAN. 2025), DEPLOYMENT OF THE DIGITAL PATIENT PLAN

<p>Under pressure from the international competitiveness of private companies, and in a move to demonstrate their technological sovereignty,</p>	<p>the French state implemented an intranet network, common to all health practitioners in order to centralise data. The “Vital profile” was thus launched.</p>
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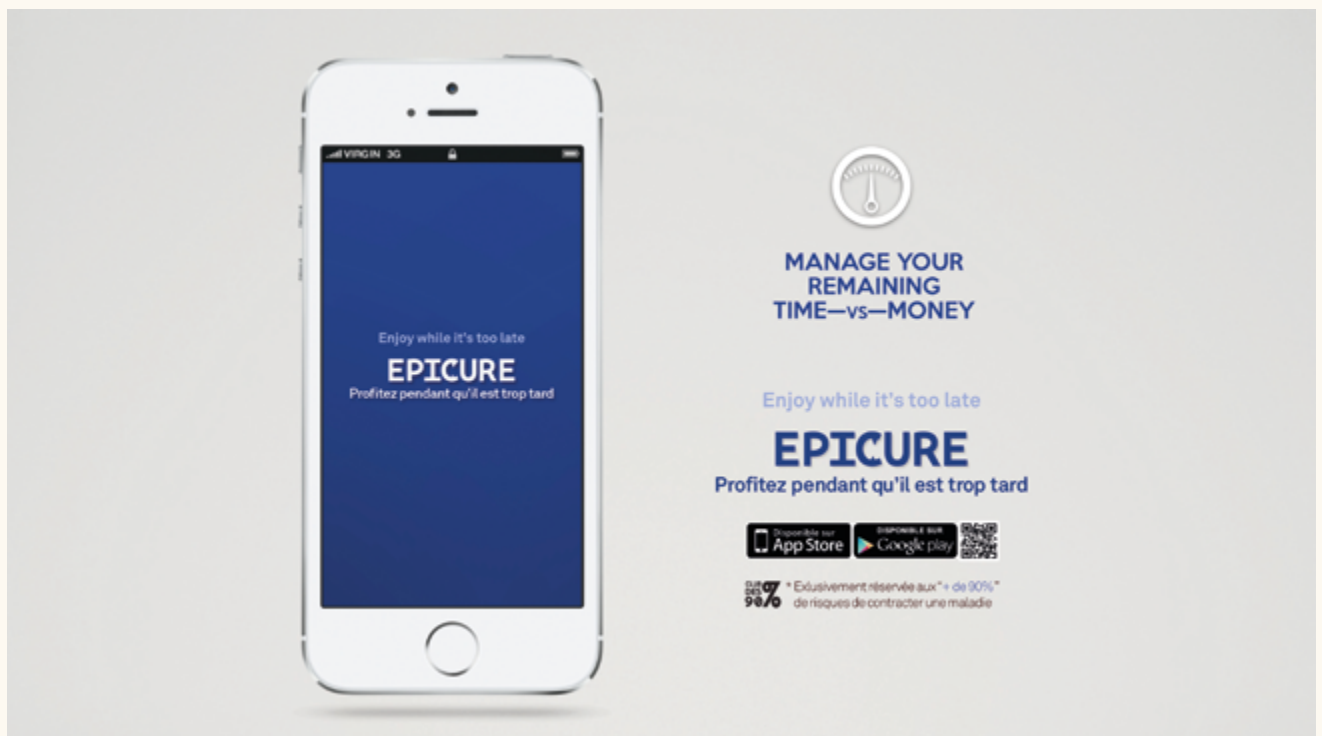
CLUB OF 90%

“In November 2030 we created the **association**. The success of our concept (mutual aid among communities of similar people) made it possible to grow at a rapid pace.”

UPDATE FOR NEWCOMERS
5 YEARS AGO (NOV. 2030), CREATION OF THE ASSOCIATION

<p>Initially reserved for people at risk from birth, our ranks were joined by other kinds of people who surpassed the 90% mark later in life (often, due to poor health conditions and a stressful lifestyle).</p>	<p>Today, these people constitute the vast majority of our members.</p> <p>All our 25000 members are exclusively people at risk (> +90%).</p>
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CLUB OF 90%



“This is why, today, we launch our very first product—the *Epicure.app* allows you to manage the time you have got left, regarding the money you have got left. It is like a classified ads website for statistically condemned people.”



STATISTICALLY CONDEMNED TO GET CANCER?

Enjoy while it's too late

EPIASURE^{.app}

Profitez pendant qu'il est trop tard



"Our campaign targets three different kinds of users, based on the three different kinds of behaviours we observed in our large community—three different ways of thinking about what comes after you. Or rather, after the day you actually become ill."



**“GAME-OVER?
PEUT-ÊTRE
MAIS PAS POUR MA FAMILLE”**

 Lukas M. 93% | A répondu à l'offre de
Démineur en formation accélérée

Vous aussi, trouvez le job de votre vie sur*

EPIPURE.app
Profitez pendant qu'il est trop tard

Disponible sur   

DES 90% * Exclusivement réservée aux "+ de 90%"
de risques de contracter une maladie



**CONDAMNÉ
STATISTIQUEMENT
À CONTRACTER
UN CANCER ?**

EPIPURE.app
Profitez pendant qu'il est trop tard

IFX * Exclusivement réservée aux "+ de 90%"
de risques de contracter une maladie

“1) **JOB: Thinking of your family?** Find a job today to pay for future treatments and provide for your family usual expenses. Some of you might think of the *Breaking Bad* TV series, right?!”



**“GAME-OVER?
PROBABLE
ALORS FAISONS LA FÊTE”**

 Laurence N. 95% | A profité de l'offre
Organisation de pré-enterrement

Vous aussi, organisez l'évènement de votre vie sur*

EPICURE.app
Profitez pendant qu'il est trop tard

 Disponible sur
 Disponible sur



 95% * Exclusivement réservée aux*+ de 90%*
de risques de contracter une maladie




**CONDAMNÉ
STATISTIQUEMENT
À CONTRACTER
UN CANCER ?**

EPICURE.app
Profitez pendant qu'il est trop tard


 

 95% * Exclusivement réservée aux*+ de 90%*
de risques de contracter une maladie

“2) PRE-FUNERALS: Thinking of your friends?
Leave the nicest memory of a healthy you by
setting up a massive party.”

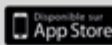




**“GAME-OVER?
SUREMENT
WHATEVER!”**

 Laurie O. 98% | A débusqué l'offre de
Week-end Artifices & Adrénaline

Vous aussi, organisez l'évènement de votre vie sur*

EPIPURE .app
Profitez pendant qu'il est trop tard

 Disponible sur
 Disponible sur


DES 98% * Exclusivement réservée aux "+ de 90%"
de risques de contracter une maladie



**CONDAMNÉ
STATISTIQUEMENT
À CONTRACTER
UN CANCER ?**

EPIPURE .app
Profitez pendant qu'il est trop tard

DES 98% * Exclusivement réservée aux "+ de 90%"
de risques de contracter une maladie

“3) BURN IT ALL DOWN: Thinking of yourself?
Make the most out of here and now. What about
an adrenaline boost?”

“As you might have seen in the metro when coming here, the campaign is dispatched in various formats.”



“Thanks for coming. Now, what do you think about it, who wants to try the app?”

Audiences' Experience and Project's Outcomes

The comments were collected on 13 October 2015, in St-Louis Hospital, *Espace Éthique* offices, through participant observation, with 9 people.

Debate Audience Feedback in 2035

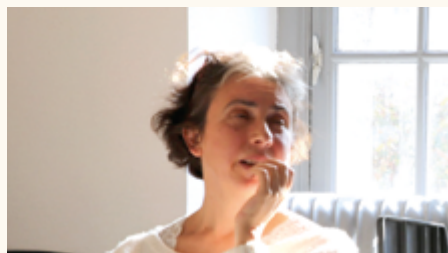
Immediately after the slides were presented, the debate audience began to react and (surprisingly) talk as if the debate session was really happening in the year 2035. This allowed participants to fill the gap of knowledge between the known state of things (present) and the depicted scenario (the fiction).

Here are, for instance, two comments:

“— **Participant** I rarely use my online patient profile, how is it called already?”

“— **Philosopher** Do you remember? 5 years ago the Swedish government voted on that law on the ‘sacralisation’ of the DNA to forbid prediction practices.”

Non-verbal reactions captured during the introductory talk.





Non-verbal reactions captured during the debate session. These pictures are given here to provide a sense of the emotional involvement of participants. Non-verbal postures seem to indicate feelings of doubt, wonder, unease, amusement, opposition, introspection, empathy, rejection.



Debate Audience Feedback, Back in 2015

After 45 minutes, I broke the speculative role-playing in order to bring the debate back to the present. This allowed very contradicting feedback to emerge, as illustrated in the following two dialogues:

“— **Person living with a disease** This all reminds me of this sci-fi movie *Gattaca*. And I was confronted with a similar situation once because of a mistake in a diagnosis. I assure you I would have chosen the ‘get a risky job’ option to plan things for my family.”

“— **Philosopher** This app shows people’s adaptation to determinism. ”

“— **Philosopher** We should pay attention to not start the reflection from the claim that being healthy is the normal state of the human body.”

“— **Participant** This is too abstract! We do not talk enough about people who suffer, the elderly, disabilities!”

“— **Participant** I read an article in *Le Monde* about dementia which looked for the right data to capture to assess the risks. That’s a hell of a question!”

“— **Philosopher** It’s a statistician’s problem, but not Google X’s one, they can detect a flu outbreak without having to know what ‘flu’ actually is. When we change paradigms in this way without knowing the data deeply, I find that the normativity of the ‘90%’ is very dangerous, even totalitarian.”



Outcomes

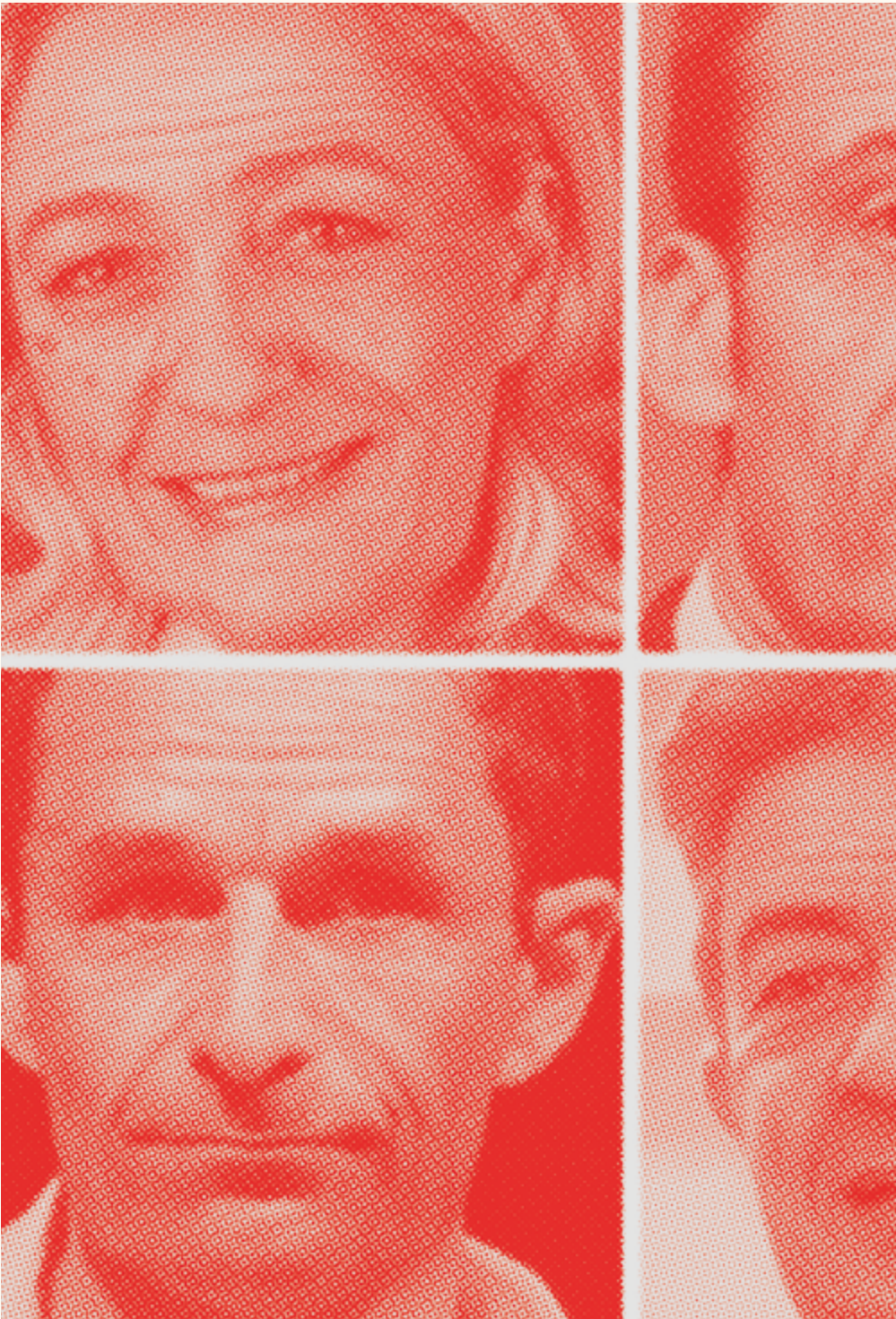
Rich material was collected during the debate session and the stakeholder was informed. On the debate level, this helped to address a known theme under an unusual angle, to collect precious feedback, and to feed the commission's everyday work of research and writing on ethics. On the level of the overall method, it inspired the commission to develop their own speculative practice—an entire year of seminar sessions starting with short speculative fiction novels written by the commission members was scheduled to start from the following year.

The role-playing debate format helped to inform my own practice. Being close to a performance, it helped to provide necessary knowledge to the debate audience and it allowed participants to get creative with a complex debate topic.

Limitations

However, the role-playing debate is very limited in terms of actual confrontation. The interruption of the fiction (coming out of the role-play and back to the present) therefore seemed to be necessary. That is when participants finally formulated and confronted personal opinions.





**POLITIQUE
FICTION**

Présidentielles
2017

TTIQ
TIO

Présidentielles
2017

38.D The *Politique-fiction.fr* / *Présidentielles* Project (2017)

Context and Issues

Abstract

What if we could prefigure the consequences of the presidential elections? Would we revise our judgement on our voting intentions?

In 2017, during the several months of the presidential campaign, French public, online, and personal media platforms were particularly saturated with misinformation (which was later called ‘fake news’). In addition to this, I asked who would thoroughly read candidates’ programmes, especially those of opponents, and how one could move beyond lack of interest and (often) superficial arguments to trigger deep and pragmatic reflection about these manifestos.

A large team and I started this self-driven project not to provide ‘answers’ but to ask relevant, in-depth, and offbeat ‘questions’ in order to give food for thought to French voters. *Politique Fiction*, like Science Fiction, would thus use the levers of anticipation and design in order to question our world as it is by showing how it could change. *Politique-fiction.fr*, *Presidential 2017* edition proposed to dive into a series of (fictional) press articles extrapolated from the (real) programmes of five candidates who contested the 2017 presidential elections. These articles addressed the theme of labour and represented the different alternatives that awaited French citizens in the future once the elections had been concluded

Politique-fiction.fr is a series of projects which explore major public issues that have not yet been addressed by politics, such as the evolution of the modes of organisation and governance specific to representative democracy. This specific project was followed by a second edition which explored different forms of participation possible within democracy beyond the concept of voting and was presented on the eve of the legislative elections in June 2017.



Project delivery context: speculative online articles debated in a participatory forum five days before the second round of the French presidential elections.

The following pages present the general issue chosen as a basis for this project, the project’s website and two examples of articles (out of a total of ten) together with some examples of design fictions materialising the issue, the conditions in which the audiences were introduced to the website’s content, and the results of the project.

Based on the two (out of ten) speculative articles developed, a participatory debate was organised on 2 May 2017 between the two rounds of votes. Please note that this self-initiated project was not intended for promotional purposes and was conducted with a cross-party team representing different political views.

About the Project:

On | 02 May 2017

At | Debate organised upon the invitation of *La Gaîté-Lyrique*, a cultural venue of the city of Paris devoted to the intersection between art, technology, and society.

For | Self-initiated, with the support of *Le Tank* (co-working space), *Casus Ludi* (technical support), and *La Gaîté-Lyrique*.

By | Estelle Harry, Bastien Kerspern, Léa Lipperra (studio *Design Friction*), Max Mollon (bureau *What if?*), and design workshop participants Anne Adàm, Sami Barkaoui, Estelle Berger, Jessica Bruno, Franck Calis, Florent de Grissac, Robin de Mourat, Léonard Faugeron, Simon Hémerly, Welid Labidi, Camille Morin, Fabienne Olivier, Paulo Pery as well as Florent de Grissac (website).

With | Julien Espagnon, Michaël Mouyal (jury of the design workshop), friends and family (reviewing the ten articles), Franck Calis (video recording), Marie-Lechner (*Gaîté Lyrique*) and Christophe Leclercq.

Licence | Some of the images of artefacts and the associated texts presented below are available material to organise similar debates. They are placed under license CC BY-NC-SA 4.0: *Politique-fiction.fr*, Max Mollon et.al. (2017). Please contact max.mollon[at]sciencespo.fr



The seventeen members of the project's team during a participatory design workshop held over a weekend.

Debate Context

'What difference would it make in my life if this or that election programme was implemented?' This unanswered question gave rise to the desire of connecting the societal debate that takes place before every presidential election to the scale of citizens' daily lives.

At that time, multiple approaches were already feeding these debates. Some of them were very close to the speculation practice used in the present project, such as the promotional (speculative) short film on the campaign of one of the candidates (Jean-Luc Mélenchon) or speculative newspaper articles (on the website Liberation.fr by Aurélie Delmas and Kim Hullot-Guiot). An encounter with these articles triggered the present project.

Screenshots of speculative newspaper articles on the French press website Liberation.fr

The image displays two side-by-side screenshots of a speculative newspaper article from Liberation.fr. The left screenshot shows the top part of the article, including the Liberation.fr logo, a search bar, and the title 'Education' with a sub-header 'Dans la France de Hamon'. Below the title is a circular portrait of a man in a suit and red tie. The text begins with 'Depuis la mise en place de la formation par an (e) enseignants, Mourad' and continues with 'Son point d'indice, c' aussi été revalorisé. Et enseignant est arrivé d' doivent être créés en tout en primaire. Mourad n'habitent pas dans une zone clas prioritaire), mais la sœur d'Elise, si, depu revue. Son neveu de 4 ans a donc pu être ans. Quand il entrera au CP, il n'y aura p classe (25 s'il n'était pas en REP) et il po élèves du pays, du service public d'aide'.

The right screenshot shows the top part of another article titled 'Dans la France de Valls'. It features a circular portrait of a man in a suit and red tie. The text begins with 'Mourad est professeur des écoles depuis une petite dizaine d'années. Il a profité des revalorisations de rémunération pour les enseignants qu'avait promises Manuel Valls. Il doit désormais faire une journée de stage par trimestre et, tous les trois ou cinq ans, une semaine de remise à niveau pour «tirer parti des nouveautés, des acquis et des résultats de la recherche». Pour certains de ses collègues, ça fait beaucoup, d'autant qu'ils doivent en plus être formés à la question de la laïcité, à laquelle une charte adossée à la Constitution a été consacrée.' Below this, it continues with 'Mourad aimerait aussi faire une demande de séjour en Allemagne, grâce aux aides proposées par l'Etat, mais il attend le retour de son collègue Matthieu, qui a dû obligatoirement prendre au moins 30% du congé parental partagé. Robin, 11 ans, le fils d'Elise et Mourad, pourra, lui aussi, bénéficier cette année d'un voyage en France subventionné mais il hésite entre la Bretagne de sa grand-mère et l'Alsace où il n'a jamais mis les pieds. Les voyages sont souvent'.

Deliverables

As mentioned earlier, a great number of issues were identified which were subsequently used as a basis to imagine fictional situations (five iterations of our next present) according to who may win the elections. In these fictional situations, a number of new practices emerged. These new (fictional) practices and needs motivated the design of new kinds of artefacts and 22 artefacts were consequently created. They were gathered under five (fictional) press articles on the politique-fiction.fr website.

The politique-fiction.fr Website

The website invited the audiences to read and question the electoral programmes in the light of speculative press articles. Ten articles were proposed with a maximum of two per candidate (in this case, however, only five candidates are addressed. The rest were unfortunately left aside due to time and budgetary reasons).

For didactic purposes, the articles attempted to make the electoral programmes accessible to the reader, working on the assumption that they were not familiar with them. Two steps were taken:

- The 'ideal scenario' articles imagined the benefits that electoral proposals which were as close as possible to the candidate's vision would bring in the best of cases.
- The 'critical scenario' articles placed the reader in the shoes of the people who would be impacted by these 'ideal programs' in order to show their strategies of adaptation and resistance.

For each candidate, the 'ideal scenarios' do not contain visual representations, but only text. The 22 illustrations are presented throughout the 'critical scenarios' of the five candidates.

View of the website's introductory page bearing the question, "Tomorrow, your president?"

POLITIQUE FICTION | Présidentielles 2017 | ET SI... ? DÉBAT COLLECTIF EN COULISSES PARTICIPEZ !

DEMAIN, VOTRE PRÉSIDENT/E ?

<p>EMMANUEL MACRON</p> <p>Scénario idéal</p> <p>LIBERTÉ, ÉGALITÉ, UBÉRISÉ</p> <p>Scénario critique</p> <p>SURF SUR LA VAGUE DES CHÔMEURS MACRON ?</p>	<p>MARINE LE PEN</p> <p>J'ai protégé le travail des Français.</p>	<p>FRANÇOIS FILLON</p> <p>J'ai rendu justice au travail méritant.</p>
<p>BENOÎT HAMON</p> <p>J'ai fait du travail un présent désirable et désiré.</p>	<p>JEAN-LUC MÉLENCHON</p> <p>J'ai concilié temps de vie et temps de travail.</p>	<p>ET LES AUTRES ?</p> <p>Parce qu'il n'y a pas que cinq candidats à l'élection...</p>

Extract from Marine Le Pen's 'ideal scenario:'

The following section presents extracts of articles on one of the five candidates—Marine Le Pen and the future of Labour. Both the 'ideal scenario' article and the 'critical scenario' article are reviewed.

POLITIQUE FICTION | Präsidentielles 2017

FILLON HAMON **LE PEN** MACRON MELENCHON

MARINE LE PEN, PRÉSIDENTE

SCÉNARIO IDÉAL SCÉNARIO CRITIQUE

"The irresistible ascent of the navy blue collars.

Published on Friday 11 October 2019 – Survey of the week from "Le Nouveau Point" newspaper – By Nolia Burot.


Arriving almost halfway through her presidency, Marine Le Pen, the first woman president in the history of France, was able to impose her style and agenda.

During the 2017 campaign, Marine Le Pen was often criticised by her competitors for the lack of a real economic vision in her programme. In two years, the Dupont-Aignan government set out

References from the website footer (upon which speculations were built):

- (1) Extrapolation of Proposal number 24—"Restoring national borders and leaving the Schengen area."
 - (2) Extrapolation of Proposal number 35—"Support French companies in the face of unfair international competition by setting up intelligent protectionism and restoring a national currency adapted to our economy, a lever for our competitiveness."
- Sources: <https://www.marine2017.fr/programme/>

Extract from Marine Le Pen's 'critical scenario:'



Présidentielles
2017


FILLON HAMON **LE PEN** MACRON MELENCHON

[f](#)
[t](#)
[in](#)
[o](#)

MARINE LE PEN, PRÉSIDENTE

SCÉNARIO IDÉAL

SCÉNARIO CRITIQUE



“New French Jobs”, a counter-investigation.

Published on Friday 8 June 2020

‘The Frexit would be a great opportunity for labour!’ At least that is the conclusion of the report entitled ‘New French Jobs’ published in April 2020 by the Secretary of State for Economic Change. Over the past six months, our investigators have travelled throughout France to investigate.
 [...]

What the report tells us:
‘With nearly 5000 posts created over the 2017-2019 period, the National Police have been able to adapt to the challenges of our newly restored borders. [...] With the promise of France’s return to order, Justice has been given real resources. The renewed enrolment in judicial schools is a sign of the French people’s restored confidence in their justice system.’ (p. 101, 5: Security and employment, job security report.)

What our investigation tells us:
 This was one of the key ideas of the Interior Minister Gilbert Collard. Already proposed to the National Assembly in 2015(8), this law provides for a presumption of self-defence(9) in the case of a legal use of armed force. This has almost logically been followed by an increase in cases of armed police violence, some of which have recently led to several investigations for homicide and mutilation. While some associations denounce a kind of police immunity, this protection has above all been the happiness of a whole generation of lawyers. For the most zealous police officers, smartphone applications have emerged that offer artificial intelligence as a virtual lawyer. Enough to come out covered during an intervention a little too brutal!
 [...]

References

- ↑ (1) Extrapolation of Proposal n°24: “Restoring national borders and leaving the Schengen area.”
- ↑ (2) Extrapolation of Proposal n°35: “Support French companies in the face of unfair international competition by setting up intelligent protectionism and restoring a national currency adapted to our economy, a lever for our competitiveness. Sources: <https://www.marine2017.fr/programme/>”

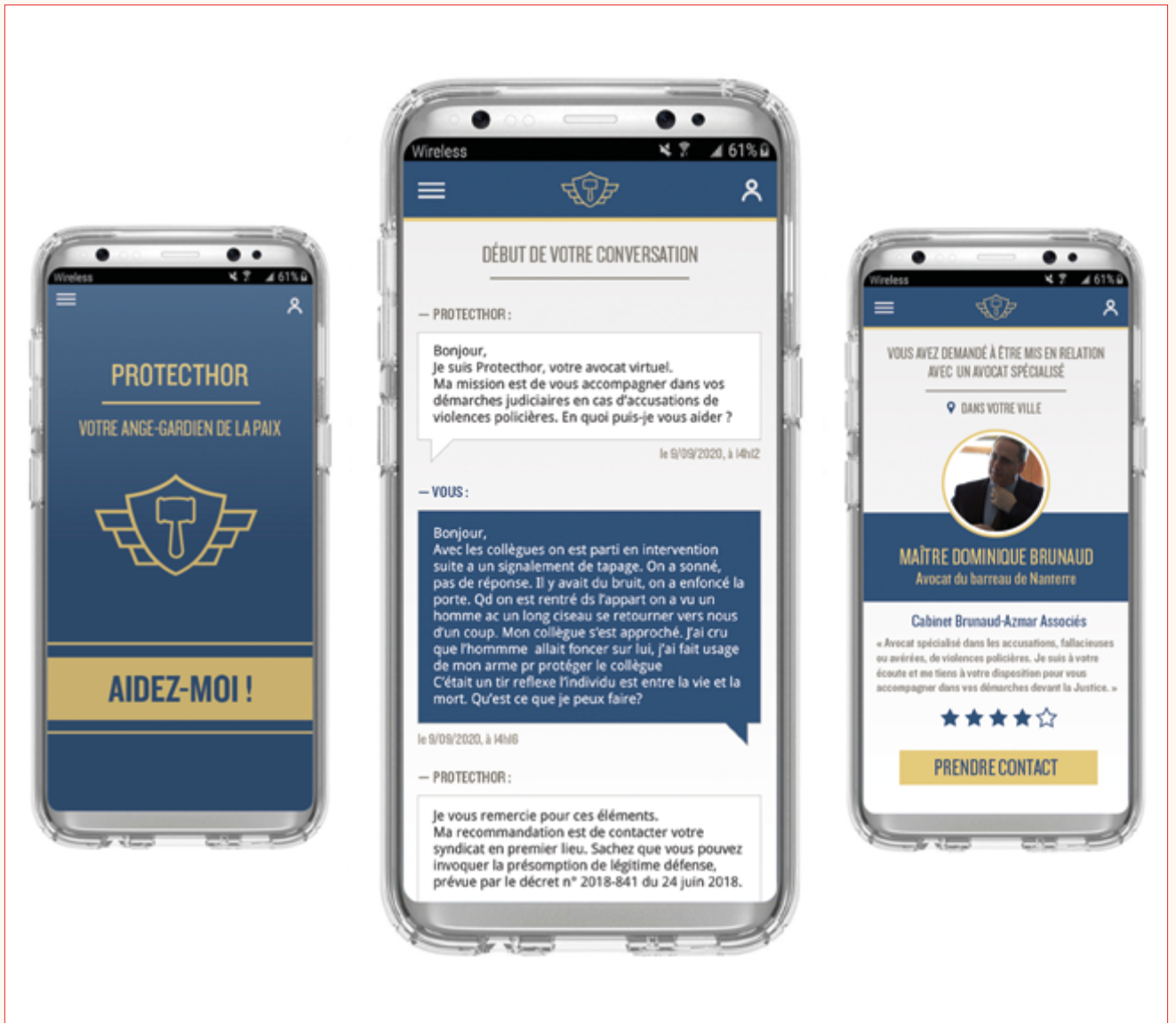
References from the website footer:

(8) Extrapolation of a law proposition creating a “presumption of self-defence” in the case of a legal use of armed force:

<http://www.assemblee-nationale.fr/14/pdf/propositions/pion2639.pdf>

(9) Extrapolation of Proposal No. 13—“I propose to massively rearm law enforcement agencies: in terms of personnel (recruitment plan for 15,000 police officers and gendarmes), materials (modernisation of equipment, police stations and barracks, adaptation of weapons to new threats), but also morally and legally (including through the presumption of self-defence).”

Illustration Corresponding to the Previous Extract



Visuals from the *Polys* start-up (fictional) press kit. This proposes *Protecthor*, an app that provides juridical assistance to police officers in the event of excessive use of lethal force.

Examples of Other Design Fictions Developed for the Articles of Other Candidates:

Based on the programmes of the presidential candidates, various formats were explored in the 22 imagined visuals (protest flyers, start-up websites, print ads, educational software, ministry communication mails, and so on). Two brief examples are given here:



(Left) Other candidates (such as Emmanuel Macron) promised financial support to start-uppers, advocating that France should become a 'Start-up-nation.' This has helped new services to emerge, such as this 'start-up-washing' offer which has allowed a baker to take advantage of the state's grant by changing their logo, website, and products.

(Right) Helping companies to invest in sport equipment was proposed as means to avoid burnout (by Benoit Hamon). Here, employees tired of the 'quantification of the self' through sport-tracking equipment moved a step beyond burnout into 'sport-out' (and edited contestation flyers).

Rejoignez la lutte des

travailleu.r.ses tranquilles

Le droit à la déconnexion ne suffit plus. Les "Privacy Google Ethic Rules" de 2016 ne sont toujours pas respectées !

- *Regardé.e de travers à la moindre pause ?*
- *Privacy ruinée par vos statistiques sportives en ligne?*
- *Obligé.e de courir jusqu'à la prochaine blessure ?*
- *Branché.e à vos capteurs sportifs comme une multiprise ?*

SPORT-OUT

Ça suffit !

**OUI À LA RECONNAISSANCE
DU SPORT-OUT COMME
RISQUE PROFESSIONNEL**

PÉTITION :

sport-outcasuffit.org

Communication Situation

Website

The politique-fiction.fr website was the main context of encounter between the audiences and the artefacts designed. The artefacts were placed as illustrations of the fictional newspaper articles and particular attention was paid to:

- Creating two kinds of scenarios.
- Omitting visuals in the ‘ideal scenarios,’ thereby making the first contact with the content of the election programmes lighter.
- Providing exhaustive access to the references used to build the scenarios. This aimed to elicit doubt about the readers’ state of knowledge and to encourage them to further discover the electoral programmes by themselves.

The screenshot shows the 'References' section of a website titled 'POLITIQUE FICTION | Présidentielles 2017'. The navigation bar includes the names of candidates: 'FILLON HAMON LE PEN MACRON MELENCHON'. The references list includes:

1. † Extrapolation de la Proposition : Simplifier la vie des entrepreneurs. Réduire leurs charges et supprimer le Régime Social des Indépendants (RSI) qui ne fonctionne pas. Doubler les plafonds pour pouvoir bénéficier du régime fiscal de la microentreprise. <https://storage.googleapis.com/en-marche-fr/COMMUNICATION/Programme-Emmanuel-Macron.pdf>
2. † Extrapolation de la Proposition : Ouvrir les droits à l'assurance-chômage aux salariés qui démissionnent. Tous les cinq ans, chacun y aura droit, s'il choisit de démissionner pour changer d'activité ou développer son propre projet professionnel. <https://storage.googleapis.com/en-marche-fr/COMMUNICATION/Programme-Emmanuel-Macron.pdf>
3. † http://www.lemonde.fr/compta/article/2017/03/02/epb-nouvelle-etape-vers-le-transparence-de-l-algorithme_5088173_4401467.html
4. † Extrapolation de la Proposition : Permettre de négocier au plus près du terrain. Le Code du travail définit un socle de droits et de règles (durée légale du travail, salaire minimum...), qui continuera de s'imposer aux entreprises. Au-delà, la primauté sera donnée aux accords d'entreprise sur les accords de branche. <https://storage.googleapis.com/en-marche-fr/COMMUNICATION/Programme-Emmanuel-Macron.pdf>
5. † Qu'est-ce qu'un pupillomètre ? https://www.sciencesetavenir.fr/sante/le-pupillometre-pour-mesurer-la-douleur-dans-l-oeil-du-patient_27105
6. † Extrapolation de la Proposition : Créer un code du travail digital pour mieux accompagner les PME dans les décisions qu'elles prennent. <https://storage.googleapis.com/en-marche-fr/COMMUNICATION/Programme-Emmanuel-Macron.pdf>
7. † Big data, ou mégadonnées, sont de larges ensembles de données (activités sur les réseaux sociaux, recherches en ligne, etc) collectés et analysés à des fins de compréhension ou de prédiction.
8. † Le "cultural fit" est une notion de management qui cherche à déterminer l'adéquation entre les valeurs et la personnalité d'un employé avec la culture interne de l'entreprise.
9. † Référence au tweet d'Emmanuel Macron le 13/04/17 : « Une start-up nation est une nation où chacun peut se dire qu'il pourra créer une start-up. Je veux que la France en soit une. #SommetStartUp »
10. † Référence au discours d'Emmanuel Macron au Palais Brongniart le 13/04/17 http://www.bonneslemonde.fr/economie/article/2017/04/14/macron-en-operation-education-supes-de-la-french-tech_5111325_3234.html#GLkR4e8af5j5bQf99
11. † Référence au discours d'Emmanuel Macron « Nous allons changer les règles, déverrouiller tous les secteurs pour pousser les outsiders à tuer les insiders. Si les insiders résistent c'est qu'ils sont bons, sinon on permettra à une nouvelle génération d'entreprises d'émerger. » http://www.usine-digitale.fr/editorial/comment-emmanuel-macron-vend-la-french-tech-a-la-start-up-nation_N348484
12. † <http://www.letribune.fr/techno-medias/internet/larsel-la-startup-nation-atteint-ses-limites-611467.html>
13. † Référence au discours d'Emmanuel Macron au CES « réduire le coût de l'échec » http://www.lepoint.fr/high-tech-internet/tes-de-las-vegas-emmanuel-macron-ovatione-par-la-french-tech-07-01-2016-2007704_47.php
14. † Outsider, c'est à dire nouvel arrivant : « Concurrent qui ne figure pas parmi les favoris, mais qui, cependant, pourrait gagner ». <http://www.cnrtl.fr/lexicographie/outsider>
15. † <http://tempsreel.nouvelobs.com/tus@3/sur-le-radar/20170303.0856084/1-enfer-des-start-up-j-avais-l-impression-que-tout-le-monde-petait-des-lunettes-roses.html>
16. † « base de la taxation des revenus du capital, fin de l'ISF pour les actions, suppression du RSI, allègement du code du travail ou encore bouleversement des pratiques des administrations qui devront reconnaître un droit à l'erreur administrative aux créateurs d'entreprises » https://www.challenges.fr/sommet-start-up/emmanuel-macron-veut-que-les-start-up-aident-a-transformer-le-pays_466804

Footer of Marine Le Pen's scenario quoted earlier, providing references taken from the candidate's programme upon which speculations were built.

Online Campaign

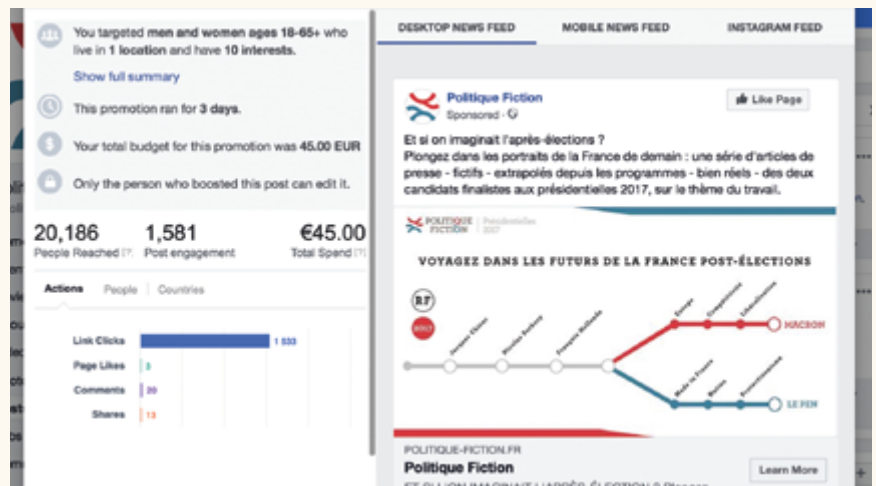
A very wide range of audiences had already been constructed around the multitude of issues mobilised by the electoral elections. In order to reach a part of these audiences, the project built on pre-existing media buzz around this topic and tried to redirect some of that attention to the website.

Reaching general audiences was done mainly through social media (and partly through the traditional press).

“Tomorrow, will you regret your choice?” This online flyer advertises our website by showing pictures of candidates as 30 years older (original pictures can be seen on the flag below).



A Facebook promotional campaign on the *politique-fiction.fr* page.





Two articles mentioning the project on two major press websites Liberation.fr and LeMonde.fr

Participatory (Physical) Debate

Finally, a public debate session was organised between the two rounds of voting. In order to uncover the content of the website, an actress read extracts of Le Pen's and Macron's articles. This was an interesting setting to observe how the audiences would consider those parts of the programme they did not personally engage with.



View of the debate session (a person is talking to the crowd in the back)

Audiences' Experience and Project's Outcomes

Audiences Feedback

During the final debate session comments were collected on 07 May 2017, in the Gaïte Lyrique cultural centre, through participant observation, with about 50 people.

Despite a flood of comments by extreme right-wing supporters (similar to the so-called 'troll armies' during the American elections of 2016-17), most Facebook comments were superficial and did not address the content of the website. However, they did address questions of political opinion and the choice to be made between the candidates (however, this was merely an outlet to express preconceived opinions). On the contrary, comments posted directly on the website were few, but very rich.

Finally, live feedback during the (physical) debate was the most meaningful.

People brought their own everyday knowledge into our scenarios and argued about the consequences of voting and about the original programme. For instance, being a hospital director, one person expressed her worries about the competitiveness of private industries against public services. Another person, a psychiatrist, discussed the probability of our scenarios where an Uber driver launches a start-up by proposing psychoanalytic services during the time of a travel.

Although a large number of comments were not listed, they successfully allowed participants to uncover undiscussed facets of the programmes, to face the scenarios, and to mutually confront conflicting opinions.

Screenshot of comments left on the project's Facebook page (The video is entitled "Macron playing us for JERKS!!!").

The screenshot shows the Facebook page for 'Politique Fiction' (@politiquefiction). The page features a navigation bar with 'Page', 'Inbox', 'Notifications', 'Insights', 'Publishing Tools', and 'Promotions'. The main content area displays a video post by 'Nicolas Didier' titled 'Macron nous prend pour des CON !!!' (Macron takes us for jerks!!!), posted on 4 May 2017. The video has 256,633 views and is from the page 'Français et Patriote'. Below the video, there are several comments from users like 'Abdou Souhail Lepen terminus :guerre civile,Macron terminus: fin de droit de travail' and 'Cedric Cloarec Guerre civile par qui ? Des étudiants ?!'. The right sidebar shows 'Visitor Posts' with comments from 'Max Mollon' and 'Pascal Euard'. The bottom of the page includes language options and privacy/terms links.

Outcomes

The project enabled to experiment with another kind of approach compared to previous projects. Here we worked within a self-driven (authoring) posture. We tried to reach unidentified (and very wide) audiences, which were already constructed and active on online and mass media.

Press articles publicised the approach but did not contribute to the debate. Articles were published on the websites Liberation, Le Monde, and Usbek&Rica (the French media outlet specialising in future-thinking).

Limitations

Gathering audiences that are interested in a public event about the elections is fairly easy. However, gathering heterogeneous members of audiences representing diverse and adverse opinions proved difficult. There are two implications to this:

- Addressing this problem would require an active construction of the public, for instance through partnerships and formal invitations of experts and citizens who would be representative of opposing political positions.
- The diversity of opposing political opinions could also be addressed before the debate session during the creation phase, for instance by inviting representatives of political parties to join during this phase. In the absence of such configuration and in an attempt at neutrality, we persuaded our team to practise role-playing during the design phase in order to put themselves in the shoes of opponents and subscribe to their political views.

Press article about *politique-fiction.fr* on Usbek&Rica.com





CH9 DESCRIPTIVE MODEL **Reaching Audiences Through a Communication System**

Chapter 9 is dedicated to a comparative analysis of my four design projects, together with *L'Éphéméride* (2015) and contrasted with *Dog & Bone* (2010-2011). It is complemented with the analysis of three other designers' projects. I then discuss these nine projects in order to characterise shared descriptive criteria.

39 *AIMS & PROTOCOL* Analysing My Six Projects and Three More, Taken from Other Practitioners

I now look at designing for debate's function of reaching audiences. I especially look at other means to reach audiences than circulating projects through media made for dissemination (exhibition, online and mass media). It appears to be an important question for two reasons. Firstly, because the limitations¹ I experienced regarding the exhibition may apply to a vast majority of the design for debate projects that employ these circulation approaches—which became a form of canon. Secondly, a number of projects from other designers seem to have surmounted the limitations I identified (a selection of project is given later in this chapter). However, the wide variety of their media, contexts, authors, approaches and especially intentions makes the work of analysis and comparison difficult.

In the present chapter, I therefore ask what are the criteria for describing and comparing the ways designs for debate reach their audiences. My objective is to draw an analysis grid from my four projects developed specifically with a similar attention to communication situations.

Before discussing my four projects, I succinctly examine *L'Éphéméride* (2015) to seek out what links an artefact to a communication situation. To this end, I have used the results of the semio-pragmatic analysis detailed in Chapter 6.

Then, putting aside the study of the artefact itself, I compare *Dog & Bone* (2010–2011)—its showroom context and its limitations—to the four projects presented in the introductory chapter. I do this in search of differences and recurrences in the ways these projects intended to reach their audiences. I intent to draw a typology from this analysis. Finally, I try to examine the projects of other designers, using the previous typology as an analytical grid. I aim to verify if the categories pertaining to my projects are applicable to other contexts.

Please note, during these three analyses, the information generated on the projects themselves will be kept for Chapter 10.

¹ Reminder: in Chapter 3, analysing the difficulties I encountered with the *Dog & Bone* (2010–2011) project led me to review the literature. I pinpointed the following limitations within the related works: the exhibition tends to decontextualise the work and make it impenetrable for the visitors; viral Web dissemination often generates superficial and frivolous online feedback; dissemination formats are not suited to meet people and initiate debates, such project is highly dependent on a third actor regarding the mediation work, which is not addressed by the designer.

40 ANALYSIS & RESULTS Analysing Similarities in a Situation-Driven Design Process

40.A Three Main Dimensions of a ‘Communication System’

What is the link between the work done on the design of an artefact and the communication situation in which it takes place?

To answer this question, I examine the issuefication work carried out within *L'Éphéméride*, and I draw on the semio-pragmatic analysis given in [CH6 | Section 24](#). In Chapter 6, I was especially interested in the debate topic that was embodied in the artefact's features. Now, I am rather interested in the way I regrouped my design choices throughout the semio-pragmatic analysis—within four categories. I hypothesise that these four categories reveal an articulation between the design of an artefact and a communication situation. These four categories were:

- **The issue** (the analysis presented the way I chose, within a co-design process, a social norm to make dissonant).
- **The artefact** (the juxtaposition of ambivalent design choices within the artefact itself was presented).
- **The communication material** (the textual, photographic, video, presentation slides material was presented).
- **The communication situation** (the analysis described the activity planned with the audiences. In the chapters 7 and 8 I also described the venue, the room-configuration, the participants, and so on).

I propose to consider these four categories as four levels on which a design for debate can be observed. I will now refine these categories by contrasting them to the design practice and the design research literature.

The book authored by Chris Woebken and Elliott P. Montgomery of the New York-based studio *Extrapolation Factory* lists methods to democratise the art of crafting design speculations. One of their methods, called “storymaking,” is comparable to anchoring a speculation in a familiar world in order to reach audiences.² It starts from a database of trends from which to extrapolate future scenarios, followed by a phase of speculation to list potential users' needs. It ends with having designers respond to these users' needs through the making of an artefact. According to Woebken and Montgomery, one of the crucial part of the method is to anchor the ‘product’ into elements that make its existence and the whole narration plausible, something they call world-building, or rather, “world-making.”

“The idea of a glimpse is important here—many *products* found in a 99¢ store are in fact *narrative hints*: items that allude to the existence of a larger system [...] leaving the shopper's imagination to complete the picture.”

² Elliott P. Montgomery and Chris Woebken, *Extrapolation Factory Operator's Manual* (Wrocław, Poland: CreateSpace Independent Publishing Platform, 2016), 42.

“And the *mass produced* aspect. It’s not just this prototype accessible to only a few, it’s going to be this gigantic knocked off, cheap thing.”³

In these quotes we can see the designers’ intention to designing not only artefacts but the whole ecosystem that supports them. Rather than ‘world making,’ I suggest naming this ecosystem more generically as a **fictional situation** to which an artefact belongs. This fictional situation can be a whole world of fictional actors or simply a set of values. This means that, somewhere between the issue and the artefact category given in my previous list, there should be a **category dedicated to the fictional situation from which the artefact is extracted.**

In Matthew Malpass’ analysis of Critical Design related practices, some of the categories are also referenced:

“As we saw in [a previous example] the ambiguous objects that characterize critical design practice are made sense of through material that situates the work in an everyday and familiar context. **The object and contextualizing material** taken together can be defined as a **design device.**”⁴

With the notion of “contextualising material,” Malpass refers to what he calls a tactic of depicting the ‘narratives of use’ or ‘rhetorical uses’ often evoked in my thesis. This consists in contextualising an artefact within a use case situation (often) standing next to the design artefact. I propose to rename Malpass’s “contextualising material” with the generic terms, ‘**communication material.**’ Also, I offer to consider Malpass’s ‘**narrative of uses**’ as **part of the communication material** category (e.g. a user testimony video or a flyer are components of a project’s communication material). Malpass also refers to ‘the object’ that comes with the ‘contextualising material.’ In order to **make a clearer distinction between the idea of the object and the physical materialisation of the object—which is part of the communication material**—I suggest distinguishing the terms ‘**artefact’s concept**’ from the ones of ‘communication material.’

It also seems relevant to reinterpret Malpass’s words and to consider his “design device” as one of ‘communication.’ Indeed, the design artefacts Malpass is referring to are discursive ones. I thus suggest to understand the four categories listed when analysing *L’Éphéméride* as forming a system. Rather than ‘communication device,’ I will now use the terms ‘**communication system**’ to refer to the conceptual structure that helps to describe how artefacts relate with the issues they address, and with the contexts in which they are circulated.

³ Montgomery and Wobken, 12 and 91 (for the two quotes, respectively. My emphases). | In this second quote, the authors interviewed their former collaborators who talk about the familiar effect of encountering fictional artefacts displayed in a 99¢ store.

⁴ Matthew Malpass, *Critical Design in Context: History*, 47.

Briefly drawing on the literature allowed me to consider the list built during the semio-pragmatic analysis of Chapter 6 as composing a **communication system**. It is revised as follows:

- The **issues**.
- The **artefacts**:
 - Its **fictional situations** (e.g. a set of values, a whole world of actors).
 - The **artefacts' concepts** (belonging to the previous situation).
 - The **communication material** of the artefacts (e.g. usable artefact, props, narrative of use).
- The **communication situations**.

The empirical experience of redesigning *L'Éphéméride* helped me understand how the **issuefication of designs for debate can be studied through the various categories of a communication system**.

40.B Building a Typology Characterising the Communication System

I identified three main categories composing a Discursive Design communication system. Yet, are these categories applicable to other design projects than *L'Éphéméride*? Is a conventional (exhibition-circulated) project like *Dog & Bone* (2010–11) also employing a communication system? If yes, what is the difference with projects that are not circulated in an exhibition context like the ones presented in the introductory chapter to the present experiment? Did the design process of these four projects change?

Under the impetus of the previous results and the questions coined, I aim at two things:

- Better characterising what a communication system is made of.
- And better understanding the differences in design process between a project intended for the showroom and others, i.e. those giving rise to interpersonal debates.

I used the three main categories composing a communication system as analytical criteria—the issues, the artefacts, the communication situations. I parsed through these criteria the four projects presented in the chapter introducing the present experiment. I added *Dog & Bone* to the analysis as a point of comparison. I looked for recurrences and differences pertaining to the different approaches. I focused less on the communication material category in order to investigate the other categories, not studied until now.

40.B.1 *Dog & Bone* (2010–2011)

I first looked at the design process of the *Dog & Bone* project:

The issues:

- The **theme** of the project and all decisions were exclusively the results of the author's choices (a sign of it being an authorial practice).

The artefacts' communication material:

- A number of visuals (such as photos and use-case video) complemented the design artefact (that is, the collar).
- The formal aesthetic employed was close to a contemporary art or design showroom one, with elements closer to an ethnographic study aesthetic.
- The design choices were made in an authorial posture. Ethnographic observations of usages informed the design choices.

The communication situations:

- In the exhibition, people discovered the project through one main **activity**, which is their own personal visits (no guided tours were offered).
- The exhibition was part of a biennale design fair **event**.
- The **location** displaying the project was an art and design venue (a former factory, turned into a design school facility, used once a year as an exhibition space).
- In this space, the **audiences** were unidentified and fluctuant.

40.B.2 *OneHealth* (2014)

The *OneHealth* project is a poster exhibition in a Biology conference. There are a number of observable differences between this project and the *Dog & Bone* one, taken here as a reference point.

The issues:

- First, I did not choose the theme of the project. The stakeholder had the final word on the choice of **general theme** to address. The President of one of INRA's research centres actually phrased the request as 'coming up with a representation of their research objects.'
- Within this theme, the choice of a specific **debate topic**, targeted by my artefacts, was mine. This authorial choice was informed by the study of the actual debate audiences (interviews of the stakeholder as well as related press and media). I was, indeed, given access to members of the audiences (through interviews, and meetings in their workplaces).

The artefacts' communication materials:

- No physical props were presented. Instead, I showed representations of the (fictional) artefacts. These representations were embedded into a communication material which mimicked a visual language familiar to the debate audience (for instance, scientific posters instead of *Dog & Bone*'s use-case videos).

The communication situations:

- Artefacts (posters) were presented in an **activity** close to the *Dog & Bone* one, an exhibition, but not in an art and design context. Rather than visiting, attendees were participants of a ‘poster exhibition.’ The programme was not announced beforehand and created a surprise effect.
- The session was part of an **event**, integrated with the stakeholder’s existing set of activities (that is, a Biennale conference).
- Its **location** was a conference room, in a university.
- The **audiences** had to register to attend this conference. The debate audience comprised individuals of different profiles, mainly experts (scientists, health practitioners, engineers, and so on) who were all concerned, in one way or another, with the debate topic and the artefacts presented.

40.B.3 #Hack.my.cafeteria (2016)

The #Hack.my.cafeteria project was conducted with Biology doctoral students, in their research campus.

The issues:

- I did not choose the **theme** of the project. It was framed by the directors of the laboratory and included in the doctoral week’s programme.
- In this case, instead of using interviews of the audiences, the choice of a **debate topic** emerged from the current work of the students and their concerns.

The artefacts’ communication materials:

- The design of the final artefacts did not intend to mimic the audience’s familiar visual language. The artefacts were made by the members of the audiences and consequently directly follow their own means of expression (PowerPoint, the Paint application on Microsoft Windows, laser printer, and suchlike).

The communication situations:

- Instead of an exhibition, or a dedicated poster exhibition, the **activities** that gave access to the artefacts were merged into the audience’s daily occupations (i.e. a cafeteria menu during lunchtime, and a talk concluding the doctoral week later the same day). The creation phase (that is, the design workshop) itself also became a moment of reflection and of debate.
- This was all part of the stakeholder’s week-long **event**, a doctoral week, attended by **audiences** of students and senior researchers.
- The project **location** was the workplace of the audiences (that is, the research campus itself and not an external conference venue).

40.B.4 *Épicure.app* (2015)

The *Épicure.app* project offered a fictional patients' association meeting presenting a mobile app for people statistically condemned to get a serious illness (e.g. cancer).

The issues:

- The **general theme** of the project was commissioned by the ethics Commission and was chosen in accordance with their current research topic as explored in their monthly seminar.
- The choice of the **debate topic**, addressed by the artefacts, was the result of an authorial posture based on a review of discourses (stakeholder's interviews and literature review).

The artefacts' communication materials:

- The making of the artefact also followed an authorial posture and the resultant aesthetic played with the visual codes of advertising and professional communication design. Like the layers of fiction, the several pieces of communication material combined the slides of the presentation, the advertising campaign, and the mobile application.

The communication situations:

- The artefacts were made accessible through one main **activity** shared in two folds—the association's (fictional) meeting (which lasted for 45 minutes), followed by a regular debate workshop (which lasted another 45 minutes).
- The debate's **location** was a meeting room, in the stakeholder's office, in a hospital
- The **audiences'** profile was very diverse and included individuals with very different kinds of expertise (such as a physiotherapist, a person with an illness, a relative, a philosopher, and so on).

40.B.5 *Politique-fiction.fr* (2017)

Politique-fiction.fr addressed the French presidential elections. It is a very different project compared to previous ones. I attempt to submit it to this analysis to test the robustness and flexibility of my typology.

The issues:

- The **general theme** of the project was drawn from ongoing public debates in the media regarding the elections. I thus inserted artefacts into a mediated issue rather than into a local audience.
- The **debate topics** were identified through a review of existing discourses (that is, the electoral programmes of contesting candidates).

The artefacts' communication materials:

- These topics were embodied in a series of communication media which included illustrations of the 25 articles (for instance, contestation flyers), press articles, and the website.

The communication situations:

- The artefact could be accessed by reading through either the website or the snippets circulated in social media, but the most engaging **activity** was the live reading by actors during a two-hour long participatory debate session.
- This debate took place in a cultural centre **location**, during a public **event** dedicated to the French elections, three days before the second round of voting.
- Online, through the website and social media, the **audiences** were pre-constructed, unidentified and fluctuant (but present and active) and 50 unidentified participants attended the debate session.

40.B.6 Identifying Recurrent Categories

In addition to *Dog & Bone* four design projects were developed with the specific intention to explore different communication situations. On the one hand, information material was produced on the design process of the projects, throughout the analysis. On the other hand, using the three main categories of the Discursive Design communication system allowed to pinpoint recurrent notions, **indicated in bold**. The present chapter focuses on these elements. The Chapter 10 will come back on the information material generated on the design processes.

The recurrence of **the notions listed in bold seem to constitute a typology**. I suggest to understand them as **additional subcategories of the Discursive Design communication system**:

- The issues:
 - The general theme.
 - The debatable topics.
- The artefacts (it contains three subcategories identified during the first analysis, based on *L'Éphéméride* project):
 - The fictional situations.
 - The artefact's concepts.
 - The communication material conveying them.
- The communication situations:
 - The activities enabling access to the artefacts.
 - The locations of the encounter.
 - The events.
 - The audiences (including the stakeholders).

40.C Analysing the Projects of Other Designers Based on the Same Typology

Two main questions arise from the previous analysis results.

- Is this list actually applicable to other contexts?
- If the initial three categories of the communication system allowed to analyse my own projects, can the nine categories, listed just now, be used to analyse the projects from other designers?

The previous analyses have allowed me to look at existing design projects from a new perspective—particularly, with regard to the attention they pay to the communication situation in which the artefact meets the public.

The following examples demonstrate ways to reach audiences by working via mass media settings,⁵ public engagement workshops,⁶ magazines disseminated in a city,⁷ public spaces,⁸ going door-to-door in a neighbourhood,⁹ plays,¹⁰ installations,¹¹ citizen assemblies,¹² with different interaction modes (watching and acting,¹³ grasping and sensing or eating,¹⁴ testing and using¹⁵).¹⁶

- 5 **Sputniko!**, *Menstruation Machine*, 2010, sputniko.com/Menstruation-Machine/ | Project (music video) was broadcast notably on MTV.
- 6 **Beaver, Kerridge, Pennington et al.**, *Material Beliefs*, 2006–2008, materialbeliefs.co.uk/ | The project includes a workshop at the Dana Centre, London, Jan 22, 2008.
- 7 **Near Future Laboratory**, *Winning Formula*, 2014, winningformula.nearfuturelaboratory.com/ | Next to an exhibition, a printed journal was given as a supplement into 130,000 copies of the Manchester Evening News journal.
- 8 **Extrapolation Factory**, *99¢ Futures*, 2013, extrapolationfactory.com/99-FUTURES/ | A pharmacy downtown Brooklyn was stocked with future (and present) products of a 99¢ store.
- 9 **Bergström, Mazé, Redström, Vallgård**, photography by Jeczmyk and Bildinstitutet, *Symbiots* (part of the *Switch!* Project), 2008–2009, ti.se/projects/switch/ | The project included displaying posters, mails and meeting inhabitants of a neighbourhood of Aspudden, Sweden.
- 10 **Extrapolation Factory**, *Alternative Unknown*, 2015, extrapolationfactory.com/ALTERNATIVE-UNKNOWN/ | Workshop participants simulating a fictional emergency script with the Emergency Management team of New York City.
- 11 **Superflux**, *Stark Choice*, 2018, superflux.in/index.php/work/stark-choices/ | Two simulation spaces (installation) offer different perspectives on future issues related to automation and labour.
- 12 **Superflux**, *Future(s) of Power-Algorithmic Power*, 2018, superflux.in/index.php/work/future-of-democracy-algorithmic-power/ | A Citizen Assembly to collectively deliberate the issue of algorithmic power, in London.
- 13 **A Parede**, *Oniria*, 2017, a-pare.de/2017/oniria/ | Open call in social media platforms encouraging participants to send selfies that expressed their own takes on a proposed narrative about restrictive reproductive rights in Brazil (designed in Berlin).
- 14 **Rubin, Weleski, and Yasko**, *Conflict Kitchen*, 2013, conflictkitchen.org/about/ | This restaurant in Pittsburgh, Pennsylvania, serves cuisine from countries with which the United States is in conflict.
- 15 **Auger-loizeau**, *Isophone*, 2003, auger-loizeau.com/projects/isophone/ | The demo installation of an underwater telecommunication device designed in London and experienced in Lintz, Austria.
- 16 All URLs of this list were accessed in Feb 2019. | This is a very short list extracted to a larger work conducted with French designers for debate Léa Lipperra and Noémie Nicolas.



Figure 70 | These projects show a special attention to the design of ways to reach audiences through a discursive design project. They are ordered from top-left to bottom-right, line per line, following the order described in the previous footnotes nº 5 to 15.

I will now examine and compare two projects taken from the practitioners listed in the previous figure. I add to them a third project, as a counter-example, that corresponds to the canonical art-gallery exhibited practice of design for debate. I will use the different sub-categories of my typology as criteria for analysis.¹⁷ My goal is not only to learn more about these projects. I am mainly looking to learn things on the design of communication situations, and on the communication system itself.

The three projects I have chosen have been developed: in an artistic context; in an academic context; and in a context of professional design practice:

- *Victimless Leather* (2004) by Oron Catts and Ionat Zurr.
- *Symbiots*, part of the *Switch!* design research program (2008–2009) by Jenny Bergström, Ramia Mazé, Johan Redström, Anna Vallgård, with Olivia Jeczmyk and Bildinstitutet.
- *Mantis Systems* (2018) by Superflux.

¹⁷ Please note that I will only detail the analysis of one out of three sub-criteria of the 'artefacts' level. This intends to focus on how designers addressed the remaining communication system's levels.

40.C.1 Analysing *Victimless Leather* (2004) by Oron Catts and Ionat Zurr

The *Victimless Leather* (2004) is a project by Oron Catts and Ionat Zurr, part of the *Tissue Culture & Art Project* (1996-present), in the SymbioticA research lab (Australia).¹⁸ The artefact offers a hyper-technological process used to produce a synthetic leather material which is lab-grown. The piece of synthetic fabric is presented in a stitch-less coat-like shape. It aims to spark debate on the viewer's relationship with the manipulation of living systems:

“An actualized possibility of wearing ‘leather’ without killing an animal is offered as a starting point for cultural discussion. [...] This piece also presents an ambiguous and somewhat ironic take into the technological price our society will need to pay for achieving ‘a victimless utopia.’”¹⁹

The project was featured in 11 international exhibitions from 2004 to 2013,²⁰ most notably in the *Design and the Elastic Mind* exhibition at the Museum of Modern Art in New York (2008) where it ‘died’ at one point (the artefact had to be unplugged during the exhibition because it began growing too quickly, according to *The New York Times*).²¹ Viewers’ feedback was mainly relayed by the authors in the press. While sources are hard to find, *Wired.com* reports that audiences concerns addressed, for instance, the “ethics of using living cells to grow living fabric.” Yet, this quote is reported by the project’s authors, there is no verbatim extracts from the audiences.²²

I summarised my analysis in the following table. The notable difference of amount of information available on the topics actually ‘debated’ (compared to the ‘debatable’ topics) led me **to add one more criteria to my analysis—the ‘debated topic.’**

¹⁸ symbiotica.uwa.edu.au/home/about/

¹⁹ lab.anhb.uwa.edu.au/tca/vl/

²⁰ The 11 exhibitions are: *Semipermeable* (+), Powerhouse Museum, Sydney, Australia 2013; *Sk-interface*, Luxembourg, 2009; *Medicine and Art*, Mori Art Museum, Tokyo, Japan 2009; *SkinDeep*, The National Glass Museum, The Netherlands. 2008; *Design and the Elastic Mind*, Museum of Modern Art, New York, USA. 2008; *Victimless Leather*, CEPA Gallery, Buffalo, USA 2008; *TechnoThreads*, Science Gallery, Dublin, Ireland, 2008; *Sk-interface*, Liverpool, UK, 2008; *Relics at Our Cyborg Future?* Tyne & Wear Museum UK, 2007; *Free Radicals*, Israeli Center for Digital Art, Holon, Israel, 2007; *Victimless Leather* Ontario Science Centre, Toronto, Canada 2006; *Space Between*, John Curtin Gallery, Perth 2004. | List based on lab.anhb.uwa.edu.au/tca/curation-exhibitions-performances/ & bit.ly/tcaproject (Web archive).

²¹ nytimes.com/2008/05/13/science/13coat.html.

²² wired.com/2004/10/jacket-grows-from-living-tissue/

ISSUES/ The general themes :	Synthetic biology.
ISSUES/ The debatable topics :	Wearing 'leather' without killing an animal.
ISSUES/ The debated topics :	No actual available verbatim of the audiences' feedback.
ARTEFACTS/ The artefact's concept :	/ (Not analysed.)
ARTEFACTS/ The fictional situation :	/ (Not analysed.)
ARTEFACTS/ Communication material :	Demo, working prototype, photos of the creation process.
COM SITU/ The activities :	Exhibition attendance (No guided tour).
COM SITU/ The audiences :	Unknown (might be self-constructed or composed of people interested in the topic of the exhibition or about the exhibition venue).
COM SITU/ The events :	The Design and the Elastic Mind exhibition curated by Paola Antonelli (2008).
COM SITU/ The locations :	Museum of Modern Art, New York, USA.

Table 14 | *Victimless Leather* (2008) by Catts and Zurr. | Table unravelling the properties of the communication system set through the *Victimless Leather* project—analysed through eight of the communication system categories. I added one more sub-category, the 'debated topics.'

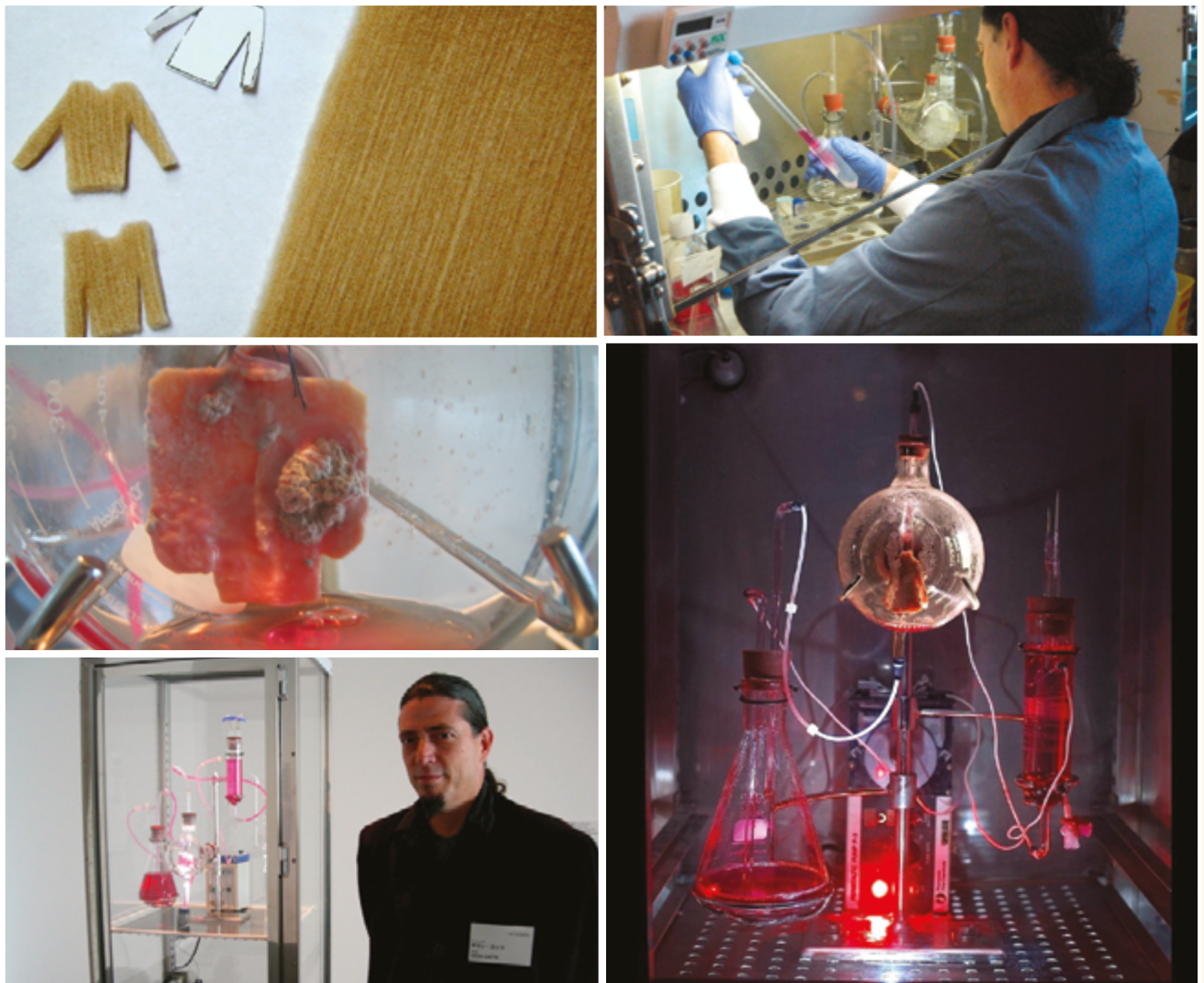


Figure 71 | Selection of pictures of the *Victimless Leather* project (2008): Two pictures chronicling the creation process (top-left and top-right); A close-up of the leather coat (centre-left); View of the exhibition setting (bottom-right); Oron Catts in one of the exhibitions (bottom-left). Image courtesy of Iona Zurr and Oron Catts.

40.C.2 Analysing *Symbiots* (2008–2009) by Bergström, Mazé, et al.

Symbiots was part of the *Switch!* design research program based at the Interactive Institute sponsored by the Swedish Energy Agency (*Energimyndigheten*) between 2008 and 2009.²³

Symbiots, as described by Bergström, Mazé, and coauthors:

“takes the form of a photo series in the genre of contemporary hyper-real art photography. Painting a vivid picture of alternatives to current local priorities around energy consumption, the three design concepts depicted are strangely familiar, alternatively humorous and sinister.”²⁴

The project sets out to question the values driving contemporary design. It explicitly intends to “expose issues related to energy consumption and current human- (versus eco-) centred design paradigms.” The *Symbiots* photo series reinterprets “graphical patterns, architectural configurations and electrical infrastructure typical in Swedish cities.” According to the authors, the photograph series explores imagined scenarios such as the one called *Street Cinema*—a weekend film-screening and traffic-stopping event, powered by the collective energy saved by the neighbourhood from past week’s consumption.²⁵ The authors collected feedback on various topics related to energy consumption.²⁶

In the next table, I focused on one of the project’s circulation settings, in the neighbourhood of a Swedish city.²⁷

²³ Project by Jenny Bergström, Ramia Mazé Johan Redström, Anna Vallgård; photography by Olivia Jeczmyk and Bildinstitutet: dru.tii.se/switch/ & tii.se/projects/switch#node-8029/

²⁴ Jenny Bergström et al., ‘Symbiots: Conceptual Interventions Into Urban Energy Systems,’ in *Proceedings of the 3rd NORDES Conference* (Oslo (NO): NORDES, 2009), 1, www/

²⁵ Bergström et al., 4.

²⁶ Bergström et al., ‘Symbiots,’ 8.

²⁷ Please note that the project was developed in two settings (gallery exhibition and neighbourhood dissemination). Since the data available on the exhibition setting was too scarce, I omitted it from the analysis.

ISSUES/ The general themes :	Energy consumption and ecology.
ISSUES/ The debatable topics :	Human- or Eco-centred values related energy consumption.
ISSUES/ The debated topics :	Saving energy in relation to the cost of life and family imperatives from politically correct to socially acceptable ideas, issues of individualism, collaboration, and competition at local-citizen and inter-business level.
ARTEFACTS/ The artefact's concept :	/ (Not analysed.)
ARTEFACTS/ The fictional situation	/ (Not analysed.)
ARTEFACTS/ Communication material :	Series of fine-art pictures mainly used as posters.
COM SITU/ The activities :	Posters were presented as billboards, or received as fold-up pamphlets meant for personal distribution, or placed pre-stamped in mailboxes to be returned with comments, or unfolded in one-on-one interviews.
COM SITU/ The audiences :	'Ordinary people' from a neighbourhood in Sweden (Aspudden) in which one of the photo-shoots took place.
COM SITU/ The events :	No actual event.
COM SITU/ The locations :	People's houses or in the streets of the chosen neighbourhood (Aspudden City).

Table 15 | *Symbiots* (2008–09) by Bergström et al. | Table unravelling the properties of the communication device set through the *Symbiots* project—analysed through seven of the communication device levels, to which was added an eighth one, the 'debated topics' level.

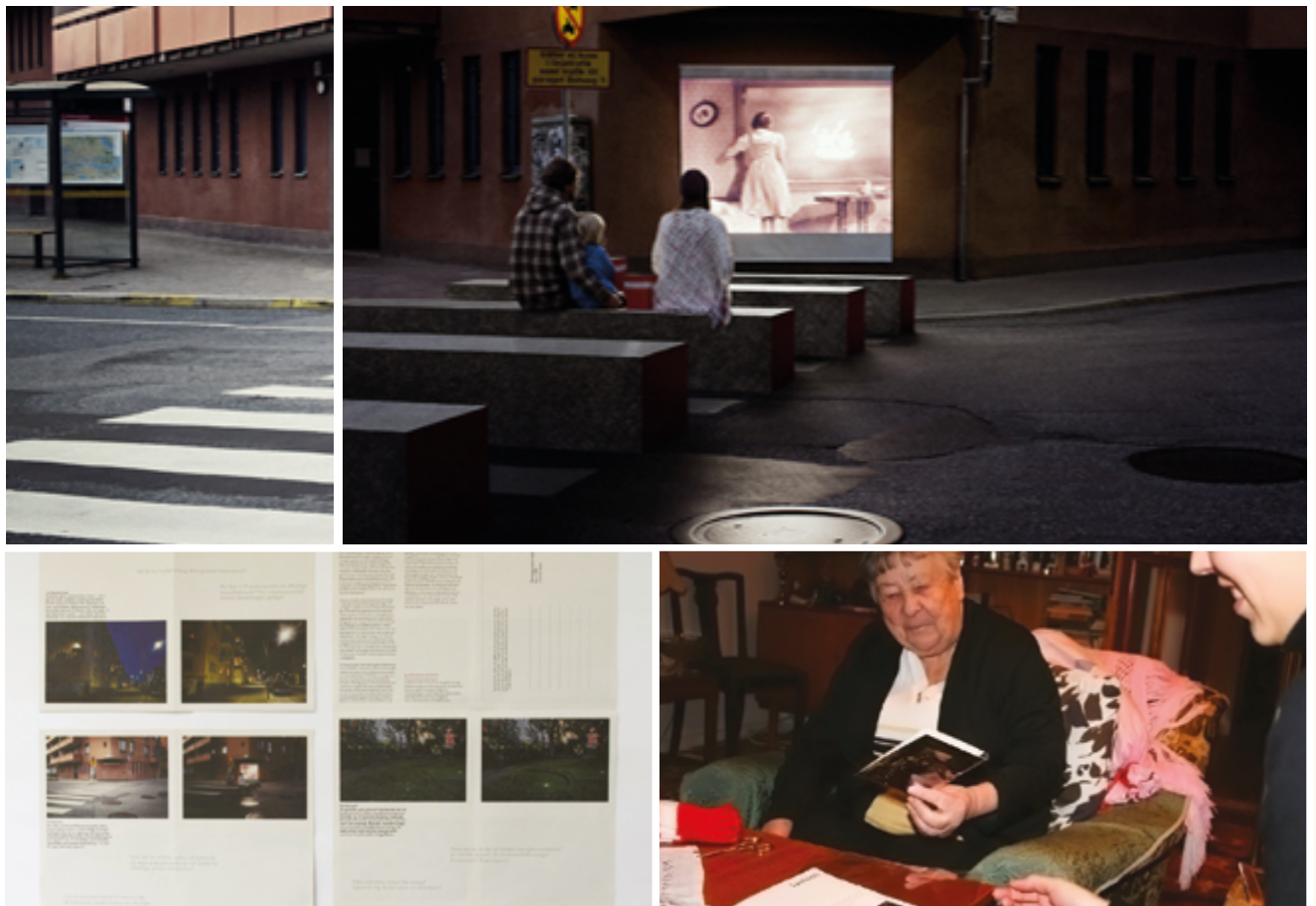


Figure 72 | Selection of pictures of the *Symbiots* project (2008): A series of photographs represents half-fictional Swedish streetlight consumption scenes, laid out in a poster/leaflet format (bottom-left); Portions of two visuals giving a close-up view of one of the scenes, the *Street Cinema* (day and night views of a road crossing, top-left and top-right images); Interviews with the people living in the neighbourhood (bottom-right). | Image courtesy of Bergström, Mazé et al.

40.C.3 Analysing *Mantis Systems* (2018) by Superflux

Mantis Systems (2018)²⁸ is a project developed by the London-based speculative design agency Superflux²⁹ for the Bond company, the United Nations Development Programme, and Nesta.³⁰ Nesta asked the agency to galvanise practitioners of the ‘international development’ sector—their clients—into engaging in unconventional and longer-term thinking. This aimed to anticipate the basic needs evolution of developing countries (regarding climate change, demographic shifts, and the pace of technological advances).

The authors proposed a powerful piece of artificial intelligence, called Mantis Systems, continuously modelling and avoiding systemic risks by creating pre-emptive strategies.

Two scenarios allow the viewer to imagine the consequences of a world where Mantis exists. The first is a (functional) mobile payment vulnerability-check device drawing on Mantis’ data. The second is a promotional campaign for climate change-resistant crops, based on Mantis’ predictive analysis of food shortage previsions in Africa (for instance, in Ethiopia).

During the *Bond Annual Conference and Awards*, Mantis was presented to 1,000 professionals of the international development sector. This was done through an undercover start-up promotional booth presented by the two (fictional) co-founders of Mantis Systems³¹. A reflective workshop was also conducted with 125 senior members, exploring the risks and opportunities of the proposal.

According to the authors’ report, feedback was very polarised. For instance, during the booth exhibition, “Surprisingly, the strongest emotional reactions were those of excitement and envy, clearly indicating an openness” whereas during the workshop,

“Perhaps one of the biggest findings was the real desire for alternate forms of funding which would reduce dependency from traditional donors who dictate strategy and approaches. There were many questions around the future of work in this sector, and what new forms of ‘human-AI’ relationships might be like.”³²

Further details can be found in the next table.

²⁸ superflux.in/index.php/work/mantissystems/

²⁹ Project’s team members: Anab Jain, Jon Arden, Matthew Edgson, Sabrina Haas, Danielle Knight, Vytautas Jankauskas.

³⁰ Bond is a registered charity and a UK network regrouping 400 civil society organisations working in international development (i.e. assistance to economically developing countries against poverty, inequality and injustice). The United Nations Development Programme (UNDP) is the United Nations’ global development network. Nesta is a global innovation foundation in London. | bond.org.uk/about-us/ | undp.org/ | nesta.org.uk/

³¹ Designers were announced in the programme as regular speakers, according to bond.org.uk/person/anab-sanghavi/

³² superflux.in/index.php/work/mantissystems/

ISSUES/ The general themes :	Agility in job evolution of international development organisation (discussed through and geared towards unconventional and longer-term thinking).
ISSUES/ The debatable topics:	The power, banality, promises, and challenges of machine learning algorithm technology.
ISSUES/ The debated topics:	The employment of data-driven technologies, action strategy's dependency upon traditional funding, the future of work in this sector, 'human-AI' relationships.
ARTEFACTS/ The artifact's concept:	/ (Not analysed.)
ARTEFACTS/ The fictional situation:	/ (Not analysed.)
ARTEFACTS/ Communication material:	A video of the software interface, 'a game trailer, a demo of the app and a NFC box which installed fake ransomware on android phones with one tap.'
COM SITU/ The activities :	A participatory workshop and an undercover promotional start-up booth (presenting the previous material and the business model of the agency, their branding and social media strategy, as well as the AI's cognitive functionality).
COM SITU/ The audiences :	1,000 professionals of the international development sector, clients of the Bond company (during the booth exhibition), and 125 senior members (during the workshop).
COM SITU/ The events :	The Bond Annual Conference and Awards 2018.
COM SITU/ The locations :	A 'conference, events and exhibition space in central London' (The Queen Elizabeth II Centre).

Table 16 | *Mantis Systems* (2018) by Superflux. | Table unravelling the properties of the communication system set through the *Mantis Systems* project—analysed through eight of the communication system categories. I added one more sub-category, the 'debated topics.'

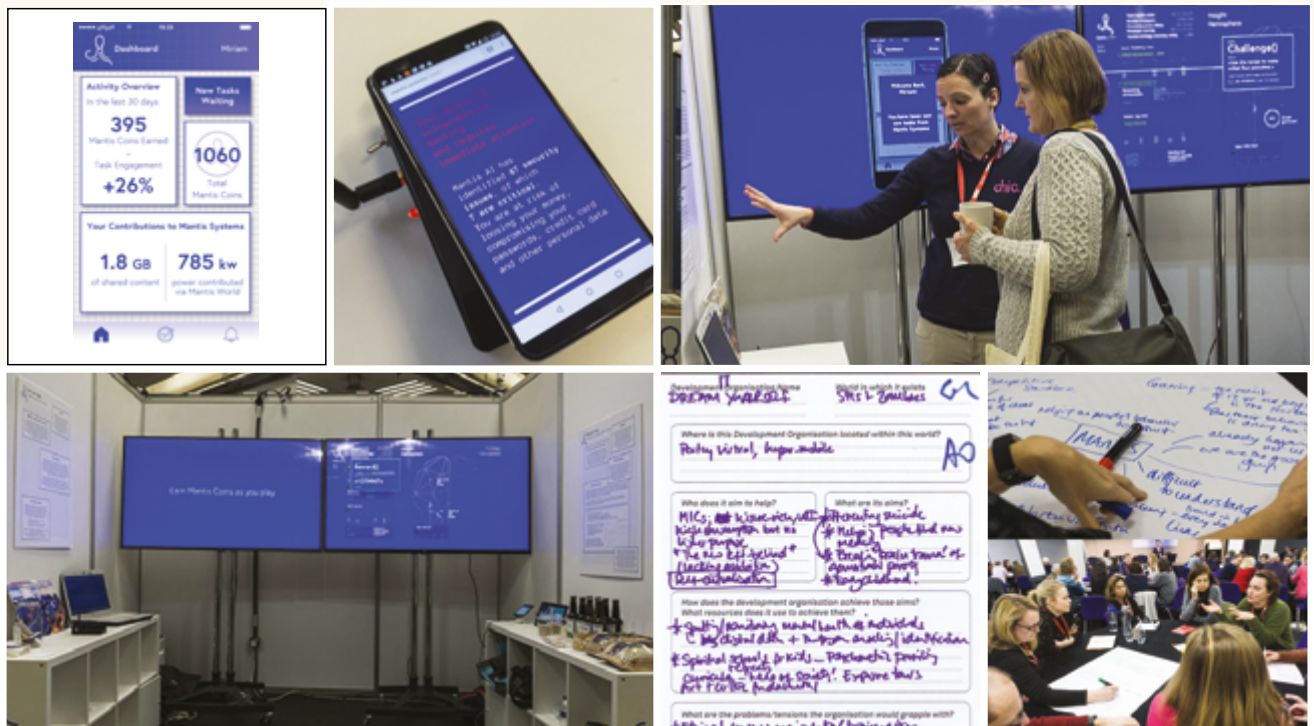


Figure 73 | *Mantis Systems*(2018) by Superflux: The user interface of a mobile app and a phone security-check device contribute to contextualising the narrative of use of the Mantis Systems algorithms (top-left); View of the start-up booth, in a conference of international development organisations (top-right and bottom-left); Extract of members' feedback and participatory workshop with members of the conference. | Image courtesy of Superflux.

To conclude, it seems that **through the analysis of my four projects**, and that of **three projects by other designers** taken in very different contexts, **a typology could be identified and refined**. An additional level was suggested—the 'debated topics' level. Each subcategory is better described and discussed hereafter.

41

DISCUSSION

The Discursive Design Communication System Model

How to describe the way discursive designs actually reach audiences? I made the hypothesis, during my first analysis about *L'Éphéméride*, that reviewing more projects with the same analytical grid would allow me to answer this question. I now draw on the nine³³ different projects reviewed until now to list my learnings on the communication system.

Unfolding this will allow me to address the questions formulated in Chapter 8's discussion: how can designers borrow from discursive design to orchestrate communication situations where artefacts and audiences meet? How to use design to organise communication situations suitable for debate?

The '**General theme**' of a design for debate project appeared to be different from the final topic actually chosen for the debate. Projects such as *Mantis Systems* and *OneHealth* showed us how the theme—here, formulated by a stakeholder—is not yet an issue that may be subject to agreement or disagreement around matters of concerns. I suggested naming these issues the '**debatable topics**,' because a great disparity can sometimes be observed between the issues embodied in the artefacts and the topics actually debated. This was the case of the *Victimeless Leather* project (where seldom information is available on the debated topics) and it was the case of the *Dog & Bone* project (where debated topics concerned animals wellbeing instead of communication technologies—as described in Chapter 3). '**Debated topics**,' in contrast, are terms I used to refer to the actual topics addressed by the audiences. The identification of these three categories of the 'issues' category of the communication system enables to distinguish three elements that have so far been intertwined.

The '**artefact**' category of the communication system is divided in three subcategories. They comprise: the '**fictional situation**,' to which the '**artefact's concept**' belongs; and that is conveyed by the project's '**communication material**.' I understand these subcategories as the initial medium of design for debate and Discursive Design practitioners. Splitting the 'artefact' category in three parts enables to understand how the work of designing can be deployed on different levels, independently. In *L'Éphéméride*, in particular, a multitude of elements came to compose the project's communication material for a single artefact's concept. In other examples, the communication material is used to make the artefact more relatable to the audiences.

³³ *Victimless Leather* (2008), *Symbiots* (2008–2009), *Dog & Bone* (2010–2011), *OneHealth* (2014), *L'Éphéméride* (2015), *Épiculture.app* (2015), *#Hack.my.cafeteria* (2016), *Politique-fiction.fr* (2017), *Mantis Systems* (2018).

For instance, Auger-Loizeau's *Afterlife* (2001–2009), presented in Chapter 5, generated the audiences rejection. Yet, in the redesign operated by the authors, the artefact's concept was kept—the artefact of the 'composting coffin' which transforms human bodies into a battery. The redesign was carried out only on the communication material, adding extracts from wills to the communication of the project.

Beyond the design of an artefact, my analyses revealed how the context in which artefacts and audiences meet can be better described in terms of a '**communication situation**,' again including three categories of structuration. I proposed the term '**activity**' to refer to the experience through which audiences come into contact with design artefacts. Examples comprise an *in situ* exhibition (such as the *OneHealth* scientific poster exhibition), a one-to-one discussion (in the *Symbiots* project), conference booth (in *Mantis Systems*), the reading of a website (*Politique-fiction.fr*) or the visiting of an exhibition (*Victimless Leather*). Having identified this subcategory allows to discriminate and compare different activities among different projects. But also, it is useful to consider several activities within one same project that would employ different strategies to reach audiences (the *Symbiots* project sets three different activities, for instance).

The activities are often part of events. Setting an event does not seem necessary to reach an audience, as the *Symbiots* project exemplifies. But often, the event is influenced by the stakeholder's choices. The *Épicure.app* project and *Mantis Systems* have shown this in particular. They respectively took place during the stakeholder's monthly seminar on their premises; and in a London conference centre, for the annual event of a company and its partners. One of the most striking observations drawn from the variety of settings reviewed in my analyses is that the type of venue chosen to welcome the event (for instance, a cultural centre or a hospital) already sets a frame upon the debate activity. This is why I underline the importance of dedicating a subcategory to this, which I proposed to name as the '**location**.' The '**event**' level, in contrast, is understood as the occasion under which the project is encountered.

Finally, my analyses allowed to examine how the different projects, reviewed until now, intended to reach very different '**audiences**.' They were sometimes broad and unidentified (in the *Victimless Leather* or *Politique-fiction.fr* project) or more constrained to the occupants of a workplace (*#Hack.my.cafeteria*), a neighbourhood (in the *Symbiots* project) or to the attendees of a conference (this was the case in the *Mantis Systems* and the *OneHealth* projects). Having a specific criterion to examine design projects' relation to their audiences could allow, in future research, to further look at the audiences' role regarding the project's 'activity'—as exhibition or website visitors, fictional patients' association members (*Épicure.app*), or codesigners and cafeteria users (*#Hack.my.cafeteria*).

These categories and subcategories provided with a relevant grid to understand the way Discursive Design projects organise a communication situation. It also effectively supported my analysis of other designers' projects. As a consequence, what I suggest to call **the Discursive Design Communication System can be understood as a descriptive model and an analytical tool**. It may be used to unravel the ways a design for debate project reaches audiences **by taking part to a larger system that articulates issues, artefacts and audiences**.

This model may be applicable to analyse discursive designs that do not necessarily intend to spark debate. This is why I called it the Discursive Design Communication System model.

This system is composed of ten categories that are now summarised in a diagrammatic model and an analytical spreadsheet tool.

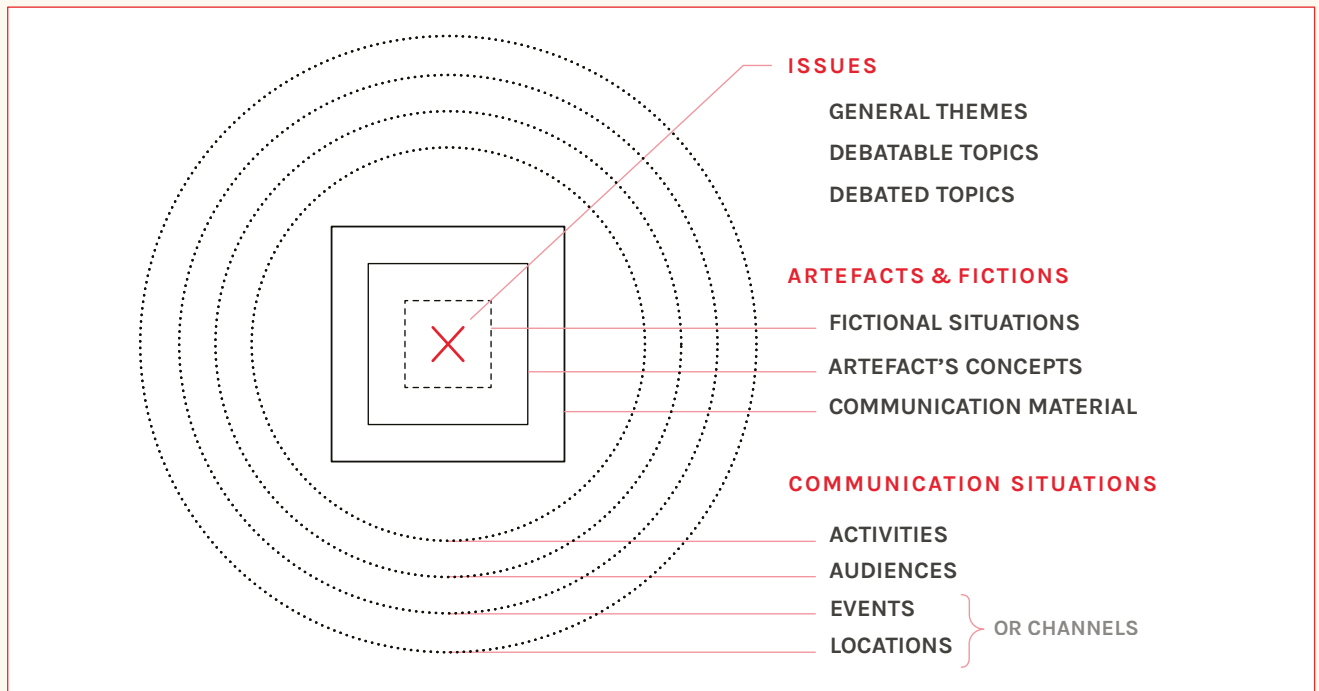


Figure 75 | The Discursive Design Communication System model comprises ten levels gathered into three categories—the issue itself, the artefact (i.e. represented with squares), and its communication situation (i.e. represented with circles).

- **Issues:**
 - The **general themes** are the general topics addressed by the project/ debate (chosen with or by a stakeholder or within an authorial posture).
 - In correspondence with the general themes, the **debatable topics** are the chosen controversial issues aimed at by the debate (identified via discourse analysis or by co-designing with the concerned actors, for instance).
 - The **debated topics** are the topics that emerge through the debate with the audiences (whether or not it is coherent with the chosen 'debatable' topics).
- **Artefacts:**
 - The **fictional situations** support the artefact's existence (e.g. it is a set of unfamiliar values, results from a world-building exercise, an ecosystem lying off-frame, a story, a fiction, a diegesis).
 - The **concepts** of the artefacts belong to the previous situation, ecosystem, or story (in the case of a story, the artefact may be called a diegetic prototype³⁴).
 - The **communication material** includes designed representations of the previous concept (e.g. prop of an artefact's concept, a fictional advertisement, narratives of uses).³⁵ Through these three levels, artefacts embody issues. In order to convey them, they meet audiences within communication situations.
- **Communication situations:**
 - The **activities** are the experiences through which the audiences come into contact with the communication material (e.g. exhibition attendance, debate workshops, role-playing).
 - The **audiences** are composed of people 'reached' by the project. Depending on the event and location of encounter, the audiences may be very broad and unidentified, or well-known and constrained. The audiences often include the stakeholder (if there is one).
 - The **events** are the occasion under which the project is encountered.
 - The **locations** are the places welcoming the event. The type of venue already sets a frame to the reflective experience (e.g. a cultural centre, a hospital).
 - **Channels:** Locations and events may both be replaced by a 'channel' level when the project circulates through mass and/or online media, for instance.

³⁴ Bruce Sterling, 'Design Fiction: Diegetic Prototypes,' Wired (Blog), 5 February 2011, wired.com/2011/02/design-fiction-diegetic-prototypes/ (accessed Feb 2019).

³⁵ Malpass, *Critical Design in Context*, 47.

It is to be noted that the model, while offering an abstracted graphic representation, can be turned into figurative representations during analysis phases. See [Appendix | CH9 | Analytical Tool](#).

When employed as an analytical tool, the diagram may be used in the form of a spreadsheet:

Discursive Design's Communication System Analytical Spreadsheet	
Title of the project (year), Authors:	
ISSUES/The general themes:	.....
ISSUES/The debatable topics:	.....
ARTEFACTS/The fictional situation:	.....
ARTEFACTS/The concepts:	.....
ARTEFACTS/The communication material:	.....
COM SITU/The activities:	.....
COM SITU/The audiences:	.....
COM SITU/The events:	.....
COM SITU/The locations:	.....
ISSUES/The debated topics:	.....

Figure 76 | Discursive Design's Communication System Analytical Spreadsheet.
The 'debated topics' level is placed at the bottom in case longer verbatim extracts need to be noted.

42 KEY LEARNINGS Articulating Issues, Artefacts, Audiences and Their Respective Context

This chapter allowed me to focus on the way discursive designs for debate reach their audiences.

At this point, I think designs for debate reach audiences through a communication situation—the actual situation in which artefacts and audiences meet. This situation can be described as part of what I call a larger ‘communication system,’ composed of three main categories and ten levels. It can be employed as a descriptive model or an analytical tool

The main rationale for this conclusion is the typology that emerged from comparing *Dog & Bone*, *L'Éphéméride*, and four of my projects especially developed to explore different contexts for meeting audiences. Using this typology as an analytical grid, to review the projects of three other designers, led me to develop a pragmatist and communicative perspective when enquiring about these projects. Looking for the ‘location’ where the *Mantis Systems* project was circulated forced me to expand my research beyond the initial information source (the Superflux website) to reconstitute an overall picture of the ‘situation’ where the artefacts and the audiences met.

The contribution offered in this chapter is:

- The Discursive Design Communication System model (i.e. a descriptive model and an analytical tool).

‘Reaching’ audiences and ‘engaging’ them are intermingled functions of design for debate. In Chapter 10, I will study how to play with different levels of the communication system in order to engage audiences with issues. To this aim, I will examine the relationship that the designer may have with the communication situation (more or less distant, more or less deliberately addressed in the designing process).

CH10 TACTIC **Engaging a Chosen Audience With Issues**

Chapter 10 is my final experimental chapter. I compare again the projects studied and the data produced in Chapter 9. I use this to discuss the way designers may ‘insert’ themselves within existing audiences.

43 *AIMS & PROTOCOL* Three Complementary Analyses Drawing on Data Generated in Chapter 9

I detailed in Chapter 3 why I study design for debate's function of 'engaging a chosen audience,' rather than the 'prompting of a public to come together' regarding a chosen issue.¹ The designer's insertion in the context of pre-established audiences is central in order to bypass public construction and to get informed in the choice of an under-discussed debate topic—while avoiding the author-designer's position of control.

Now that we know more about how to reach audiences, I ask: how to engage audiences with debate issues? How can they be personally interested and touched so that a matter of concern is indeed their concern? And how can this be done otherwise than by encouraging the construction of audiences that are unidentified, or foreign to the issue at stake?

To answer these questions, I have conducted three analyses. I start by reinterpreting the results of the experiments presented in the previous chapter. In particular, I draw on other designers' projects and look at what they did so as to design the communication situation—in order to engage their audiences. I then look at my own projects regarding the 'insertion' approach. I compare my four design projects to identify what this approach may bring to a debate enterprise. Finally, in order to deepen my learning on this 'insertion' approach, I examine in more detail how it was implemented in one of my four projects, *#Hack.my.cafeteria* (2016). With this, I try to characterise the design work carried to put into relation the issue, the artefact, and the audience within a communication situation.

¹ Unidentified publics construction is often attempted through feeding public discourse in mass media. Within this approach, it is hard to control what issues the public (including curators or journalists) will construct upon. When combined to an authorial posture, an elitist separation may be made between experts and non-experts. In addition, authorial postures of issues finding lack relevance regarding the most pressing issues of contemporary societies. They are subject to the designer' own blind-spot regarding their privileges.

44 ANALYSIS & RESULTS Unravelling the Use of a Communication System that Engages Audiences

44.A Setting a Coherence Between Issues Debated, Interested Audiences and the Locations Where to Find Them

In Chapter 9, I noted that a number of design projects give a peculiar attention to the situation of communication in which they meet their audience. Among them, I chose three projects according to the different contexts in which they were developed (i.e. an academic, professional and artistic context—chosen as a counter-example). I now ask: what kind of design work has been done in these projects, with regard to the communication situation in order to engage audiences?

The *Victimless Leather* project (2004), intended to spark debate on the technological possibility of wearing leather without killing an animal. For this, its communication material was a working prototype of a synthetic-skin manufacturing machine. The locations and events in which the project was featured included numerous international exhibitions. Audiences encountered the artefacts while visiting the exhibitions. No precise audience members were identified in my analysis from Chapter 9 and no verbatim extract of debated topics were reported by the designer.

Second, the *Symbiots* project (2008–09) intended to spark reflection on the values related to everyday interactions with energy. The artefacts included a series of photographs representing (fictional) Swedish streetlight scenes. Laid out in a poster/leaflet format, artefacts were used to interact with specific audiences in a specific location. They were used to conduct interviews in peoples' houses in the chosen neighbourhood where the photographs were taken (Aspudden City, Sweden). The project targeted, triggered, and reported discussions on issues related to energy consumption.

Third, the *Mantis Systems* project (2018) intended to engage practitioners of the 'international development sector' with reflection about the promises and challenges of artificial intelligence for such a professional field. An audience of a thousand professionals attended the stakeholder's event at a conference centre in London. The design concept embodying the issue was a software application continuously modelling and avoiding systemic risks. Its communication material included an interactive app mock-up, a game, a phone security-check device, and suchlike. It was made accessible through two activities—a (fictional/under cover) start-up booth and a participatory workshop with members of the conference. Extracts of members' reactions helped to identify several debated topics.

The following table summarises and compares the different projects.

	<i>Victimless Leather (2008)</i> by Catts and Zurr	<i>Symbiots (2008–09)</i> by Bergström, Mazé et.al.	<i>Mantis Systems (2018)</i> by Superflux
ISSUES/The general themes :	Synthetic biology	Energy consumption and ecology	Agility in job evolution of international development organisation (discussed through and geared towards unconventional and longer-term thinking)
ISSUES/The debatable topics:	Wearing 'leather' without killing an animal	Human- or Eco-centred values related energy consumption.	The power, banality, promises, and challenges of machine learning algorithm technology
ISSUES/The debated topics:	No actual available verbatim of the audiences' feedback.	Saving energy in relation to the cost of life and family imperatives from politically correct to socially acceptable ideas, issues of individualism, collaboration, and competition at local-citizen and inter-business level.	Envy towards the employment of data-driven technologies, action strategy's dependency upon traditional funding, the future of work in this sector, 'human-AI' relationships.
ARTEFACTS/ The artifact's concept	/ (Not analysed.)	/	/
ARTEFACTS/ The fictional situation	/ (Not analysed.)	/	/
ARTEFACTS/	(The artifact's concept, and fictional situation are not analysed.)		
ARTEFACTS/The communication material :	Demo, working prototype, photos of the creation process	Series of fine-art pictures mainly used as posters	A video of the software interface, 'a game trailer, a demo of the app and a NFC box which installed fake ransomware on android phones with one tap'
COM SITU/The activities :	Exhibition attendance (No guided tour)	Posters were presented as billboards, or received as fold-up pamphlets meant for personal distribution, or placed pre-stamped in mailboxes to be returned with comments, or unfolded in one-on-one interviews	A participatory workshop and an undercover promotional start-up booth (presenting the previous material and the business model of the agency, their branding and social media strategy, as well as the AI's cognitive functionality)
COM SITU/The audiences :	Unknown (might be self-constructed or composed of people interested in the topic of the exhibition or about the exhibition venue)	'Ordinary people' from a neighbourhood in Sweden (Aspudden) in which one of the photoshoots took place	1,000 professionals of the international development sector, clients of the Bond company (during the booth exhibition), and 125 senior members (during the workshop)
COM SITU/The events :	<i>The Design and the Elastic Mind</i> exhibition curated by Paola Antonelli (2008)	No actual event	The Bond Annual Conference and Awards 2018
COM SITU/The locations :	Museum of Modern Art, New York, USA.	People's houses or in the streets of the chosen neighbourhood (Aspudden City)	A 'conference, events and exhibition space in central London' (The Queen Elizabeth II Centre)

Table 17 | This comparative table gathers the data produced in Chapter 9 when analysing the work done on the different subcategories of the communication system—for three projects made by Catts and Zurr, by Bergström, Mazé et.al. and by Superflux.

The formal aesthetic employed in each project demonstrates a form of coherence and regard for the communication situations in which they are circulated. For example, in *Victimless Leather* (2008) a contemporary art aesthetic has been conferred on an artefact circulated in art venues among exhibition visitors. For *Mantis Systems* (2018), a formal aesthetic of a start-up technology product was used to present artefacts in a conference for professionals.

However, there is a significant difference between the project circulated in the exhibition context and the others. It is no longer the *formal aesthetics* of the artefact and the situation that must be compared. The difference lies in the adequacy that is set between the *debatable topic* and the communication situation (and in particular, towards the kinds of audiences reached). In *Victimless Leather*, the issue (the relationship of exploitation and violence made to living beings by humans) could have been proposed for debate in a place, or an event, that would be appropriate to meet audiences concerned by this topic—e.g. the agriculture fair or the fashion-week. Conversely, in the other two projects circulated outside artistic contexts, there is a strong coherence between the subject to be discussed, and the communication situation in which the work and audiences meet. *Symbiots* talks about electricity consumption in Sweden, in a district of a Swedish city, to consumers on the Swedish electricity grid. *Mantis Systems* deals with technological upheavals and future living conditions for developing populations, it is staged in a conference bringing together actors specialised on developing populations' issues.

Certainly, the difference between the art exhibited project and the other ones comes in part from the different intentions of each project. Also, it is often the curator's job to set a coherence between exhibited pieces, the exhibition event's topic and the targeted audiences. That said, observations pertaining to the collaboration between curators and artists are not the most relevant conclusion to be drawn here, given my research question. As mentioned in Chapter 3, the art exhibition communication situation is rather favourable to the dissemination of an issue, than it is for interpersonal encounter and debate. Rather, the first conclusion to be drawn is that **some designers demonstrate a concern for coherence between the three main categories of the communication system**—between the chosen outcome, the designed artefact and the situation in which it is circulated. For example, the *Symbiots* project combines a topic for discussion, audiences potentially interested in this issue and the location where these audiences may be found.

The designers' creative intervention is not limited to the design of an artefact. The *Mantis Systems* project demonstrates particularly well how designers can actually deploy their debatable topic through the 'activities' themselves (in this case, a fictional start-up booth). Hence, while Noortje Marres refers to one object in which issuefication is operated, *the Mantis Systems example makes it possible to formulate the following hypothesis: issuefication may be deliberately deployed through the various subcategories of a communication system, not solely the artefact.*

Furthermore, both the *Mantis Systems* and the *Symbiots* projects developed artefacts and activities while paying pragmatist attention to the pre-existing situation in which they inserted themselves (in these cases, a stakeholder's event in a conference venue, or a precise neighbourhood in Sweden in which the project's communication material has been shot). In fact, these activities are specifically designed—and only valid—for one place, one event, one audience. I therefore suggest that **the audience can be considered as the 'user' of the debate situation**. Here, the term user **opens the possibility of a 'user-centred' approach in the choice of the debatable topic and in the place where the audiences are met**. I suggest this approach can help to better understand the work setting a coherence between issues, artefacts and communication situations.

These interpretations shed light, in part, on how other designers have developed a practice that has not only reached audiences. They have tried to engage them in issues, by putting them at the centre of their design choices, which are not limited to the creation of an artefact.

44.B Joining Audiences in Their Context Enables the Deliberate Design of a Whole Communication System

The choice of a debatable topic and its interaction with other subcategories of the communication system seems to be a significant component in the projects of other designers. I have therefore examined my own projects on this matter and I further looked at how I personally engaged the public after reaching them.

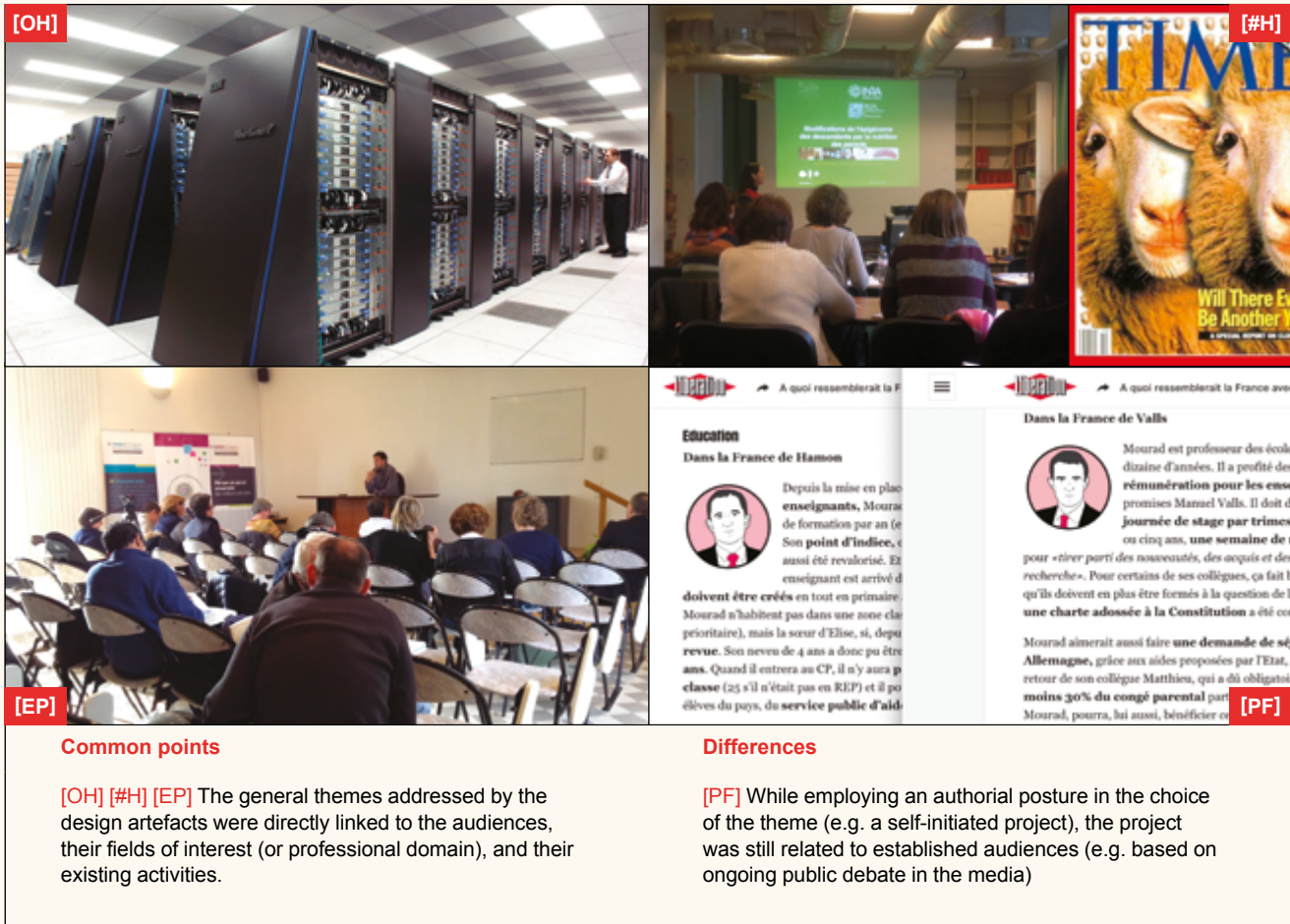
In my four projects, my working hypothesis regarding audiences' engagement was to join pre-established audiences in their contexts. Hereafter, I examined how this strategy has impacted my design process on each level of the communication system.

In order to pass each level of the communication system under the scrutiny of the analysis, I compared my projects by using a visual juxtaposition method, the annotated portfolio. In each portfolio, four visuals are given and annotated,² one for each design projects.

I refer to the four design projects with the following abbreviations—*OneHealth* as [OH], *#Hack.my.cafeteria* as [#H], *Épicure.app* as [Ep], and *Politique-fiction.fr* as [PF].

² The visuals used are extracted from the pictorial presentations given in the introductory chapter to the present experiments. The annotations placed below each set of visuals are extracted and reformulated from: the empirical findings presented in each pictorial; and from the analyses conducted in Chapter 9.

44.B.1 The General Themes



Common points

[OH] [#H] [EP] The general themes addressed by the design artefacts were directly linked to the audiences, their fields of interest (or professional domain), and their existing activities.

Differences

[PF] While employing an authorial posture in the choice of the theme (e.g. a self-initiated project), the project was still related to established audiences (e.g. based on ongoing public debate in the media)

Figure 76 | Comparing the work done on the 'general theme' subcategory of the communication system for my four projects.

In these examples, working for a stakeholder implied a loss of authorship on the designer's side, regarding the choice of the general theme. It brought the approach closer to a commissioned work.³ In contrast, working without a stakeholder and within an authorial posture—while selecting a general theme for the debate project—does not mean ignoring the audience's areas of interest. For *Political-fiction.fr*, I chose the general theme because of the audience, already constructed around the mediated issue. Hence, I adopted **two distinct postures of insertion** in my four projects.

³ In my case, the very first projects with INRA and the *Espace Éthique*, were framed as 'collaborations,' but following ones switched to actual (paid) commissions (i.e. *#Hack.my.cafeteria* and *Épique.app* are part of them).

44.B.2 The Debatable Topics

Common points

[OH] [EP] [PF] Debatable topics were identified by means of a review of existing discourses and practices through various sources of information—such as interviews of stakeholders, press and media sources, visiting work-places, field experience, etc.

Differences

Debatable topics were:

- [EP] Unknown.
- [OH] [#H] Known but untold.
- [PF] Known but unintelligible (polemical, over-debated, saturated, un-debatable).

Figure 77 | Comparing the work done on the 'debatable topics' subcategory of the communication system for my four projects.

In the previous examples, adjusting the choice of topics to specific audiences was made by conducting research on the topic itself, but also on the target audiences.

In addition, a taxonomy of the different natures of debatable topics was listed.⁴ Designing for debate seems preferably orientated towards tackling complex issues that are:

- Known but unintelligible (polemical, un-debatable).
- Unknown (unthought-of, speculative).
- Known but untold (taboo).

Drawing on *L'Éphéméride* and on the *Dingdong Manifesto* cited in Chapter 7, I add a fourth kind of issues, the ones that are:

- Told but unheard (muted—i.e. matters of concern that are marginal and not visible).

The fact of joining established audiences in their context **made it possible to study the audience** so as to **identify relevant under-discussed issues**. These issues may be under-discussed for a variety of reasons.

⁴ It is notable how the following list corroborates some of the elements outlined in Chapter 8 when listing the 22 qualities of design for debate from a stakeholder's point of view.

44.B.3 The Artefacts

 <p>[OH]</p>	 <p>[#H]</p>
 <p>[EP]</p>	 <p>[PF]</p>
<p>Common points</p> <p>[All projects] The formal aesthetic of the representations employed a visual language that was familiar to the targeted audience.</p>	<p>Differences</p> <p>The visual language was chosen according to:</p> <ul style="list-style-type: none"> • [#H] The fictional proposition (e.g. a cafeteria menu helps to introduce a new animal species). • [OH] It was inherited from the targeted audiences' practices (e.g. a scientific poster is familiar to scientists). <p>The formal aesthetic chosen was relative to the artefacts' respective makers, such as:</p> <ul style="list-style-type: none"> • [EP] The designers (here, myself). • [#H] The members of the audience.

Figure 78 | Comparing the work of design developed for the 'artefact' category in my four projects.

Within the artefact category (comprising the communication material, the artefact's concept and the fictional situation) the formal aesthetic of the artefact intended to make the debatable topic familiar and accessible to the audiences. For instance, the visual language of scientific posters is familiar to scientists).

This play on the 'formal aesthetic' is not arbitrary, it draws a 'perceptual bridge' (as reported from Auger's words in Chapter 5). Being inserted within existing audiences allowed **my design choices to be informed by the study of the audiences' practices and visual culture.**

44.B.4 The Activities



Figure 79 | Comparing the work done on the 'activities' subcategory of the communication system for my four projects.

I previously observed that the formal aesthetic of the artefact was chosen to be familiar to the audiences. Here, regarding the activity level, inserting myself in existing audiences also allowed to choose **activities that seemed familiar** to the audiences (e.g. lunchtime, poster exhibition, concluding talk of a doctoral week). Three different approaches were taken regarding the audiences' existing context—the activities **mimicked, merged with, or infiltrated the audiences' usual context and practices**.

44.B.5 The Location & Events

Through this fifth annotated portfolio, I gathered two subcategories that were often mutually dependent in the observed situations.



Figure 80 | Comparing the work done on the 'locations' and 'events' subcategories of the communication system for my four projects.

Looking at the event—the occasion under which the project was encountered—and the location—the place where artefacts and audiences met—allowed one main observation. The artefact was inserted into the audience's **familiar environments and events**. In some cases, it came close to an infiltration practice aiming at **surprising the audiences from within their comfort zone**. For instance, in the manner of a hoax, students and I modified the scientific campus cafeteria menu, for the *#Hack.my.cafeteria* (2016) project. In another approach, the *OneHealth* (2014) project was the occasion to feature in an event without being announced to the programme—which could be seen as a form of pirating of the event.

44.B.6 The Audiences

Common points

Audiences were pre-constructed around topics of interest:

- [OH] The theme of a conference to which they registered.
- [EP] The programme of a monthly seminar.
- [#H] The programme of talks given to students as part of a doctoral week.

Differences

Audiences were pre-constructed, in a very different way, around topics of interest:

- [PF] The audiences were broadly pre-constructed (probably by virtue of being exposed to mass media), although a small part of them specifically gathered around the topic of debating the potential consequences of the election results.

Figure 81 | Comparing the work done on the 'audiences' subcategory of the communication system for my four projects.

Here, the three main categories of the communication system—issues, artefacts, communication situations—appear to be articulated in a coherent way in regard of the target audience. This confirms what was observed in the analysis of other designers' project: issuefication seems to be **indeed deliberately deployable on various levels of a communication system, beyond the single artefact**.

Yet, the strategy I chose to engage audiences—i.e. 'insertion' into a pre-constructed audience—had another consequence. Joining audiences in their respective contexts was a way **to stage the debate through pre-existing dynamics of activities** (part of programmed events, planned in specific locations) **and a pre-existing fabric of issues** already carried by people (including debate participants, stakeholders and institutions). My four projects **composed with the components of an existing context so as to orchestrate a communication situation** were artefacts and audiences could meet within an activity dedicated to debating.

One of the **contributions of this analysis** is to suggest the Discursive Design Communication System model not only as an analytical tool, but as methodological guidelines for design practice.

I have learnt that a pragmatic approach to design for debate can lead the practitioners to insert themselves into a field of tensions. This field is made up of pre-existing discourses, practices and actors. Addressing this field through a multi-level design intervention, supported by the communication system, may enable to transform this social situation into a communication situation linking issues, artefacts, and audiences. Taking part to (or infiltrating) this field of tensions seems to be part of what makes it possible to identify familiar and under-discussed elements, to make them visible and open to debate.

44.C Sparking Debate Among and About the Audience Itself

It therefore seems that the designer links issues and audiences by composing and playing with the familiarity of an existing context. However, some questions remain. How exactly did I infiltrate, or play with the familiarity of the situations? How did I deliberately orchestrate a communication situation? And how did the level of the ‘artefact’ itself (the fictional situation, the concept of the artefact and the communication material) work in concert with the other levels of the communication system?

To clarify this aspect of my ‘insertion’ approach developed so far, I would like to look at one project more specifically—the *#Hack.my.cafeteria* project. I chose this project because it developed an *in situ* (an on-site) approach that I would like to analyse hereafter. I focus—within the *#Hack.my.cafeteria* project—on one of the two scenarios that animal microbiology students explored. They called it the “Chickowtrout” scenario. It introduces a ‘chicken-cow-trout’ genetically-edited species that answers all the needs of the animal food industry.

In this scenario a post-climatic change emergency legitimised the emergence of new relations among existing actors—agronomic researchers, the food industry, the realm of animal species, and cafeteria managers of research campuses beyond current ethical regulations. For instance, the stakeholder (INRA) was pictured as building new partnerships (with the McDonald’s Corporation) to fund research.⁵

⁵ Students’ proposal also included funding from the WHO (World Health Organisation, or OMS in French), and the FAO (Food and Agriculture Organisation of the United Nations).



Figure 82 | The logos placed on the project communication material—i.e. here a promotional flyer placed in the cafeteria—suggest that INRA and McDonald funded the *Chickowtrout* project.

One part of the audiences (the students) were staged as being the main carrier of the Chickowtrout project. The research project was (fictionally) conducted by former INRA Ph.D. students that had a doctoral week in the campus, years ago, and come back today to present their research results.



Figure 83 | Preview of one of the projects 'activities' staging Ph.D. students as themselves, 10 years later, as if they were the founders of the *Chickowtrout* project.

Another part of the audiences (the senior researchers) were staged as themselves, but as if they actually tried a sample of the research results during lunchtime in the campus cafeteria.



Figure 84 | Meet-based, egg-based, milk-based and fish-based dishes were changed, on the cafeteria menu, by adding the terms, 'made with chickowtrout ingredients.'

In other words, the fictional situation created for the project (so as to support the creation of artefacts) proposed a fictitious representation of existing actors pertaining to the real situation in which the project was circulated. It actually staged the existing actors within a fiction where their relations were changed—here, a new species that implies that ethics regulations and research funding have changed.

In short, by looking at how I have inserted myself into audiences, the relationship set between the debatable topic and the audiences reached can now be better characterised. This analysis shows how **the components of the real communication situation**—the project delivery activities, the audiences, the event, the location—**were all involved as components of the fictional situation**, that informed the design of the artefacts and their communication material.

To be precise, the *#Hack.my.cafeteria* artefacts could have been featured in an exhibition about synthetic biology, in order to reach the arts communities. It could have triggered a debate in a TED talk conference to reach decision makers. But it involved, instead, the first actors concerned and responsible for the debated issue (microbiology scientists) right from their workplace, at lunchtime, and along the context of a doctoral seminar. Hence my approach of joining the audiences in their own situation seemed to have intended to **engage the debate participants with issues by:**

- **Having the audiences actively debating about themselves** (i.e. about an alternative version of themselves).
- **Doing this 'from within' their usual context.**

Before to proceed to the discussion, it is important to draw attention to the fact the observations made on this project may also apply to other ones like, *Politique-fiction.fr* (2017) and *Symbiots* (2008–09). Both projects staged audiences in their own context. The project on elections portrayed voters as future citizens living in France, but governed in a different way. The project exploring energy consumption issues depicted altered version of the homes and public spaces of a neighbourhood and its residents, with whom discussions were then conducted.

45 DISCUSSION Audiences Engagement from Within Their Context, Gathering Humans, Artefacts, and Fictional Actors

So far the challenge is to understand the articulation between fiction, the situation of communication and the designer's fieldwork, which seem to me to belong to three distinguished planes.

Further examining this will allow me to address a question formulated in Chapter 8's discussion: what does a multidisciplinary perspective bring to understand the communicative and *political* qualities of design for debate?

45.A Two Distinct Approaches to Inserting Artefacts in Audiences' Context

I would like to come back to the results of my second analysis, which drew on a series of annotated portfolios. It will allow to better describe what is meant by the term insertion. In this analysis, I had studied my four design projects. I pointed out that being part of pre-established audiences is a matter of staging debatable issues through dynamics of activities that pre-exist the project's creation.

To discuss this result, it is necessary to situate my original hypothesis—that of joining pre-established audiences in their context in order to start debates that seem relevant to them and that engages them personally. My hypothesis elaborates on Carl DiSalvo's drawing on John Dewey's *The Public and Its Problems*. DiSalvo borrows from Dewey the same criticism formulated by Walter Lippmann and reformulated by Latour in his preface to the French edition of *The Phantom Audience*—the dissolution of the illusory idea of one 'public' and the understanding of the construction of audiences around specific societal issues.⁶ In contrast with design projects that count on the construction of publics, I intended to avoid two pitfalls of such an approach: having to wait for an audience to be constructed before to actually start a debate; and choosing arbitrary issues relative to the designer's own concern. Therefore, throughout all my experimental chapters and up until the present point, I have tested the hypothesis according to which designers could involve pre-constructed audiences and tackle situated issues.

I now observe that a notable change in my design process occurred after I had stepped out of the exhibition space. Working with stakeholders and their respective audiences enables the **insertion of the artefacts produced**. It also allows the insertion of **the designers themselves, into the activities of the actors concerned** with this issue—and constructed before the creation of the artefacts. This was the case when contributing to INRA's doctoral week, or to *Espace Éthique*'s monthly seminars, for instance. This is also the case for Superflux's *Mantis Systems*' contribution to the Bond company's award conference.

⁶ DiSalvo, 'Design and the Construction of Publics.' | Lippmann, *The Phantom Public*. | Dewey, *The Public and Its Problems*.

But was it the case for *Politique-fiction.fr*? This project was built as a counter-example to the communication strategy established so far. Indeed, this project was not developed with a stakeholder. I did not reach precisely identified audiences. It was partly circulated via mass media (i.e. website and social media).

Comparing it with other projects revealed that two distinct approaches seem possible to fit into a pre-existing audience. On the one hand, I compared such an approach to **a form of infiltration**, aimed at **surprising the audiences from within their existing activities** and thereby drawing them **out of their comfort zone**. This infiltration approach **verged on the hoax**, in the *#Hack.my.cafeteria* project for instance, when dispatching fictional concepts in the shape of restaurant menus in the cafeteria of an agronomic research campus. It can be considered as an example of the Trojan Horse posture of the designer that I phrased as a hypothesis in Chapter 8's discussion

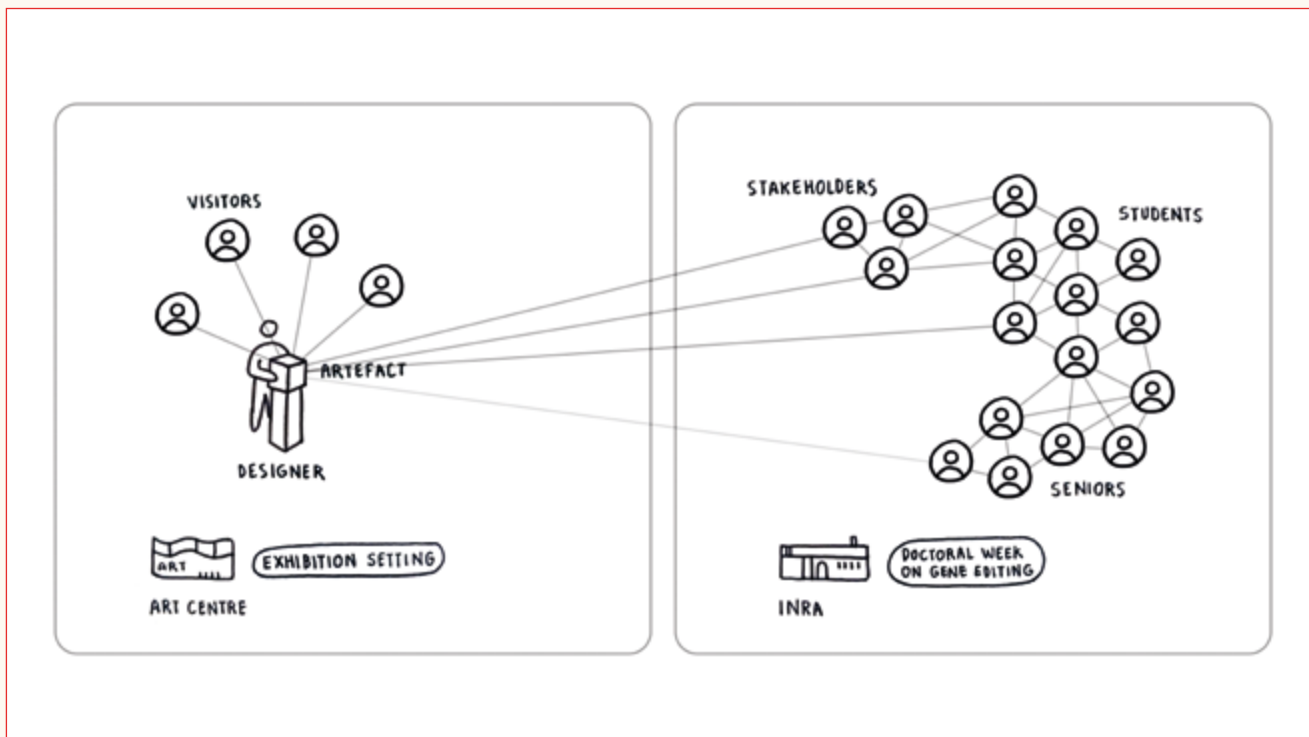


Figure 85 | In order to picture the insertion approach, I sketched two situations. Here, the INRA doctoral week situation is pictured as if the *#Hack.my.cafeteria* project would have been circulated in an art exhibition.

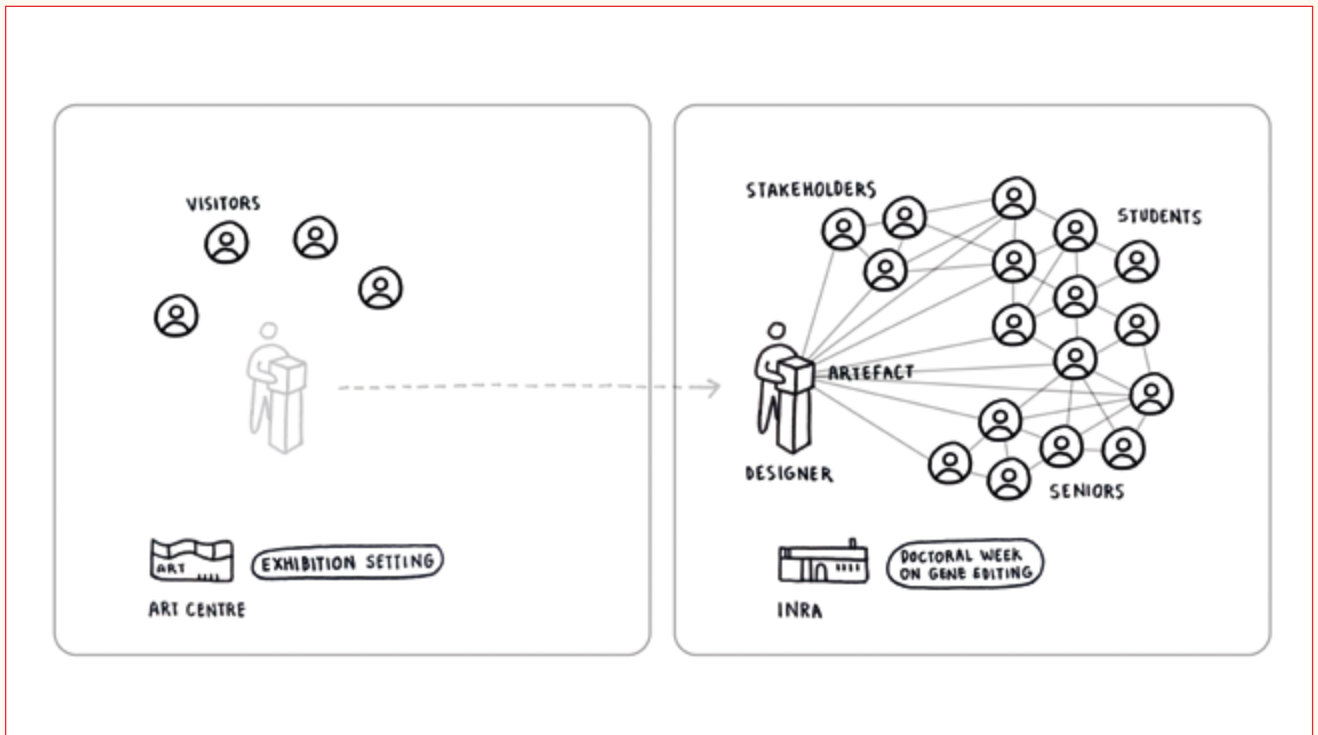


Figure 86 | This second sketch pictures the infiltration of the artefact in the doctoral week situation—e.g. a *Chickowtrout* flyer given in the campus cafeteria. In comparison to the first sketch, additional connections link the artefact to the actors in place at INRA, the day when the debate happened.

On the other hand, *Politique-fiction.fr* did not infiltrate the activities of a pre-existing and local audience. This project did not participate in the construction of audiences ‘from scratch’ but actually ‘borrowed,’ ‘reoriented,’ or ‘diverted’ streams of audience attention already constructed around a topic circulated in mass and online media—that is, the French elections. This approach could be compared to other forms of tactical media strategy, like creating the copy of a website to divert the attention of visitors interested in the original website.⁷

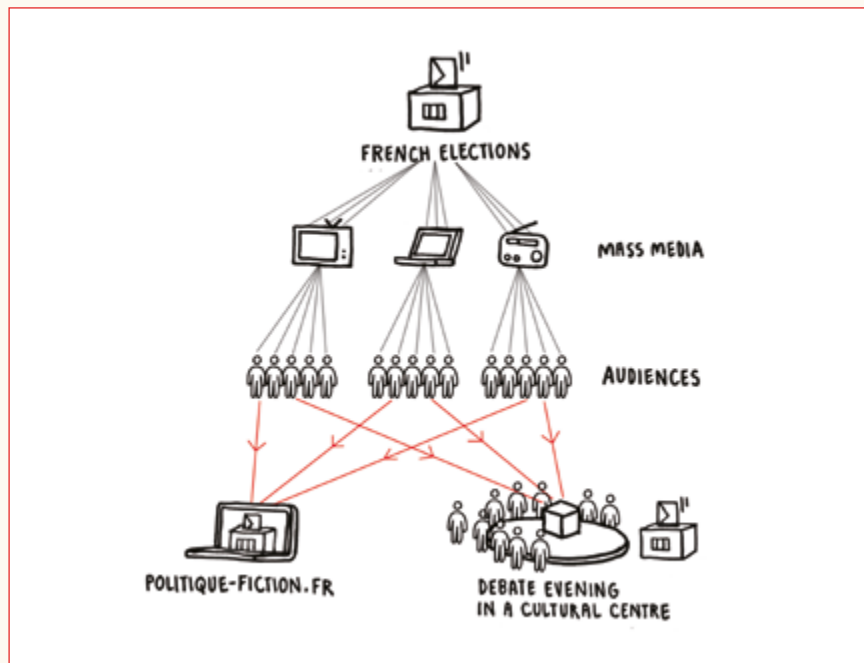


Figure 87 | This diagram gives a very schematic representation of a situation where the *politique-fiction.fr* website and its associated debate event diverted the audiences’ attention—that was initially directed towards the French presidential elections.

I propose that both ‘infiltration’ and ‘diversion’ can be better seen as different modes of insertion into pre-constructed audiences.

- **Infiltration** describes the way designers and artefacts may physically join pre-constructed audiences in their respective contexts.
- **Diversion** describes the way a media streams of audience attention, already constructed around a topic circulated in mass and online media, may be redirected to another communication situation.

These two modes are part of the same pragmatist stance. They aim to enable the designer to be informed of the under-discussed debatable issues that seem relevant to given audiences.

⁷ This is what the Yes Men call a “funhouse mirror” website, a visual duplicate of an official site, usually at a domain name close enough to the original to allow confusion, according to **Lambert-Beatty**, ‘Believing in Parafiction,’ 76.

45.B Orchestrating a Communication Situation Between Human, Non-Human, Actual and Fictional Actors

I would now like to discuss the results of my analyses regarding the specific approach implemented in the *#Hack.my.cafeteria* project—especially since this approach is not unique to this project and can be found to some extent in projects such as *Symbiot* and *Politique-fiction.fr*.

In the first place, the *#Hack.my.cafeteria* project made it possible to observe how new relations were imagined among agronomic researchers, the food industry, the realm of animal species, and cafeteria managers of research campuses—beyond current ethical regulations. It is useful to draw on STS studies to clarify this.

In Bruno Latour’s Actor Network Theory (also developed by Madeleine Akrich and Michel Callon),⁸ the sociologist and philosopher of sciences describes how scientists historically separated humans and non-humans when studying society, which is an inheritance from modernist philosophy.⁹ He proposed to consider both entities as “actors” who are linked by their mutual interactions within a “network”¹⁰ of actors. In other words, when designers create an artefact they add a new actor to the world, one that is a node in a constellation of other actors that enabled it into being. This constellation includes the user, the shop, the transporter, the factory, to which can be added the workers and the materials all along this chain.

Can designing for debate therefore be seen as adding an artefact to a network of actors concerned by an issue? Yes, but not only. The communication material of the *#Hack.my.cafeteria* project was actual nodes between the microbiology Ph.D. students, the senior researchers that came to the cafeteria that day, the cafeteria owner, myself, and the stakeholder that commissioned the work. Inserting an artefact in an existing context can be seen as creating a node in a situation composed of other actors.

Yet, the previous connections are not the only ones set by the artefact. The artefact is indeed extracted to a ‘fictional situation’ that differs from reality. Getting back to the concept of fictional situation is here useful. I referenced the Extrapolation Factory’s manual of design speculation in Chapter 9 when setting the ‘fictional situation’ level. According to their authors, employing the visual language of massively produced design suspends the audiences’ incredulity by faking the product’s belonging to a whole world that is off-frame.

⁸ **Bruno Latour**, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford: Oxford University Press, 2005). | **Madeleine Akrich, Michel Callon, and Bruno Latour**, *Sociologie de la traduction: textes fondateurs*, ed. Centre de sociologie de l’innovation, laboratoire de sociologie de Mines ParisTech (Paris: Les presses de l’école des mines, 2006).

⁹ **Bruno Latour**, *Sur le culte moderne des dieux faitiches suivi de Iconoclash* (Paris: La Découverte : Les empêcheurs de penser en rond, 2009). | **Tobie Nathan and Isabelle Stengers**, *Médecins et sorciers* (Paris: Les Empêcheurs de penser en rond : La Découverte, 2012).

¹⁰ Mapping a network needs an anthropological field work and clearly appears when a link is broken in the chain of actors. (For instance, when a *person* gets fired by their *boss*, because arriving late to the *office* again, after waiting in a 2 Km *queue*, in the *car*, at the *gas station*, because of the *workers* strike of a *refinery* on the other side of the globe.)

The artefact works as a ‘narrative hint’ pointing at this remote world.¹¹ The designer crafts not only artefacts but the whole ecosystem that supports them—that I suggested to call the fictional situation. In #Hack.my.cafeteria the fictional world is staging existing actors concerned by an issue, but it reconfigures the relations existing between these actors. Indeed, by the very fact of pretending to exist—while being a fiction—the Chickowtrout scenario materialises the hypothesis that ethics regulation actors, McDonald, INRA and the INRA campus cafeteria wove different relations.

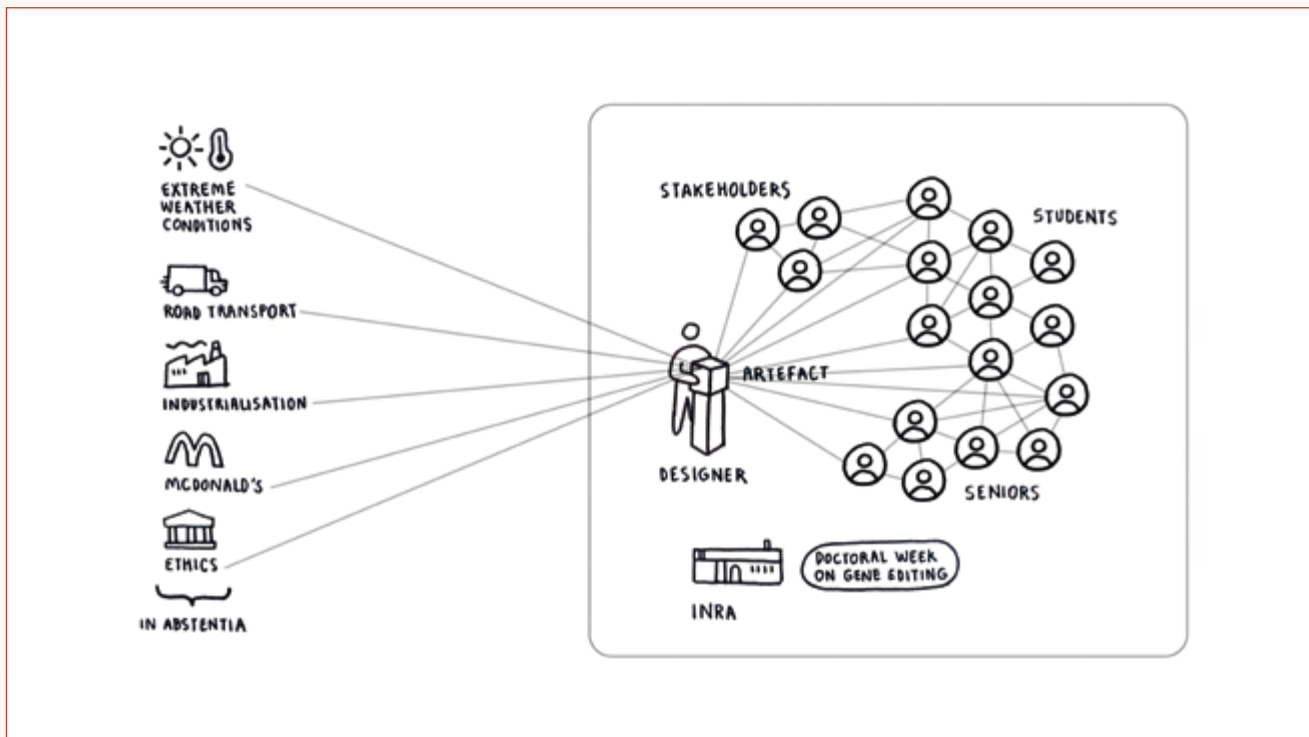


Figure 88 | In this updated version of Figure 86, additional links have been added to the network of actors. These new links include the connections that would be necessary to support the non-fictional existence of the Chickowtrout artefacts—i.e. McDonald, ethics regulation actors, extreme weather conditions, and so on. These fictional links also blend with previous non-fictional ones, existing between the prop and the actual actors in place.

In addition to this, my analysis reported that the fiction was deployed *in situ*. Elements of the real communication situation were involved as components of the fictional situation. Hence, the fictional relations suggested by the artefact blended with the real ones pertaining to the communication situation in which the pictured actors were partly gathered.

I suggest the artefacts and the debate participants can be considered as **forming a communication situation**—in the pragmatist communication sense. **Instead of debating face-to-face, participants are discussing ‘face-to-artefact-to-face.’** Furthermore, I suggest that **the actors populating the project’s fictional situation can be considered as part of the members of the conversation too.** Indeed, these actors’ (fictional) choices of supporting a funding, developing a research or serving a chimeric animal dish, can be considered as carrying a form of discourse on the social values they support.

These relations to fiction and discourses requests to look at the artefact not only as a non-human, but as a ‘media.’ A multidisciplinary gaze at the designing for debate situation makes it possible to also look at the situation where artefacts encounter audiences as a multidisciplinary communication situation. Under this perspective, designing for debate seems to offer **three interconnections of distinct plans**.

- It connects humans and non-humans in a face-to-artefact-to-face debate situation.
- It connects the world of actions (in a debate situation, for an event, in a location) and the world of discourses (carried by people and artefacts).
- And it connects the actual world as we know it, and the fictional world as it could be.

45.C Mirroring: Depicting Reality Through Fiction and Staging Fiction Within Reality

Carl DiSalvo’s concept of “devices of articulations” stands as a resource to extend the previous discussion. This concept elaborates upon Chantal Mouffe’s concept of “articulation” of existing hegemonies and upon Bruno Latour’s “collectives.”

On the one hand, the concept of “articulation” in social and political theory refers to Gramsci’s work.¹² Mouffe is one of the authors who built on Gramsci. She proposed “articulation” as the revealing of the relations that underpin a situation of domination. It is the creation of connections between discourses and practices which would otherwise seem disparate.¹³ It relays onto the establishment of “chains of significance,”¹⁴ thereby allowing new meaning and value to emerge as a way to expose existing hegemonies, that is, structures of power. On the other hand, the concept of “collective” belongs to STS studies. Latour develops the idea of the “collective” as,

“[...] a way of reconceiving relations among humans and non-humans [...] the term refers [...] not to a collective, but rather to a ‘procedure for collecting associations of humans and non-humans.’”¹⁵

Drawing on these two authors, DiSalvo focuses on specific kinds of collectives¹⁶ and describes how design artefacts contribute to political articulation. What he calls **devices of articulation** gather within their design “multiple elements in a manner that transforms the identity and meaning of those elements and results in a new object.”¹⁷

¹² Gramsci, *Selections from the Prison Notebooks of Antonio Gramsci*.

¹³ In her words, articulation “is any practice establishing a relation among elements such that their identity is modified as a result of the articulatory practice” Laclau and Mouffe, *Hegemony & Socialist Strategy*, 105.

¹⁴ Laclau and Mouffe, *Hegemony & Socialist Strategy*. | Anna Marie Smith, *Laclau and Mouffe: The Radical Democratic Imaginary* (London: Routledge, 1998).

¹⁵ Bruno Latour, *Politics of Nature: How to Bring the Sciences Into Democracy*, trans. Catherine Porter (Cambridge: Harvard University Press, 2004).

¹⁶ The author especially develops this idea in respect to the field of ubiquitous computing.

¹⁷ DiSalvo, *Adversarial Design*, 95.

By drawing on Dewey, in a 2009 paper, DiSalvo proposes two tactics that may allow audiences to articulate the causes and consequences of an issue. What he respectively named “tracing” and “projection,” described ways in which design may contribute to the construction of publics, by unravelling an issue’s causes and consequences that are concealed and hard to grasp.¹⁸

I consider the approach taken in the *#Hack.my.cafeteria* project as an additional tactic that enabled the audiences’ articulation of the remote causes and/or consequences of issues. **But its specificity is to be deployed *in situ*.** It relays on **taking the audiences’ context both as fictional material and as a release situation for the project, thereby blending them.** It allows **to articulate the audiences’ own position from within their situation**, like looking at a mirror. I therefore propose **to name this tactic ‘mirroring.’**

Yet, it is important to specify that this metaphoric mirror, being agnostic, is therefore a distorting mirror.¹⁹ The ‘gap’ existing between the audiences’ known situation and the fictional situation (i.e. their reflection in the mirror) questions the underpinning associations existing between humans and non-humans, **both in the fictional and in the actual world.** It intends to allow audiences to actively reflect and debate about an alternative and dissonant version of themselves, ‘from within’ their usual context. In other words, through the tactic of mirroring, designing for debate can **stage the dissonant social values and the dissonant relations existing between the network of actors concerned with an issue.** It relays on the creation of a situation of communication gathering artefacts, audiences and actors ‘*in abstentia*’—the ones implied by the existence of the artefact—that are all concerned with a debatable issue at stake, and all become member of a collective conversation.

Because of its *in situ* nature, this tactic can be considered as one of the tools of a designer that adopts a ‘diplomat’ or a ‘Trojan horse’ posture—as phrased in Chapter 8. Inserting into existing audiences via ‘infiltration’ or ‘diversion’ can be two ways to set the *in situ* posture that is necessary to achieve mirroring.

Finally, the second **contribution of Chapter 10** is given under the shape of methodological insights to trigger self-reflection via the mirroring tactic.

¹⁸ “Projection” uses design to represent a possible set of future consequences associated with an issue. “Tracing” is the activity of exposing the underpinning structures of an issue. DiSalvo, ‘Design and the Construction of Publics,’ 52 and 55.

¹⁹ For instance, replacing the menu of the INRA research campus’s cafeteria with a fictional one blended into (and conflicted with) the relations existing between INRA, their partners, and the scientists consuming steaks made out of a gene-edited species for lunch.

Methodological Guidelines of the Mirroring Design Tactic

Mirroring is a design tactic that sets a debate situation between the audience and another version of itself.

How to take the audience's situation both as fictional material and as a release context for the project, thereby blending them?

- Start by inserting in, and analysing a given situation. Identify audiences and their issues, as well as the context and activities of the audiences. Consider the audiences' positions within a larger network of human and non-human actors related to this issue. Regarding 'insertion,' please note that 'infiltrating' in the audience's activities or 'diverting' the audiences' mass media attention can be two ways to set the *in situ* posture that is necessary to achieve mirroring.
- Take these elements of context as ingredients for the creation of an agonistic fictional situation supporting the existence of artefacts.
- Deploy issuefication within the whole scale of levels composing the communication system—if possible, or compose with existing elements.
- Take the initial situation as a context to release the project—thereby orchestrating a dissonant communication situation that blends fiction and reality.

46 KEY LEARNINGS Audiences Are the ‘Users’ of Design for Debate

Studying the function of ‘engaging a chosen audience’ with a chosen issue led me to ask, in the present chapter: how can designing for debate personally engage audiences towards under-discussed matters of concern that are their concern? And how can this be done other than by encouraging the construction of unidentified publics?

I now formulate three replies belonging to a pragmatist approach to designing for debate. They imply both the designing of (dissonant) artefacts and the designing of situations where audiences meet them.

First, rather than expecting audience members to cross paths with the discourses of designers, circulated through media made for dissemination, I advance that designers can regard the audiences as the actual users of the debate situation. This implies considering the situation where audiences and artefacts meet and eventually inserting artefacts into the contexts of audiences, or inserting designers themselves in this context (working *in situ*). This allows to get informed of an under-discussed set of matters of concern that actually concerns the ‘user.’ Apart from the choice of subjects, this also entails to consider the user’s role in a larger designable system made of issues, artefacts and communication situations—i.e. the discursive design communication system. This system can be purposefully addressed to allow the issues to appear more familiar to the audiences. In short, the same way designers address specific ‘user needs,’ designers for debate can address specific ‘audience issues.’

I came to this conclusion by observing that some exhibition circulated projects—unlike other analysed ones—manifested less attention to match debatable issues with contexts where concerned audiences may be reached. In other designers’ projects, like in mine, the audiences seemed to have been put at the centre of design choices, which were not limited to the creation of an artefact. I also saw that my approach of insertion (through ‘infiltration’ or ‘diversion’) transformed my design process towards the deliberate shaping of a communication system.

A second way to engage audiences is to consider the designed artefacts, the audience members, and the network of actors that compose the fictional situation supporting the existence of the artefact, as members of a discussion—forming a multi-level and multidisciplinary communication situation. Hence, designers’ representations of fictional situations may take the relations existing, between audiences and a larger collective of human and non-human actors, as a designable medium and as a subject to be debated.

I got to this conclusion by unravelling the *#Hack.my.cafeteria* project, where components of the actual communication situation were involved as components of the fictional situation that informed the design of the artefacts. I came to understand that communication situations enable a face-to-artefact-to-face debate situation. Meanwhile, artefacts—being a form of media—involve fictional representations of actors, and their discourses, as members of a collective debate activity.

Third, audience engagement may be achieved through various means, but one tactic is based on the customisation of an *in situ* communication system, so as to put the audiences in relation with another version of themselves, like looking at a distorting mirror. This design tactic, that I called mirroring, takes the audiences' situation both as a fictional material and a release context for the project, thereby blending them. It intends to allow the audience articulation and questioning of their own position and relations within the collective concerned by an issue.

My main argument, here, came from my third analysis of the *#Hack.my.cafeteria* project, which I further discussed by elaborating on DiSalvo's concept of the device of articulation. This concept, drawing on Mouffe and Latour allowed me to understand the specificity of using an *in situ* approach when creating and staging devices of articulations—therefore blending and conflicting with actors concerned with an issue, from within their known context.

Chapter 10's contributions comprise:

- Understanding the ten subcategories of the Discursive Design Communication System model as methodological guidelines for design practice—and not only as an analytical tool.
- The demonstration, the description and the methodological guidelines of a design tactic called mirroring.

Finally, the tactic of mirroring enables the mutual feeding of my investigations on communication situations and dissonance. Issuefication can now be deployed in a coherent way through all the subcategories of a communication system. I consider this form of customisation of the debate experience as another 'rhetorical strategy' (following Chapter 6). Mirroring can also inform further work on the 'diplomat' and 'Trojan horse' design postures described in Chapter 9.

Conclusion

« Le design d'aujourd'hui s'intéresse principalement aux activités commerciales et de marketing, mais il pourrait fonctionner à un niveau plus intellectuel. [...] Ce passage d'une réflexion sur les applications à une réflexion sur les implications **crée un besoin de nouveaux rôles, contextes et méthodes pour le design.** »

“Design today is concerned primarily with commercial and marketing activities but it could operate on a more intellectual level. [...] This shift from thinking about applications to implications creates **a need for new design roles, contexts and methods. It's not only about designing for commercial, market-led contexts but also for broader societal ones.**”¹

— Anthony Dunne

1 Anthony Dunne, 'Design For Debate,' in *Neoplasmatic Design*, ed. Marcos Cruz, Steve Pike, vol.178, AD Architectural Design 6 (London: John Wiley & Sons, 2008), 91, [www/](#)

CONCLUSIONS

New Roles for the *Political* Designers

47 FINDINGS Four Ways in Which Design for Debate Disrupts Consensus

47.A What is the Subject of My Research?

In this thesis, I looked for ways in which design may spark debate. I focused on a body of practices that aim to offer an experience of the *political*—a state of antagonism intrinsic to collective life. More specifically, I explored practices that use **discursive designs** to stimulate mutual contestation (as opposed to collective contestation). My work contributes to a field of research, which has the same name as the set of practices I study: design for debate. I tried to find out: How could design thwart consensus? What are design specific contributions to enabling an experience of the *political*? How can a design artefact may be used to deliberately engage people with (mutual) contestation situations?

47.B Why This Subject?

The position taken here is that **consensus** is harmful to collective life because it is built on the will of the majority and marginalises divergent views. Whether it is a group of people or a democracy, thwarting consensus is therefore a complex and crucial issue.

I observed that my own design practice—and the body of practices of design for debate that I study—have the potential to thwart consensus, but that this potential was partially underdeveloped. I was therefore particularly interested in the ways in which design can foster pluralistic agonistic situations.

47.C The Design for Debate Research Field

In my review of the design history literature on the relationships between design and the *political*—Chapter 1—I argue that the practices I study are neither recent, nor homogeneous, nor limited to a denomination (e. g. Design Fiction, Speculative Design or Critical Design). I was able to differentiate reformist practices which support a politically engaged vision, from those that interest me: *political* practices (which promote the confrontation of opinions). In this second group I distinguished the practices allowing **collective** and **mutual contestation**. After defining the term **debate** (meaning public debate, interpersonal debate and struggling against consensus), and listing the fundamental properties of these disparate practices (being designerly, discursive, reflexive, adversarial and participatory), I propose to consider these two types of practices as those adopting a ‘design to debate’ posture.

By looking at how academic research addressed these practices, I defined the contours of the design for debate research field. I constituted a typology gathering works that deal with: (A) the artefact itself; (B) the making process and the functions of the project; (C) the ground and outcomes of the project; (D) the debate issues and the public’s experience.²

² Typology adapted from the four categories of a generic design project situation of Findeli and Bousbaci. | Findeli and Bousbaci, ‘The Eclipse of the Object in Design Project Theories.’

47.D How Did I Identify My Questions and Conduct the Research?

My first design for debate project, *Dog & Bone* (2010–2011), did not trigger a debate. At the end of 2012, this frustration led me to start the present study and to look at whether similar limitations were reported in the literature by other researchers (see [CH3 | Section 12](#)). These limitations led me to study six functions attributed to design for debate projects: feeding critical reflection on known situations (Chapter 5), conveying and prompting recognition of a chosen issue through an artefact (Chapter 6), enabling mutual contestation and using it as a means of social research (Chapter 7), or using it as a professional practice (Chapter 8). Beyond the design of an artefact, reaching (Chapter 9) and engaging (Chapter 10) a chosen audience with debate issues. The limitations I identified also led me to experiment with two hypotheses that cut across all my chapters. I attempted to foster a real debate by, first, avoiding to use artefacts that would persuasively defend an opinion; and second by avoiding to prompt ‘unidentified’ publics to come together around an issue. Instead, I have tried to ‘insert’ myself into contexts where the public is already busy or concerned with issues.³

Influenced by my training as a designer, I placed my study within the approach of “project-grounded research”⁴ (Chapter 2). It implies a pragmatist epistemological perspective articulated around the exploration of research questions within the context of a design project. I hence chose to conduct my research through the practice of design, iteratively (a series of projects), in the field (with stakeholders)—and through qualitative methods borrowed from action research and ethnography. I spent a year of (what I called) ‘design residency,’ in a medical ethics Commission, the *Espace Éthique île-de-France* at the Hopital St-Louis, Paris. There, I developed *L’Éphéméride* (2015) to debate issues related to Motor Neuron Diseases (MND)—chapters 5, 6, 7, 8. The second part of my research is based on four other design projects specifically exploring different debate situations (chapters 9 and 10). In the *OneHealth* (2014) project, I propose a fictional scientific posters exhibition as part of a microbiology conference. In the project *#Hack.my.cafeteria* (2016) I made a fictional campus cafeteria menu, entirely based on a genetically modified species, for a research laboratory. A speculative debate in the form of a role-play is the activity I organised in an ethics commission for *Epicure.app* (2015). And via the website *politique-fiction.fr* (2017) a series of speculative online news articles describes a ‘post-presidential election’ situation, in France.

³ Birkbak, Petersen, and Jørgensen, ‘Designing with Publics That Are Already Busy.’

⁴ Findeli et al., ‘Research Through Design and Transdisciplinarity.’

47.E What Are the Results of My Experiments?

I provide four answers to my research question. They are built on a combination of my experimental results.

47.E.1 Norms as a Dissonant Material for Debate

I propose that design can allow us to debate politics (living together), in a *political* way (agonism) when it takes social norms as a medium and bring them in a state of dissonance.

In my first experimental chapter (Chapter 5) I studied how to describe the ways design for debate unsettles audiences to distance them from known situations and feeds **critical reflection**.⁵ To do this, I presented my first prototype made for the *Espace Éthique*—called, *Montre-Éphéméride* (2015)—to two people living with an MND. It was the strong rejection of the artefact by one participant that led me to search the literature for concepts that would subtly describe public disruption through design.⁶ I found, in the researchers’ descriptions, that the ‘**familiarity**’ and ‘**non-familiarity**’ of the artefact give rise to self-identification, on the one hand, and on the other hand, to “**defamiliarisation**”⁷ (and thus brings a distance from the known: it enables critical reflection). In order to avoid pure provocation, the authors announce that they want to avoid the too familiar or the too strange and prefer to juxtapose the familiar and the unfamiliar in their design choices. I therefore proposed the term **ambivalence** to regroup such mechanisms. One of them is the “**uncanny**”⁸ (familiar strangeness), theorised by Sigmund Freud. This term describes a strong emotional engagement of the audience, an introspective disturbance, close to fright and neurosis. However, it easily becomes close to provocation, and can therefore prevent reflection.

Ambivalence does not only destabilise emotions, as catharsis would do. The researchers describe it as posing an “**interpretation dilemma**” (according to Matthew Malpass)⁹ that fosters critical reflection by resisting the interpretation of the meaning of the artefact. Such a dilemma arises when a person is faced with a proposal that cannot be resolved—e.g., ‘You want to be true to your ethics and starve to death (and starve the whole world population), or accept that genetically modified animals are created and eaten?’—see [Intro CH9–10 | Section 38.B](#) for the *#Hack.my.cafeteria* (2016) project. A second mechanism of ambivalence therefore occurs at the cognitive level, it is the concept of “**cognitive dissonance**”¹⁰ of Leon Festinger, mentioned by James Auger. I deepened it to understand the feeling of discomfort caused when dealing with an artefact composed of two pieces of information that do not follow one other. According to Festinger, cognitive dissonance pushes the audience to restore a coherent situation. I would add that it encourages reflection and concern.

⁵ Terms in red are listed in the glossary.

⁶ One of the things I looked at was how another designer researcher came out of a similar situation—James Auger with the *Afterlife* project (2001–2009). I also studied how the authors describe a successful artefact or a failure.

⁷ **Bell, Blythe, and Sengers**, ‘Making by Making Strange.’ | **Shklovsky**, *L’Art comme procédé*.

⁸ **Freud**, ‘Das Unheimliche (The Uncanny – 1919).’

⁹ **Malpass**, *Critical Design in Context: History, Theory, and Practices*.

¹⁰ **Festinger**, *A Theory of Cognitive Dissonance*.

It should be noted that cognitive dissonance comes from the discipline of social psychology, so it is relevant to look at this concept when viewers are in a group situation. Moreover, the debates I am studying also take place in groups. From that perspective, any emotion or opinion takes on a different meaning when it is expressed in public or in a collective context. They involve social norms (which are the set of implicit rules that make a group hold together). Any expressed emotion or opinion thus put at play what is socially acceptable to feel or believe. As the study of social norms contains methods close to provocation (ethnomethodology), I have proposed to focus on them in my chapters 6 to 8. One of these methods is Harold Garfinkel’s “breaching experiments.”¹¹

Breaching experiment is intended to infringe social rules so as to reveal them (e.g., going to a restaurant naked in order to collect reasons given by people for rejecting this behaviour, and deconstructing social norms about nudity). Thus, dealing with an artefact that conflicts with the acceptable could lead others to express themselves in order to restore normality to a situation and thus enter into a debate. This crossover between ethnomethodology and social psychology has allowed me to propose the **design tactics**¹² of **dissonance**, because these two disciplines describe a spur to react and express oneself. As a result, I call ‘dissonance’ a tactic that disrupts the audience emotionally and cognitively. It is based on the setting of a public (or collective) situation in which the public is confronted with an ambivalent set of social values, supported by a design artefact.

What is special about using dissonance to foster *political* experiences? When design takes **social norms as a medium**, I argue that dissonance **can initiate a discussion on ‘political’ issues—which defines the common horizon that makes a group constitute itself—in a ‘political’ way**—that is, it encourages the expression of disagreement.

¹¹ Garfinkel, *Studies in Ethnomethodology*.

¹² The concept of tactics is borrowed from DiSalvo, who draws on De Certeau’s work on strategies for controlling the public put in place by institutions in a position of power, and tactics (counter-strategies) to avoid control. | DiSalvo, ‘Design and the Construction of Publics.’ | de Certeau, *The Practice of Everyday Life*.

47.E.2 Design Triggered Mutual Contestation

I think that the visual language of design can disrupt consensus by stimulating people's contestation of an artefact, of its designers and of other participants in a debate. The tactics of dissonance make this possible by delivering arguable, ambivalent artefacts that carefully infringe a social norm.

In the midst of a participatory debate—in my Chapter 7—I observed that not all debate participants agree on how to interpret my artefact, *L'Éphéméride*. Disagreement and mutual contestation was stimulated by a trait of the artefact that I call 'arguable.' It was by observing, in Chapter 6, that my artefact did not embody one, but several opinions on the subject to be discussed, that I came to qualify it as such. In this case, some of its design features represented the subject of debate, MNDs as a day of hope, a life of memories, or a straight path to death. The multiplicity of possible interpretations thus becomes a pretext for discussing the reasons why we do not agree. When the artefact simultaneously evokes hope and the inevitability of death, it juxtaposes contradictory arguments in an 'ambivalent' way, in the manner of an aesthetic oxymoron. Instead of simply resisting interpretation, the artefact resists persuasion. I said earlier that ambivalence can sometimes trigger an impulse to express oneself when the artefact carries a discourse perceived as unacceptable by the participants. That said, I now argue that it is very different to make an unacceptable oral statement, for instance, and to show an artefact that embodies that discourse. Indeed, since design is often perceived as a search for the 'preferable,' any design artefact can be perceived as imposing a vision of what is good (and what is better)—what Buchanan calls 'rhetorical arguments.'¹³

So, what difference does it make to use design for debate to offer such a political experience?

I observed (in Chapter 7) and now believe that the artefact's **unacceptableness stands as a spur to challenge both the design proposal and the designer**. It is because the unacceptable arguments take **the shape of an artefact** that the counter-arguments formulated by the participants come to take the form of design counter-proposals. Making design proposals **emancipates the (non-designers) participants from their posture of user/audience, towards one of a designer and citizen**. In addition, the artefact's **arguableness allows the majority opinion to be questioned and minority voices to be heard** instead of remaining silent. This design triggered **dissensus** (i.e. the disruption of consensus) seems able to reveal disagreement and "political frontiers."¹⁴ Finally, the **ambivalence** of my design artefact, by the fact of enabling critical reflection and self-doubt, **made the political frontiers versatile during the debate session**. Ambivalence is part of what enables the renewing of a state of contestation—namely, *agonism*.

¹³ Buchanan, 'Design and the New Rhetoric.'

¹⁴ Mouffe, *The Return of the Political*.

47.E.3 Design as a Media

One of the qualities of design, that makes a singular contribution to the *political*, now appears clear to me. It is the artefact's ability to bring together, in the same conversation, debate participants that are human, non-human, and that are present or distant (actual participants and fictional entities).

After a year of residency in an ethics commission, I became interested in the situation through which the artefact and the public meet. It is by analysing the rejections expressed by the participants, concerning the adversity experienced during the debate of *L'Éphéméride*, that the very format of our debate proved to be dissonant (Chapter 8). It created a situation of communication, made of adversity, between the Commission and its usual public. I concluded that beyond the design of an artefact, agonism could manifest itself in the organisation of a debate situation, i.e. the '**communication situation**.'

In this thesis, I have tried to avoid situations of public debate in favour of interpersonal debates. So I had to deal with "communication situations" in the sense of Goffman's pragmatic communication, namely, face-to-face people.¹⁵ However, it seemed to me that the artefact played a role in the conversation too, it was carrying a discourse. I came to this argument in Chapter 6, emphasising that design for debate artefacts are not (necessarily) used. They are what Bruce and Stephanie Tharp call "**discursive**."¹⁶ The Sciences Technology Society studies (STS) allowed me to understand that a design artefact can "script" behaviours.¹⁷ But it can also influence reflection on societal issues and stimulate the construction of an audience, according to Noortje Marres. This may be the case for an advertising poster depicting an object surrounded by political slogans. Marres describes such an object as "loaded" with social issues via an "**issuefication**" process. But, I defend that designers for debate deliberately craft a new object in order to convey the issue, rather than adding slogans to existing ones. This is a practice I call **embodied issuefication**.

If the artefact is an actor in the conversation, it is also necessary to look at the role of the fictional actors represented by the artefact (Chapter 10). For example, in my *#Hack.my.cafeteria* (2016) project, a fictional cafeteria menu based on a genetically engineered animal was proposed. In this cafeteria menu and in the narrative supporting it, real people and institutions (students and the INRA microbiology laboratory) were depicted likewise other distant or fictional actors (e.g. respectively, McDonald's or a genetically modified animal species). The actors of the fiction and the participants of the debate thus seemed to me to compose the members of the same conversation. Borrowing from Information and Communication Sciences helps to better understand this phenomenon. According to Gentès, design artefacts are comparable to a form of **media**.¹⁸

¹⁵ Goffman, *Interaction Ritual*. | Bateson et al., *La nouvelle communication*.

¹⁶ Tharp and Tharp, *Discursive Design*.

¹⁷ Akrich, 'The De-Description of Technical Objects.'

¹⁸ Gentès, *The In-Discipline of Design*.

Just like a movie or a theatre piece distances the action so as to experience it through imagination and narration, a design artefact can do the same. It does not need to be used to stimulate the imagination, it already conveys meaning about the use and offers a simulation of use. In the case of Discursive Design, it is in fact the main objective to allow this form of imaginary simulation by depicting a narrative of use—what Malpass calls **rhetorical uses**.¹⁹ The artefact, or what I call a **mediating-artefact**, creates a ‘simulation’ of the public’s relationship with a problem. It is this simulation that allows the actors of the debate (present and distant ones) to form a communication situation at several levels—between face-to-face, face-to-artefact and actual-fictional elements.

Finally, I distinguish this situation of concrete communication from the conceptual model that I came up with, to describe this situation. I frame this model as a system that interconnects debate issues, artefacts, and audiences (and their context). It is composed of ten categories. As this model seems to apply to Discursive Design at large (regardless of an attempt at debate) I have named it the **Discursive Design communication system**. I recommend to understand this system as a descriptive model, an analytical tool and as methodological guidelines for the practice of design. The communication situation can then be considered as deliberately designable. And we can see the actors of a debate situation, and their network of relationships, as ingredients for creating designs for debate.

What is the particularity of using Discursive Design as a media (simulation)? It is to install an experience of the *political* and of contestation that is not only oriented towards others, but also towards oneself. Indeed, DiSalvo’s concept of “**device of articulation**,”²⁰ describes how an artefact can reveal links in a network of actors to better understand the power structures that govern that network. Following this concept, I realised that an *in situ* approach to design for debate allows controversial actors to use fiction to reflect on themselves. It is as if we were looking through a distorting mirror—which happens to be the artefact, while the reflection is the fictional situation and its communication material. I therefore argue that design can deliberately offer a singular experience of the *political*, that of **putting the public in discussion with another version of itself**. I have named this tactic the ‘**mirroring**.’ It is based on a simple principle which is to take the *context* where the public stands as a material to create a fiction, and as a situation to disseminate the project, thereby mixing fiction and reality.

¹⁹ Malpass, *Critical Design in Context: History, Theory, and Practices*.

²⁰ DiSalvo, *Adversarial Design*, 95. | Bruno Latour, *Politics of Nature*. | Laclau and Mouffe, *Hegemony & Socialist Strategy*. | Anna Marie Smith, *Laclau and Mouffe: The Radical Democratic Imaginary*.

47.E.4 Design as a Non-Human Diplomat

Design and designers can contribute to agonistic pluralism by acting as spokespersons for under-represented voices, within situations that already exist and that are, as such, fields of tensions.

One of the challenges of my research was to involve a chosen audience, with a chosen subject without resorting to use: provocative artefacts; or media strategies aiming at the construction of an unidentified public. Learning from my literature review (Chapter 3), it was also essential to take into account the criticisms made to the top-down authorial postures often employed when choosing a debate issue (these postures have become canonical since the 2000s). Critics include: a lack of relevance in the choice of debate topics in relation to the most urgent problems of contemporary societies; and a blindness on the part of designers regarding their privileges. The relevance of the authorial posture is conditioned by the ability of designers to take into account the public's point of view.

To address these challenges, I started with the failures of two of my projects regarding the use of provocation. These were *Dog & Bone* (2010–2011) and my first prototype in the field, the *Montre-Éphéméride* (2015). In Chapter 5 I identified a glossary of concepts to refer to the unsettling of the public's emotions while avoiding the lexical field of provocation. Yet, this glossary was not sufficient. I had to find out how to describe and implement careful dissonance. I found the answer by comparing the redesign of my first prototype with pieces of the design research literature. In fact, in a similar way to authors like Auger, I realised that the discourse of my artefact was 'adapted' to an audience using strategies comparable to Aristotle's rhetoric.²¹ However, the 'adaptation' also manifested itself in the design process, which has become both participatory and inclusive. This change has had several consequences.

Firstly, this posture made the project more relevant and credible than my earlier wristwatch prototype (judging by the quality of the debate in Chapter 7). Importantly, it also allowed me to adopt the public's point of view when I tried to *carefully* make a non-familiar design proposal more familiar. The adaptation of my working process made it possible to juxtapose multiple values and points of view in the artefact to make it 'arguable.' But above all, the artefact has bridged different standpoints (in Harding's sense),²² including those that are under-represented. My way of avoiding provocation was therefore to *take care* to relay the point of view of certain members of the public, on a subject, via an artefact. I have called this inclusive approach **bridging**.

²¹ Aristotle, *The Rhetoric and the Poetics of Aristotle*.

²² Harding, *Whose Science? Whose Knowledge?*.

Secondly, by observing that the ‘arguable’ artefact had indeed been interpreted in contradictory ways, in Chapter 7, I came to consider it as a “boundary object” of a particular type.²³ This boundary object, being ‘issuefied,’ stimulates politicisation and the construction of audiences. But above all, the artefact does not take sides. Indeed, when issuefying an artefact from a specific inclusive standpoint, I argue the artefact should be understood as a **non-human diplomat**. It makes under-discussed visions visible, in a given consensual situation. Because the definition of who is under-represented might change depending on the situation, the non-human diplomat is not from either side. The artefact does the work of translation and bridges worlds. It is here, in my opinion, that the agonistic posture of design for debate stands out.

Thirdly, the designers themselves can work as diplomats. Indeed, working in an inclusive, participatory and adversarial posture has proven to have importance to the stakeholder, as this posture can disrupt their existing practices and public image (Chapter 8). Observing this made me realise that designers can take on two stances to involve a stakeholder with agonism, the **diplomat** (i.e. being an agonistic intermediary and thwarting hegemonies and consensus in all camps) or the **Trojan horse** (i.e. working as an infiltrator, enabling a minority voices breakthrough from within the comfort-zone of a majority opinion audience)—[CH8 | Section 36](#).

So, how does this inclusive and participatory design posture for debate bring something unique to an agonistic approach? Design provides a unique contribution in situations when **the designer is acting as a deliberate agent of the political, who works and connects worlds that do not speak to each other, through a non-human material** (their design production). The diplomat has the particular ability of **inserting themselves in a field of tensions** that exists before them. The designer can work *in situ*. They can ‘insert’ themselves into audiences already concerned (“busy”)²⁴ with a problem. They can ‘**infiltrate**’ an existing environment to identify subjects and add their artefacts. Or, they can make a ‘**media diversion**,’ capturing the attention of a public already concerned about an issue in the media (e.g. *politique-fiction.fr* (2017), [Intro CH9-10 | Section 38.D](#)). These approaches encourage us to consider the public as the real users of the debate situation and to get rid, in part or totally, of an author’s posture. In his thesis 20 years ago, Dunne suggested that to be self-critical, the designer must take an authorial stance to emancipate themselves from the constraints of the market. I contend now that the designer can also be a diplomat, who uses their practice to criticise a range of topics, other than design itself, and who allows distinct worlds to listen to each other.

²³ Leigh Star, ‘The Structure of ill-Structured Solutions.’

²⁴ Birkbak, Petersen, and Jørgensen, ‘Designing with Publics That Are Already Busy.’

47.E.5 Two Main Thesis Statements

My first thesis statement is two folds. Firstly, a number of disparate approaches can be gathered in a coherent body of design practices that contribute to people’s engagement with the *political* experiences of mutual and collective contestation. Secondly, there is a rich field of research that is focusing on these practices as an object of study. I contend that both elements can be referred to as—the practices, and the research field of—designing for debate. Designing for debate is better understood as a branch of social design in which one of the subgenres uses discursive designs.

My second thesis statement focuses on the subgenre of discursive design for debate. I forward that design can contribute to the *political* by making social norms debatable, in the shape of dissonant design artefacts, staged within situations of communication that allow publics, artefacts and issues to interact.

In short, while Herbert Simon defined design as any practice that “devises courses of action aimed at changing existing situations into preferred ones,”²⁵ designing for debate enables us to question and debate about what is preferable. These practices put at play the very definition of the preferable, which is necessary collective and often implicit and under-discussed. Design for debate—which I have tried to theorise and support with methods—creates simulations of the preferable in order to question the hegemony of the actors of a situation in its definition and to emancipate a plurality of standpoints on its (re)definition. The way to do this is to try to thwart consensus.

48 CONTRIBUTIONS Empowering Designers as Agents of the *Political*

48.A Theoretical and Methodological Contributions

This research contributes to the theory of agonism:

It makes Chantal Mouffe's concept of political frontier less binary. My research has indeed shown that Mouffe's we/they dichotomy—i.e. the existing borders of opinions that she suggests should be made more visible—can be subdivided and made more versatile during a debate session. Making a political frontier versatile implies changes of camps and opinions. For instance, it is as if a procession of demonstrators (we), were suddenly joined by some of the police guards facing them (they). Making frontiers 'versatile' is an important shift in order to contribute to the renewed state of confrontation that is agonism.

- My study distinguishes between mutual and collective contestation. These two elements may be understood as different zoom levels in the work of agonism, between the interpersonal and the group/mass level. This is an important distinction because consensus, like collective contestation, always starts at the individual level.
- This research provides practical examples to a theory that is sometimes abstract. It provides methods for the deliberate construction of political situations and thereby empowers others to answer Mouffe's call for artists and designers to take on agonistic practices.
- Also, this research complements Mouffe's concept by considering norms and shared values as an important material of *the political*. This is a crucial step to move from an abstract concept to the complex reality of fieldwork.

A multi-disciplinary contribution:

- This research contributes to Information and Communication Sciences, STS studies and ethnomethodology by providing a possible example of interdisciplinary dialogue. Among the concepts delivered in this thesis, some contribute directly to these disciplines, respectively: the mediating-artefact; the embodied issuefication, the non-human diplomat; and the bridging experiment. On this last point, my thesis offers to ethnomethodology a designerly method for studying social norms.
- The present work also allows these disciplines to see design as a common research object, which makes possible the ability to bridge different domains.

My study contributes to design research with:

- The definition of a body of design practices for debate. It may allow practitioners and researchers to go beyond an understanding of existing practices, often seen in silos, and restricted to their initial programme (i.e. Critical Design, Speculative Design and Fiction), while embracing their heterogeneity. This definition (chapters 1 and 8) is supplemented by a glossary of concepts, a list of potential professional qualities attributed to these practices, two tactics and their methods (respectively chapters 5, 8, 7 and 10). These contributions invite us to explore beyond the author's posture and the restriction of the act of design to the sole creation of an artefact. It does this by delivering concrete case studies and a method (a model) to consider the Discursive Design communication system as part of a design process. Together, these contributions are expected to give handles to design practitioners and design researchers allowing them to acknowledge and elaborate constructively on criticism made against canonical practices of design for debate.²⁶
- The definition of the **design for debate** research field. This field makes these practices visible, researchable and improvable. It shows how the association of different theoretical constructs makes it possible to grasp a multifaceted research object in a coherent way. This field is proposed with: an attempt of typology structuring the design for debate research space; a series of 'functions' to be studied; and a series of research avenues to be explored.²⁷
- Methodological elements to feed the practice of research through design. In particular, the communication system descriptive model is also proposed as an analytical tool to support new research (Chapter 9). The bridging experiment method is proposed to use design for debate as a means of social research (Chapter 7). And the 'design residence' approach is suggested as a relevant tool for the development of project-grounded research (Chapter 4).

²⁶ A great number of the critiques I *structured* and addressed can be found within another formulation in the enlightening but somehow disempowering critique of: **Cameron Tonkinwise**, 'Just Design,' Medium (Blog), 21 August 2015, medium.com/@camerontw/just-design-b1f97cb3996f.

²⁷ See respectively, [CH1 | Section 3.C](#); then, [CH3 | Section 12](#); and [CH7 | Section 32](#).

48.B Limitations and Future Works

In regards to the generalisation of the knowledge produced in this thesis, I have already raised in the question of scientific objectivity and replicability in the chapters 2 and 4.²⁸

Also, within the diplomat's line of thought, I have tried to connect my work to a broader community which includes rather than exclude French-speaking people. But English is not my mother tongue and the language barrier has remained a challenge.

That said, I would like to now focus on the limitations that call for new research. They are numerous, but the prospects they open up are very stimulating.

First, the present research on agonism focuses on my own practice, but, it would be appropriate to assess the extent to which my results can feed into design for debate practices that are not discursive and that aim at collective contestation (rather than mutual contestation). I hope that the research field I have identified will allow this kind of exploration.

In addition, it would be fascinating to look at how design in general, or the artificial,²⁹ can be an agent of the political. The questions I raised about a design for debate practice 'without products,' 'without design' or 'without designers,' and the work of STS studies on the participation of objects in democratic life, may pave the way to develop address this matter.

Second, in the field of discursive and reflective practices, my work on dissonance focuses on social norms. But the ambivalence mechanisms underlying dissonance need to be further explored. In this regard, I hope this research is complementary to ongoing work, such as James Pierce's design resistance strategies and Bruce and Stéphanie Tharp's recent book.³⁰

Moreover, while my work enriches the definition of new social design practices described by Koskinen, it leaves partly aside the aesthetic experience addressed by Koskinen and central in Dunne's thinking.³¹

In addition, the present research would strongly gain to anchor future elaborations in the study of contextualised semiotics and ethnomethodology, and Information and Communication Sciences.³²

²⁸ For example, in project-grounded research, the quality of the design deliverable is of critical importance. However, its assessment involves a high degree of subjectivity. Moreover, the generalisation and validity of my results are constrained. In particular, my conclusions on dissonance are only drawn from one experimental situation and the exact reproduction of this experimental situation is impossible. Thus this thesis, because of its epistemological positioning (project-grounded research, action research), does not claim to deliver strictly verifiable 'truths,' but aims to extend the horizon of possible truths.

²⁹ Clive Dilnot, 'Book 2, Ch2. The Artificial and What It Opens Towards,' in *Design and the Question of History*, ed. Tony Fry, Dilnot Clive, and Susan Stewart (New York, NY: Bloomsbury Publishing, 2015).

³⁰ Pierce, 'Working by Not Quite Working.' | Tharp and Tharp, *Discursive Design*.

³¹ Dunne, *Hertzian Tales*. | Koskinen, 'Agonistic, Convivial, and Conceptual Aesthetics in New Social Design.'

³² Julien Brunel, Catherine De Lavergne, and Valérie Méliani, 'Ethnométhodologie et Sémiotique Situationnelle: Parentés et Différences,' *Cahiers de l'ethnométhodologie*, Colloque Contributions ethnométhodologiques à la science de l'information-communication, 20–21 novembre 2008, Laboratoire Paragraphe, 4 (December 2010): 177–188 | Alex Mucchielli, *Manuel de sémiotique situationnelle pour l'interprétation des conduites et des communications* (Montpellier: Le Moine Copiste, 2008).

Third, in terms of adversity and debate, this research gives an empirical dimension to the concept of “*design thing*.”³³ However, it would benefit from being more strongly articulated to the many studies that already exist on the subject.

In particular, my work seems compatible with that of equipping the public to unravel the causes and consequences of a debate issue.³⁴

Another point about adversarial stances, my study did not demonstrate how to design a communication situation that would allow people to express themselves frankly or fearlessly in front of a representative of the power in place. Extending research on Parrhesia (fearless speech), explored by Foucault but also by Wodiczko, is a way forward.³⁵

Thinking post-debate, and using the results of the debate for decision and action is also an important and hitherto underdeveloped avenue. Kock’s research cited in Chapter 3 and the work of the UK Policy Lab and the Nesta agency on SimPolitics could be useful to explore in this regard.³⁶

Last, in practice, one of the main areas for improvement in my work would be to resolve the limitations identified in existing design for debate practices, rather than avoid them—e.g. I avoided dealing with public debate. I recommend, in future research, that the following questions are considered.

How can mass media be used specifically to foster mutual (benevolent) protest on a large scale to enrich debates that are often sterile or difficult to deepen? We could do this in the same way as the designer ‘Sputniko!’ who relied on MTV and twitter to fuel a feminist debate in Japan.³⁷ For instance, what would a period of agonistic presidential election campaign look like, punctuated by speculative debates between candidates and members of the public, relayed on television? A related question is: How to deal with a subject that concerns a large public scale but affects everyone on a local daily basis? A suggestion would be to use an online platform complemented by physical meetings where decision-makers and local actors would discuss, for instance, a future European law.

While the previous questions touch on the downstream side of the design project, in regards to upstream, I wonder: How to structure the research of under-discussed topics with a practical methodology and a theoretical basis? In this respect, it would be useful to work on existing controversies via the methods of anthropological investigation and mapping of controversies of Medialab Sciences Po in Paris, or those of the ballistics of controversies, developed at EHESS by Francis Chateauraynaud.³⁸

³³ Binder et al., *Design Things*.

³⁴ DiSalvo, ‘Design and the Construction of Publics.’ | Ricci, ‘Tensing the Present.’

³⁵ Michel Foucault, *Discours et vérité ; Précédé de La parrêsia*, ed. Henri-Paul Fruchaud, Daniele Lorenzini, and Frédéric Gros (Paris: J. Vrin, 2016). | About Wodiczko and the Interrogative Design Group’s work on Parrhesia, see this online appendix: maxmollon.com/permalink/PHD_Appendix-CH1-Interrogative_Reflective.pdf (accessed Sept 2019).

³⁶ Kock, ‘Norms of Legitimate Dissensus.’ | Nesta, ‘SimPolicy: Smarter Policy through Simulation,’ Company Website, nesta, 2018, <https://www.nesta.org.uk/feature/10-predictions-2018/simpolicy-smarter-policy-through-simulation/>

³⁷ Sputniko!, *Menstruation Machine*, 2010, sputniko.com/Menstruation-Machine/ | Project (music video) was broadcasted notably on MTV.

³⁸ Venturini et al., ‘Designing Controversies and Their Publics.’ | Francis Chateauraynaud and Josquin Debaz, ‘Scénariser les possibles énergétiques. Les gaz de schiste dans la matrice des futurs’, *Mouvements* 3, n° 75 (16 septembre 2013): 54–69.

In my future work, I would like to focus on key elements that drastically transformed my practices and could further transform the canonical practice of design for debate.

This includes: the participatory and inclusive choice of debate topics; the diversion of media attention from audiences already busy with an issue; and the design of communication situations.

In my most recent work, I have notably tried to address the previous limitations throughout three initiatives. The first is a design for debate course given to 12-year-old pupils to invite them to question their own future in an interspecies world. The second is a disciplinary triangulation between the sociology of imaginaries, STS studies and design for debate—used to explore the past, present and future of a controversy.³⁹ The third, called *Crisprfood.eu* (2018). It is a citizen assembly project on the social acceptability of the genetic optimisation of agriculture by 2050, via CrispR/Cas9 technology. It was developed in a context of ongoing legal developments in Europe and the USA. In *Crisprfood.eu* we regrouped EU commission members, scientists, farmers, cooks, and so on, to debate about the outcome of the EU law making process on our gene-edited food futures. Find the project in this online appendix: maxmollon.com/permalink/PHD_Appendix-crisprfood.pdf. *Crisprfood.eu* is proposed as a ‘project-grounded conclusion’ to this thesis.

³⁹ We have been developing this course, named *Contemporary Controversies*, within the *Innovation and Digital Transformation* master programme at Sciences Po (Paris) since September 2018 with Stéphanie Desfriches-Doria et Stéphanie Coiffier. | master-itn.com/ (accessed Sept 2019).

48.C Implications for Research, Practice and Design Education

The results of my research may be of interest to design academics, professionals or educators who wish to further develop a critical and participatory practice of design, and who wish to go beyond the limits of design for debate—i.e. the limits who have meant that the last 20 years have been spent more talking about design itself than the debate topics which it has targeted (see Chapter 3).

Some of the implications that may result from my research are subject to the vagaries of the future—e.g. the interest of practitioners in developing the practices of design for debate; the willingness of researchers to elaborate on the field of design for debate as a coherent, rich and flexible enough framework in which to place their work. The implications are also subject to the intrinsic quality of my arguments—which I propose as open to discussion, counterarguments and improvements—and to the future modes of dissemination of this work, other than writing a (very) thick dissertation.

Last, I would like to apply one of my working methods—namely, speculative fiction and projection in an elsewhere or an elsewhere—in order to list the potential implications of my research. I ask :What if in 10 years' time, the first scientific Special Interest Group, on designing for debate, comes together?

The following piece of fiction lists the implications of the present work for research, practice and design education. It offers a *pre-view* of a distant reality where this speculation could realise itself.

[FICTION]

Everything started with a collective of young researchers who have been deploying a dissonant tactic in a 'Trojan horse' way, at each of the Design Research Society and CHI conference since 2025. They have done this by systematically enabling mutual contestation about the social norms relating to the privileges of design researchers and educators. By sparking debate and confrontation within the academic and educators communities, these 'academic Yes Mens' have accidentally harvested the professionalisation of design for debate practices. A contemporary example of the rise of these new professions is next month's annual awards ceremony of the Practitioners' Association. This time, it is organised by the UK Policy Lab so as to promote their book, *After Design for Policy Making, Design for Public Debate*.⁴¹ The UK policy Lab are not the only ones in this realm, many NGOs and government innovation departments have hired an agent (or team) for internal and public debate. New skills are often highlighted on CVs. Regarding this, my agency is currently looking for a 'disturbance prototyper' and a 'debate set director'.⁴²

Beyond the strict field of design for debate, two fields of design are now dedicated to an intellectual war. The design thinking and cognitive psychology's behaviour change⁴³ on one side, and participatory design's agonistic debates on the other.⁴⁴ Both were seen at a time as the best option to address the inability of citizens (and governments) to overcome their comfort zone and take climate and environmental issues seriously. Practitioners of participatory design boldly defend that agonism allows us to move beyond the illusion of consensus, and towards adversarial and politically agency-enabling practices.

In civil society, outside of design, new spaces of confrontation appear. In an increasing fashion, it is in the first year of secondary school, that we learn to project ourselves into other futures and to debate them.⁴⁵ The English speaker's corner has come back into fashion. Activist associations—of which *Extinction Rebellion* has been the leader—use modes of action

similar to the Trojan Horse posture to make their demands heard in places of power and of political decision-making. In the mass media, the latest episode of *Black Mirror* has once again sparked a debate within the English government on the ecological law of post-Brexit degrowth. The episode is blamed for a violent demonstration organised by a hitherto silent minority—i.e. foreign workers, climate immigrants, and large families. Their banners read, "You f****d the planet, Your problem!" or "Degrow yourself. Our turn to grow!"

Last but not least, design education is where it all started. I remember, in 2014, intervening in a private design school in Paris to present my research. I was quite surprised to learn that I had been announced as a philosophy teacher to the students.⁴⁶ In recent years, these courses have changed and have been included in the New Social Design class.⁴⁷ A whole range of methods have been developed, which allowed design educators (including myself) to avoid leaving design students facing a dilemma. The latter was too often presented as the status quo and the only viable option to young professionals: either making a living in the industry (through 'affirmative' design), or being critical but somehow out of the main stream (as an artist, a researcher, a superstar-designer, or working on projects without budget).⁴⁸ In other words, providing design for debate methods enabled design's critical reflexivity to leave the neutralising space of art galleries where it has predominantly been found up until now.

That said, the development of these methods and educational programmes implied a number of shifts in the design for debate practices: considering the context that pre-exists a debate project; being informed by this context and its occupants about the choice of a relevant debate issue; but above all, considering being less the 'designer as an author' and being more a designer as a diplomat (i.e. operating a pragmatist inclusive grounding into situations in order to politicise them).



Figure 89 | Trump presidency inauguration day. 22 Jan 2017. City unknown, USA. Credit: @AlbertLloreta #inaugurationday on twitter.com.

- 41 [protopublics.org/ | openpolicy.blog.gov.uk/2015/02/26/policy-making-through-possible-futures/](https://protopublics.org/openpolicy.blog.gov.uk/2015/02/26/policy-making-through-possible-futures/) | imagination.lancs.ac.uk/sites/default/files/outcome_downloads/protopolicy_design_report_print.pdf | core77.com/posts/45693/Governments-Warming-up-to-Discursive-Design/ (accessed Sept 2019).
- 42 Examples of skills taken to LinkedIn.com: Under-discussed subject *explorer*, *bridger* (also known as *silent-voice-finder* and *spokesperson*), *discorder* (the one who refines the points of tension of social norms), *thorn-finder*, *dissonance user-tester*, *panellist* of heterogeneous audiences, *debunker* of biased argumentation, *vulnerable speech facilitator*, *arguments curator*, *speculative decision-making advisor*, *public debate impact analyst*.
- 43 Leonard, 'Richard H. Thaler, Cass R. Sunstein, Nudge.'
- 44 Björgvinsson, Ehn, and Hillgren, 'Agonistic Participatory Design.'
- 45 Superflux, *Cartographies of Imagination*, 2018, superflux.in/index.php/cartographies-of-imagination/ | [What if? \(Mollon, Labidi\)](https://www.whatifif.com/), *What if we lived in alliance with other species?*, 2019, ac-paris.fr/serail/jcms/s2_2136976/fr/classe-a-pac-6eb/
- 46 Personal communication with a student at the end of the course, (anonymised) private design school, Paris, Nov 20, 2014.
- 47 Koskinen, 'Agonistic, Convivial, and Conceptual Aesthetics in New Social Design.'
- 48 Most of the practitioners referenced in this thesis make a living through academic positions or patronage in the art & culture field, and not from their practice—according to a quick review of their job positions and the funding of their projects, but also, according to interviews I conducted, e.g. Elliott P. Montgomery (*Extrapolation Factory*), personal communication, interview via video-call, New York City–Paris, August 15, 2018.

Appendices

Project-Grounded Ph.D. Conclusion



See: maxmollon.com/permalink/PHD_Appendix-crisprfood.pdf

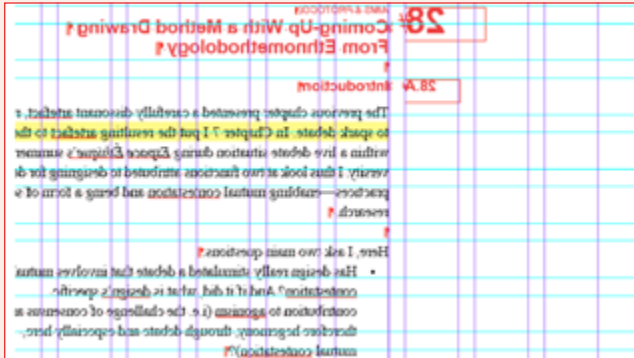
Having listed my contributions to knowledge in the dissertation body, this appendix will preview some of the contributions of this research, to my own practice.

This way, I intend to conclude my research in a *designerly* way. Presenting this project seems important to me because, since the present study emerged and was driven in a project-grounded way, potential avenues of future works may emerge similarly.

Through a project called *CrispRfood.eu* (2018), I address the limitations listed in my dissertation conclusion. This project uncovers a whole new round of research questions. They are related to: addressing issues that are known but unintelligible; active audience construction through a communication strategy; controversy mapping.

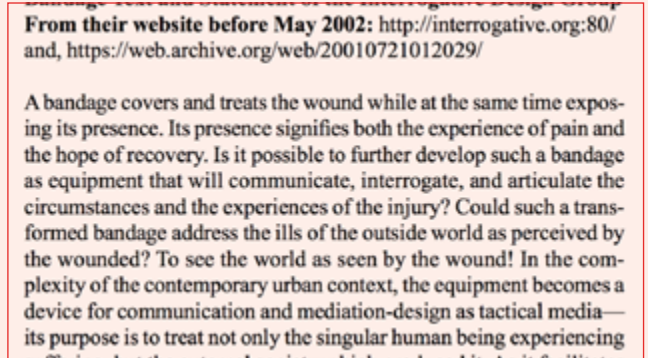
In *CrispRfood.eu* we regrouped EU commission members, scientists, farmers, cooks, and so on, to debate about the outcome of a EU law making process on gene-edited food.

Links to Online Appendices



Introduction | Graphic Design Layout

See: maxmollon.com/permalink/PHD_Appendix-INTRO-Layout.pdf



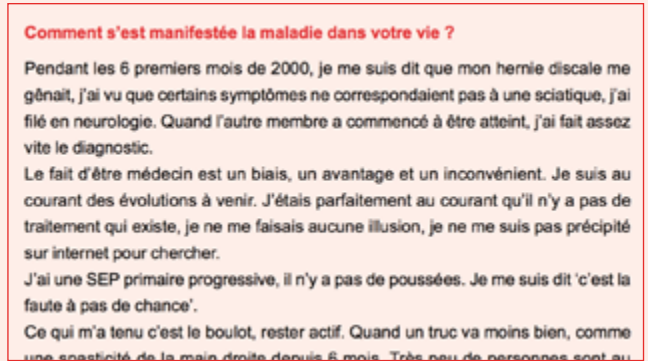
CH1 | Interrogative Design and Reflective Design

See: maxmollon.com/permalink/PHD_Appendix-CH1-Interrogative_Reflective.pdf



Appendix | CH5 | Making of *Montre-Éphéméride*

See: maxmollon.com/permalink/PHD_Appendix-CH5-Making-of_montre_ephemeride.pdf



Appendix | CH5 | Sophie Marion

See: maxmollon.com/permalink/PHD_Appendix-CH5-Sophie-Marion.pdf



Appendix | CH6 | Making of *L'Éphéméride*

See: maxmollon.com/permalink/PHD_Appendix-CH6-Making-of_Ephemeride.pdf



Appendix | CH8 | Mind-Mapping

See: maxmollon.com/permalink/PHD_Appendix-CH8-Mind-Mapping.pdf

Appendix | CH3 | Auger

Appendix related to [CH3 | Section 10.C.4: The Limitations of Dissemination Means, an Unaddressed Work of Mediation](#)

The interview goes through a lot of the topics addressed in the Chapter 1 and Chapter 3: Mass media implies uncontrollable and superficial feedback; overwhelming design provocations impedes on reflection. Public engagement was forced upon scientists, and critical propositions threaten their funding. Conducting debates in art centres filters out a type of privileged audience. Thinking critically about their own practice was not on the agenda at the MA level, it came when starting the Ph.D.

Auger, J. (2017). Personal communication. 17/11/2017, Sully Café, Paris. | Emphases are added by myself.

Many critiques can be made on our 'design for debate' projects. With the *Material Beliefs* project, for example, Jimmy (Loizeau) and myself were involved in the organised debates at the Dana Centre (attached to the Science Museum in London). It is located in Kensington, one of the **most expensive areas** of London and clearly influenced the kind of visitors that attend these debates.

The [critical] quality of the design projects was not fantastic either. This is a big problem with the nature of public engagement itself. As far I am aware, in the UK at least, public engagement emerged from the GMO public outcry in the 2000s. The government realised after the GM case that better methods to engage the public with science are needed. In some respects, we can draw a comparison with *Futurama* (General Motor's exhibit at the 1939 World's Fair in New York). The designer Norman Bel Geddes was involved in a similar approach—manipulating a public opinion, in favour of corporate or/and government agendas.

As a consequence (of GM failure), let's say perhaps '10%' of scientific project grants have become dedicated to public engagement. Policy makers made it mandatory. As a result, you get scientific institutions funding art and design projects, but not necessarily wanting them! The CERN residency programme is a famous example of these art-science programmes. Quite often the artists in residence are not very interested in public engagement, they want to express metaphorically or aesthetically what the technology is and how it works, **not** what it may become – or how it might negatively impact aspects of everyday life.

This is where it becomes problematic. Scientists, as much as corporations, do not like to expose what could go wrong (with their research). It threatens their funding rather than bolstering and supporting it. Hence, coming back to my critique of our participation in the *Material Beliefs* research project, it is hard to honestly critique what a technology could do. This difficulty (to express critique) is something we experienced first-hand with a project called *IMPACT* at the RCA. Fifteen designers were connected to fifteen EPSRC [Engineering and Physical Sciences Research Council] funded projects around the UK. We had to select, from a list of projects and institutions, who we wanted to collaborate with. Among the fifteen projects, perhaps 3 or 4 faced big conflicts in formulating critical statements.

The designers were simply not allowed to be honest being expected to present only positive applications (not negative implications). The root of the problem is finance, not science. This is one of the massive problems related to how technology comes into our lives.

Critical and Speculative Design is still a very naïve and rapidly evolving practice. During the early years, there was not much time to critically reflect on what we were doing. At the MA level you just answer the brief—being imaginative to challenge the boundaries of conventional design. But you do not have enough time to question the practice thoroughly. For 6 years, from 2005 to 2011 or 2012 I would say, everybody was embracing what we were doing (in Design Interactions at the RCA), including some very well-known galleries. **There was little need to analyse the situation too much because it was working, or at least no one suggested it was not.**

Social sciences such as STS have been dealing with similar questions (on technological critique) for years. I feel slightly irresponsible that we hadn't been more engaged with such approaches on the MA programme but it was when I started the Ph.D. that I recognised the relevance of this material. I discovered (in STS) socio-technical imaginaries, utopian studies, etc. and realised how naïve and unprepared we were, or maybe even arrogant.

Which one of your projects did engage people the best and why did it work?

In terms of raw public engagement, the Audio Tooth Implant. What it actually achieved is hard to say. **When something goes viral, you can't trace its impact.** You can quantify the number of articles or collect a number of anecdotes. We had a lot of them—funny emails, weird SMS, funding proposals, a company attached to DARPA contacted us, Jimmy has even been stalked in the streets.

The debate is invisible or hard to follow when conducted through the media. I consider the media as a gallery space. A space to engage people with reflection.

How did it get viral?

We (Jimmy and myself) presented it at the RCA degree show in 2001. It was one of my MA graduation projects in Design Products. We won a prize at the Science Museum in London called Talking Points and this resulted in an installation in the museum for 6 months. After the graduation, Jimmy and I just started working at Media Lab Europe (MLE) in Dublin and this coincided with the Science Museum opening, which was very lucky as we were no longer RCA graduates but MIT researchers (MLE was the European partner the MIT Media Lab in Boston, USA)—this gave the concept way more credibility! **The Press Officer of the Science Museum did just a ridiculously good job.** He put the press release out and everything started getting crazy. BBC was there (at the exhibition), Reuters, several tabloid newspapers such as *The Sun* with a full-page spread... **For us it was pure luck to be very honest.** We never lied to anyone, pretending the project was going to be real. I have become very cynical about the role the media can play after this experience—the blurring of fact and fiction is too easy.

The evaluation of impact is one of the big problems with this kind of design projects: **as a designer, when you finish an object, the project is finished...** for example, I make a chair, maybe I sell the chair, I would never conduct an interview to understand how people experience it or what it means for the world. This is the problematic shift when the purpose of a project is public engagement (like with the Audio Tooth Implant and so on). Designers simply aren't trained to participate in such activities. We are not going to start chasing people up who want to debate. It did not happen at that time because this is not how design (at the time) operated. A lot of the problems come from the fact designers are very naïve (when it comes to engagement). It is too easy to make sexy projects for galleries and see exhibitions such as the one at the Science Museum as the end goal.

In contrast, Tobie [Kerridge]¹ made a significant shift (in the approach) when moving to Goldsmith College, due to the close relation between design and the social sciences.

We later developed other approaches. With the *Isophone* project, for example, we experienced the power of the demo. The project was exhibited at the *Ars Electronica* festival, right in the middle of the main public square in Linz. Around 60% of the people who tried the demo were locals.

In the museum, like at the MoMA exhibition,² the projects were contextually disrupted and impenetrable. It is hard to get tangible feedback, unless curating very actively your own events.

And the problem with the media is that you lose control.

What is the sense of the expression you use in your thesis 'meaningful reactions?'

It was about our *Carnivorous Domestic Entertainment Robots* project. A short video was featured on YouTube and this triggered a lot of online discussion—but very banal and mostly stupid comments. No one took the time to deeply think about the project's potential and the comment it made on the potential existence of robots in our lives. What I mean with meaningful is that the comments are constructive or helpful in some way. It refers to the quality of people's feedback. In my Ph.D. I reflected on why the project only managed to elicit banal commentary concluding that **I mismanaged 'the uncanny.'** The *HappyLife* project (which came after) was less provocative for instance.

¹ Kerridge was the project leader of the *Material Beliefs* research project.

² Auger-Loizeau's *Afterlife* (2001–2009) project participated to the *Design and the Elastic Mind* exhibition curated by Paola Antonelli in 2008.

Appendix | CH3 | Futures Cone Diagram

Appendix related to: [CH3 | Section 11.A.1: The Function of Prompting a Public to Come Together and its Limitations](#)

Dunne and Raby often use the Futures Cone diagram, common in Foresight literature, which represents the potential alternatives ahead of us as a series of spaces, more or less drifting from the line continuing the present in a straight direction.

As Joseph Voros recalls, Futurists have often spoken and continue to speak of three main classes of futures: possible, probable, and preferable (Amara 1974; Bell 1997). The cone diagram was brought, because better suited to depict this expanded taxonomy. It was used to represent alternative futures by Hancock and Bezold (1994). They based it on a taxonomy of futures by Henchey (1978) including main classes of future (possible, plausible, probable, preferable). Voros found out that Charles Taylor (1990) evoked a “cone of plausibility” even before, which comprised a “back-cone” into the past and “wildcards.”³ Since 2003, Voros popularised and modified the cone as depicted below.

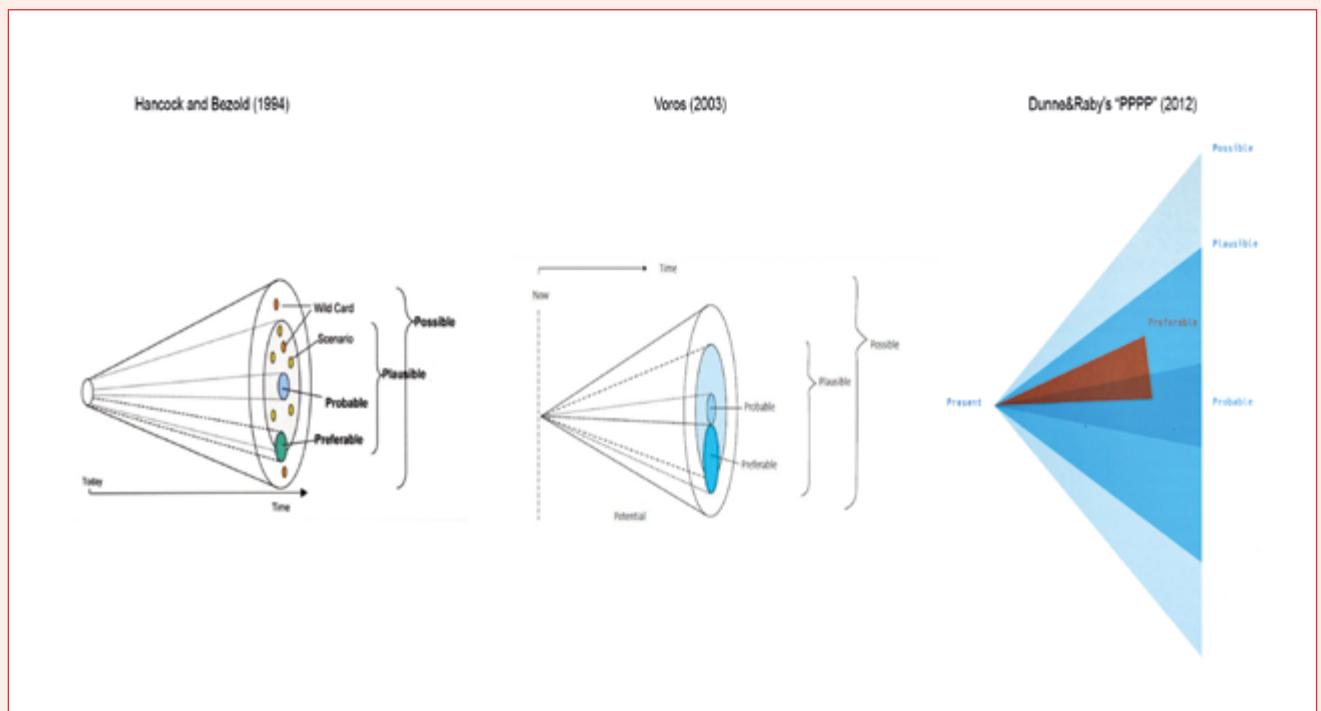


Figure 90 | Future Cones by: Hancock and Bezold (1994); Voros (2003), Dunne&Raby's "PPPP" (2012).

3 Paraphrased from: bit.ly/voroscope | References given by Joseph Voros: Amara, R 1974, 'The futures field: Functions, forms, and critical issues,' *Futures*, vol. 6, no. 4, pp. 289–301. | Bell, W 1997, *Foundations of futures studies*, 2 vols, Transaction Publishers, New Brunswick, NJ, USA. | Hancock, T & Bezold, C 1994, 'Possible futures, preferable futures,' *Healthcare Forum Journal*, vol. 37, no. 2, pp. 23–29. | Henchey, N 1978, 'Making sense of futures studies,' *Alternatives*, vol. 7, no. 2, pp. 24–28. | Taylor, CW 1990, *Creating strategic visions*, Strategic Studies Institute, US Army War College, Carlisle Barracks, Carlisle, Pennsylvania, USA. | Voros J 2003, 'A generic foresight process framework,' *Foresight*, vol. 5, no. 3, pp. 10–21.

Appendix | Intro CH5-8 | The Commission Terrain

Appendix related to [Intro CH5-8 | Section 16.A.2](#)

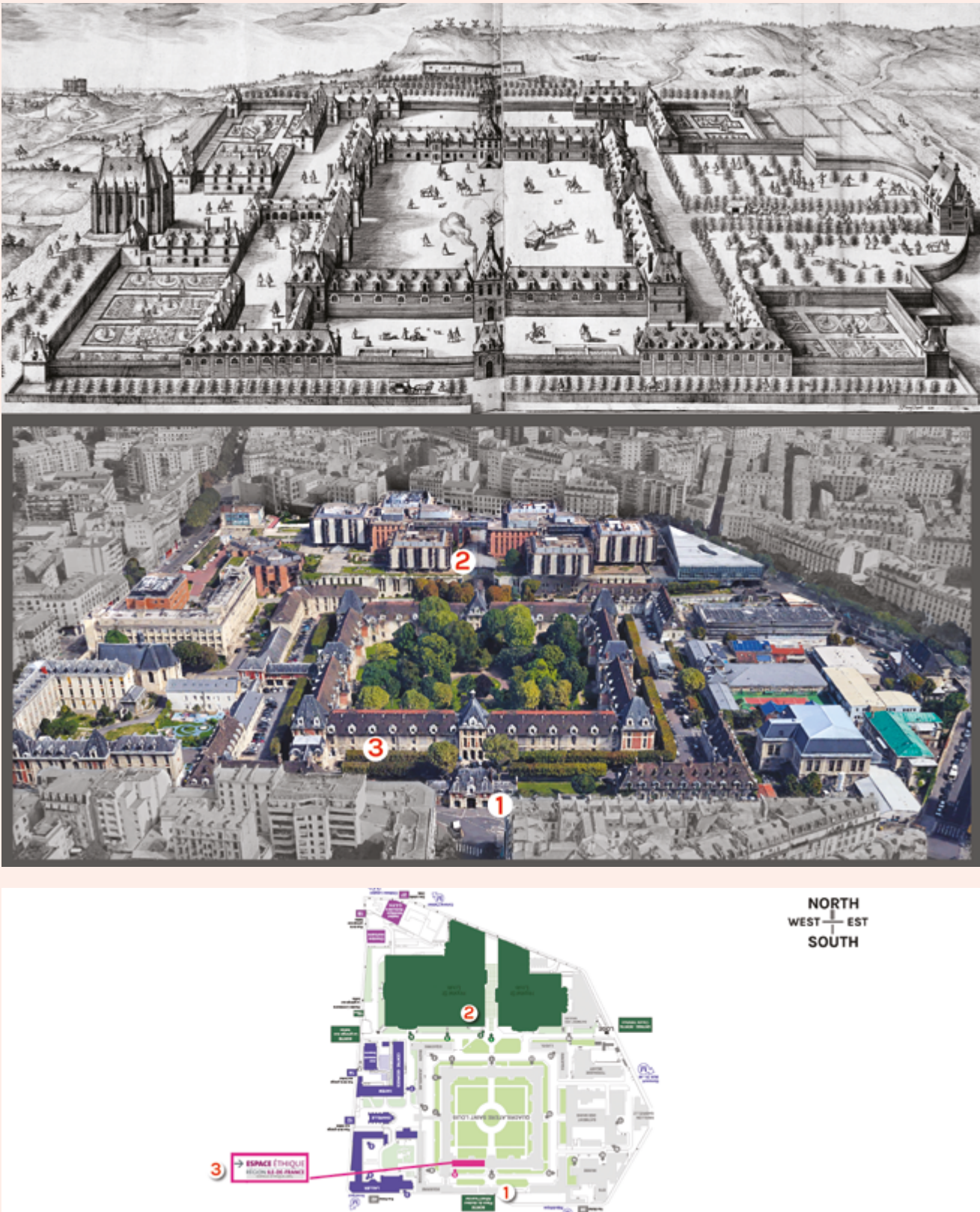


Figure 91 | 3 views of the St-Louis Hospital, Paris: a couple of decades after its construction in 1607 (top), in a 2019 Google Earth picture (centre) and on a map view (bottom). Numbers shows: the entrance (1) of the former hospital's historical building; the actual hospital (2) and the *Espace Éthique's* offices (3), among other services. No medical intervention is performed in the historical building nowadays.



Figure 92 | Number (1) on the previous map, Fig. 91. The entrance of the historical building, in 2018 (left), and in the the 70s (right). St-Louis Hospital, Paris | Right-side image credit: paris-zigzag.fr.



Figure 93 | Number (2) on the previous map. Entrance of the contemporary building of the St-Louis Hospital, Paris, in 2007 | Image credit: hopital-saintlouis.aphp.fr.



Figure 94 | Number (3) on the previous map. View of the south-west ail of the squared historical building in which *Espace Éthique's* offices are installed. View from the park. | St-Louis Hospital, Paris, April 10, 2015.



Figure 95 | Main corridor leading to the exit of the Commission's offices. The open space where I was installed is at first left in the picture. | St-Louis Hospital, Paris, April 10, 2015.



Figure 96 | View of the open-space which comprises 5 workplaces, my desk is behind the glassed wall on the right (top picture). View of my office progressively filled with paperboard and mindmaps (bottom). | St-Louis Hospital, Paris, July 27 (top) and October 20, 2015 (bottom).



Figure 97 | View of the Monday team meeting, preparing the Summer University (top) | Working session with the Head of Public Relation and Communication (middle) | Drink after the *10 Hours of Ethics* conference with two colleagues and a speaker, near La Bellevilloise (bottom) | Respectively, June 01, April 23, and June 08, 2015.

Appendix | CH9 | Analytical Tool

This appendix is related to: [CH9 | Section 41 The Discursive Design Communication System model](#)

It is to be noted that the Discursive Design Communication System model, while offering an abstracted graphic representation, can be turned into figurative representations during analysis phases.

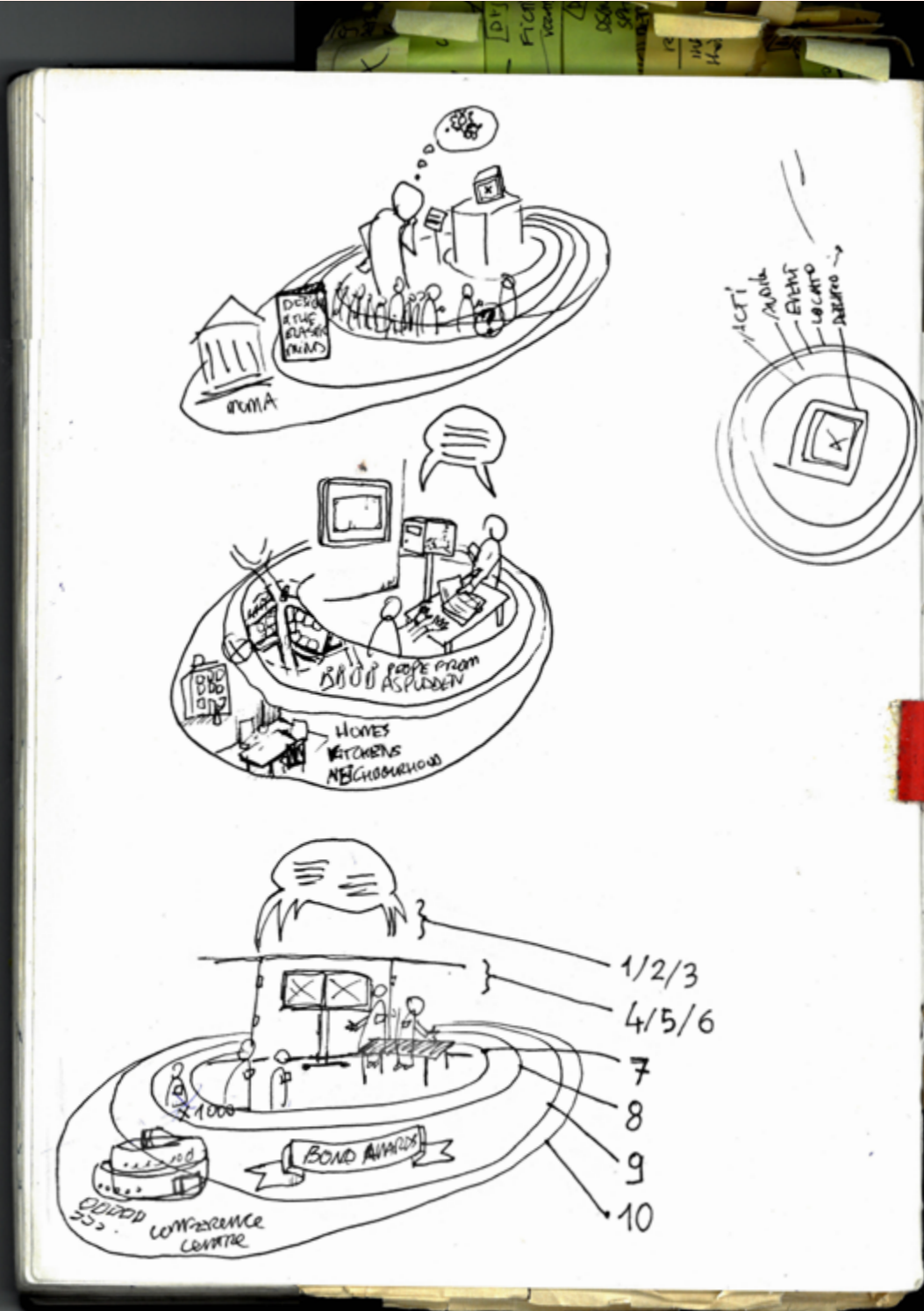
Here are given examples of figurative sketches, used to analyse the communication situation of three projects analysed in Chapter 9.

Figure 98 | Extract from my design research journal. Examples of the analysis of the communication situation of three projects. From top to bottom:

- *Victimless Leather* (2004)'s MoMA exhibition context;
- *Symbiots* (2008–09)'s face-to-face, mailbox and billboard in a neighbourhood context.
- *Mantis Systems* (2018)'s booth in a conference context.

Sketches based on the Discursive Design Communication System model, and turned into a figurative representation during the analysis. The numbers correspond to the ten levels of the model:

- (1) General topics,
- (2) Debatable Issues,
- (3) Debated Issues,
- (4) Fictional Situations,
- (5) Artefact's concepts,
- (6) Communication material,
- (7) Activities,
- (8) Audiences,
- (9) Events,
- (10) Locations.



Glossary

This list of keywords used or defined in the thesis is organised by theme in order to facilitate its reading as a separate document.

The Political, Contestation, and Design for Debate

- **Adversarial** is the quality of something to stand in opposition to something else, and to arouse an agonistic experience.
- **Adversarial Design¹** is a theoretical construct drawing on Mouffe's theory of agonism. It encompasses design practices that provoke experiences of confrontation—i.e. prompting recognition of under-discussed issues, expressing disagreement, and enabling contestation.
 - **Discursive Design²** is a theoretical construct regrouping design practices that deliberately and explicitly craft artefacts to convey meaning (rather than to perform an action), often about societal issues.
 - **Reflective design³** is a theoretical construct drawing on Critical Theory gathering a body of design practices that engage the viewer with critical reflection.
 - **Participatory Design⁴** is historically rooted in the 1960s labour rights movements and refers to a body of practices that give an active role of design to the people that benefit from the results of a design process.
- **Agonism⁵** is a conceptual condition (and an experiential situation), a state of constantly renewed contestation against others, as adversary (*agon* in Greek) rather than enemy. It aims at challenging established consensuses and hegemonies underpinning the state of things, thereby fostering *political* conditions and relations.
- **Agonistic pluralism⁶** is a vision of democracy based on forever ongoing contestation (and the challenge of the ones in place of power). It values the expression of disagreement as a basis for democratic pluralism.
- **Consensus** is a state of collective agreement of opinions between members of a majority of people. It therefore privileges the majority, installs hegemonies and implies the marginalisation, clustering, and rise of extreme opinions.
- **Contestation:**
 - **Collective contestation** is the action of expressing contentious opinions as a group that reached a consensus about the object of (collective) dissent.
 - **Mutual Contestation** is the action of expressing contentious opinions against others in a collective, while no agreement is found.
- **Debate** refers to the process and outcome of collective contestation—i.e. public debate—the confrontational nature of mutual contestation—i.e. interpersonal debate—and it may also convey a sense of struggle against the oppression of consensus, once playing on words and drawing on the French *se débattre*.
- **Designing for debate** is a design stance, an intent to engage people with mutual or collective contestation. It works through *artefacts* that embody and *convey* issues, which initiate or deepen individual *reflection* by fostering the expression of *disagreement* in a *participatory* and inclusive debate setting. These practices are *designerly*, *discursive*, *reflexive*, *adversarial* and *participatory* (Definition coined in Chapter 8).
 - **Design for debate** is a **body of design practices** which aim at sparking contestation and debate. This branch of social design includes practices of debate facilitation, collective intelligence, citizen assembly organisation, and so on. Within this body, the practices that confront an audience with artefacts that are not necessarily used (discursive designs) can be understood as a subset—i.e. discursive design for debate.
 - **Design for debate** also refers to a **field of research**, taking the previous practices as an object of study. It can be structured through the following typology. It gathers the research works that deal with: (A) the artefact itself; (B) the making process and the functions of the project; (C) the ground and outcomes of the project; (D) the debate issues and the public's experience.

1 **Carl DiSalvo**, *Adversarial Design* (Cambridge, MA: The MIT Press, 2012).

2 **Bruce M. Tharp et Stephanie M. Tharp**, *Discursive Design: Critical, Speculative, and Alternative Things*, Design Thinking, Design Theory Series (Cambridge, MA: The MIT Press, 2019), 13, [www/](#).

3 **Phoebe Sengers** et al., 'Reflective Design', in *Proceedings of the decennial conference on Critical computing (CC)* (2005), 49, [doi.org/](#).

4 **Susanne Bødker**, 'Creating Conditions for Participation: Conflicts and Resources in Systems Development', *Hum.-Comput. Interact.* 11, n° 3 (septembre 1996): 215–236, [doi.org/](#).

5 **Chantal Mouffe**, *On the Political* (London; New York: Routledge, 2005).

6 **Mouffe**.

- **Disagreement** or **dissent** is the state reached when a collective does not reach a consensus, it is the discursive expression of conflict and the opposite of consensus.
- **Dissensus⁷** (i.e. Mouffe's dissensus) is understood as a state of conflict reached when something or someone disrupts an existing consensus, so as to emancipate under-represented people and opinions from the state of power relations in place.
- **Issue experts⁸** defines all persons having a relevant experience of a given controversy. This concept blurs the distinction made between so called 'official experts' and 'profanes.'
- The *political⁹* is the essence of the experience of collective life, rooted in affects and antagonism.
- **Politics** is the administration of collective life (including people, institutions, jobs, etc. related to these tasks).
- **Design things¹⁰** are artefacts that make issues, matters of concern and their implications manifest to publics, thereby enabling reflection and political action.

7 **Mouffe**.

8 **Tommaso Venturini et al.**, 'Designing Controversies and Their Publics', *Design Issues* 31, n° 3 (1 juillet 2015): 74–87, [doi.org/](#).

9 **Chantal Mouffe**, *The Democratic Paradox*, Phronesis (London: Verso, 2000).

10 **Thomas Binder et al.**, *Design Things* (Cambridge, MA: The MIT Press, 2011).

Dissonance

See **CH5 | Section 21**, for a page dedicated to the glossary of Dissonance. It includes the following concepts:

- **Ambivalence**
- **Cognitive dissonance¹¹**
- **Critical reflection¹²**
 - **Stimulating critical reflection**
- **Defamiliarisation¹³**
- **Dilemma of interpretation¹⁴**
- **Dissonance**
 - **Careful**
 - **Design tactic¹⁵**
- **Emotional and cognitive involvement**
 - **Not extreme**
- **Familiarity**
 - **Unfamiliarity**
 - **Gap¹⁶**
- **Perceptual bridges¹⁷**
- **Uncanny¹⁸**

11 **Leon Festinger**, *A Theory of Cognitive Dissonance* (Stanford: University Press, 1957).

12 I elaborated on these terms by drawing on Reflective Design (Sengers et al.) who draws on Critical Theory and advocate for a form of design that entices critical reflection. | **Sengers et al.**, 'Reflective Design.'

13 **Viktor Borisovich Shklovsky**, *L'Art comme procédé*, trad. par Kak Priëm Iskusstvo, (1st edition in 1917, at Petrograd, in Recueils sur la théorie de la langue politique, Vol 2) (Paris: Allia, 2008).

14 **Matthew Malpass**, *Critical Design in Context: History, Theory, and Practices* (London: Bloomsbury Academic, an imprint of Bloomsbury Publishing, 2017).

15 **Carl DiSalvo**, 'Design and the Construction of Publics', *Design Issues* 25, n° 1 (janvier 2009): 52, [doi.org/](#). | **Michel de Certeau**, *The Practice of Everyday Life*, trad. par Steven F. Rendall. (Berkeley: University of California Press, 1984).

16 **Anthony Dunne et Fiona Raby**, *Speculative Everything: Design, Fiction, and Social Dreaming* (Cambridge, MA: The MIT Press, 2013), 35.

17 This definition is elaborated from **James H Auger**, « Why Robot?: Speculative Design, the Domestication of Technology and the Considered Future » (Ph.D. Dissertation, London, Royal College of Art, 2012), [www/](#).

18 **Sigmund Freud**, 'Das Unheimliche (The Uncanny – 1919)', in *Fantastic Literature : a critical reader*, éd. par Westport Sandner (Westport, London: Greenwood Publishing Group, 2004).

Communication Situation, Discursive Design and Norms

- **Arguable** is said of an artefact that does not embody one, but several opinions on a debate issue—offering a multiplicity of possible interpretations and becoming a pretext for discussing disagreeing interpretations
- The **audience** is the people reached by a discursive artefact. Within the frame of design for debate, I understand the audience as a Discursive Design perspective on Dewey's concept of **public**—i.e. which is the people that come together to deal with a common matter of concern.
- **Bridging**, the short for 'bridging different standpoints,' is—within the creation process of a dissonant discursive design—the action of adopting the public standpoint in order to (1) punctuate an unfamiliar proposal with familiar elements and (2) make an unfamiliar standpoint available to others. It is a rhetorical strategy that it is an essential component of what makes dissonance careful—i.e. which allows to avoid mere provocation.
 - **Rhetoric**, is the art of speech and persuasion. Within the frame of design for debate, it refers to the design means put in place by designers to adapt their project to an audience.
- **Bridging experiment**,¹⁹ is a designerly approach to ethnomethodology. It uses a discursive design that does not breach norms but carefully bring them in a state of dissonance in a given context (towards a given audience).
 - **Ethnomethodology**²⁰ is the study of the methods used to understand and produce the social order (e.g. social norms) in which we live.
 - **Breaching experiment**²¹ is one of these methods which consists in studying social norms by infringing them.
- The **circulation**²² of a design for debate artefact refers to its communication. This term has been proposed as an alternative to the term dissemination in order to encourage designers to think about mediation means that are ostensibly open to audience participation.
- The **communication situation** is the concrete context in which discursive design artefacts meet publics, which is often composed of pre-existing actors, activities and discourses. This situation can be deliberately addressed, it gathers—in the same communication activity—debate actors that are human, non-human, actual and fictional.
- The **Discursive Design Communication System model** is a conceptual structure that helps to describe how artefacts relate with the issues they address, and with the contexts in which they are circulated (i.e. communication situations). It is composed of three main categories and ten sub-categories. This system can be employed as a descriptive model, an analytical tool or as guidelines for design practice.
- **Diplomat (artefact)** or **non-human diplomat** refers to a design artefact that thwarts hegemonies and consensus, in all camps. it does so by making under-represented visions visible, in a given consensual situation. Diplomat artefacts do a work of translation, bridging worlds that do not usually communicate. Such artefacts draw on the **arguable** nature of dissonant artefacts.
 - **Diplomat (designer)** can also be understood as the stance of a designer that takes the role of an agonistic intermediary—i.e. which is not from either sides, thwarting hegemonies and consensus in all camps.
 - The **Trojan horse** is a second stance where the designer works as an infiltrator. They enable minority voices and opinions to be heard within an audience composing the opinion of the majority (in terms of number, or of power). Which is a breakthrough from within their usual social or media context, from within their comfort zone.

¹⁹ The term bridging evokes the notion of linkage; a phonetic proximity to the terms 'breaching experiment;' and is a reference to Gloria Anzaldúa's work (i.e. *This Bridge Called my Back*) on the status of people who behold two nationalities, therefore becoming a bridge between communities, cultures and points of views.

²⁰ **Harold Garfinkel**, *Studies in Ethnomethodology* (Englewood Cliffs, N.J.: Prentice-Hall, 1967).

²¹ **Alain Coulon et Presses Universitaires de France**, *L'ethnométhodologie* (Paris: Presses Universitaires de France, 1987).

²² **Tobie Kerridge**, « Designing Debate: The Entanglement of Speculative Design and Upstream Engagement » (Ph.D. Dissertation, London, Goldsmiths, University of London, 2015), doi.org/, www/.

- **Insertion** (of an artefact or of a designer themselves), is the joining of a specific audience in their context in which to work and/or circulate a design for debate artefact. Infiltration and diversion are different modes of insertion into pre-constructed audiences.
 - **Infiltration** describes the way designers and artefacts may physically join pre-constructed audiences in their respective contexts.
 - **Diversion** (or 'media diversion') describes the way a media streams of audience attention, already constructed around a topic circulated in mass and online media, may be redirected to another communication situation.
 - **Mirroring** is a design tactic which puts the public in discussion with another version of itself. For this, the designer works *in situ* and takes the *context* where the public stands as a material to create a fiction, and as a situation to disseminate the project, thereby mixing fiction and reality. This way, the project works like a "device of articulation".
 - A **device of articulation**²³ is a design artefact that reveals connections between (apparently disparate) actors, discourses and practices. This enables the public's articulation of chains of significance regarding their belonging to a collective of humans and non-humans that is structured by power relations.
 - **Issuefication**²⁴ is the 'loading' of an artefact with meaning regarding a societal issue (e.g. slogans surrounding the artefact on an advertising poster).
 - **Embodied issuefication** is the purposeful creation of an artefact in order to convey issues (in contrast with adding slogans to pre-existing artefacts).
- **Mediating-artefacts** offer a 'simulation' of the public's relationship with an issue. It draws the viewer close to a distant situation depicted in a narrative of use, while distancing the actual use of an object (the artefact being a form of media).
- **Media**,²⁵ like a movie or a theatre piece, distances viewers from the action so as to experience it through imagination and narration. A design artefact can do the same and be understood as a media too.
- A **rhetorical use**²⁶ is the viewers' projection in the use of a (often fictional) artefact. It is supported by narratives of use giving meaning and context to the artefact—depicted through film, images, photomontage, vignette, etc.

²³ **DiSalvo**, *Adversarial Design*, 95.

²⁴ **Noortje Marres et Richard Rogers**, 'Recipe for Tracing the Fate of Issues and Their Publics on the Web', in *Making Things Public: Atmospheres of Democracy*, éd. par Peter Weibel et Bruno Latour (Karlsruhe, Germany / Cambridge, MA: ZKM / The MIT Press, 2005), 922–935, www/.

²⁵ **Annie Gentès**, *The In-Discipline of Design: Bridging the Gap Between Humanities and Engineering*.

²⁶ **Malpass**, *Critical Design in Context: History, Theory, and Practices*, 47.

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Max Mollon

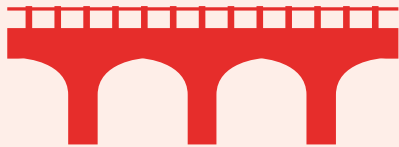
Designer pour Debattre



Comment fabriquer des artefacts dissonants
et leurs situations de communication
de manière à ouvrir des espaces de contestation mutuelle (agonisme)
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APPENDICE

EN LANGUE FRANÇAISE

Résumé de la thèse

La thèse est ici présentée en 9 pages de résumé court, et 52 pages de résumé développé (dont 11 pages de visuels clés).

En annexe de ce résumé, une synthèse des contributions est proposée. Elle peut être employée comme document autonome à visée pédagogique, méthodologique ou de recherche (9 pages). Elle est suivie du glossaire traduit en français (8 pages).

Noter que ce corpus des concepts empruntés à la littérature et/ou développés pour la thèse est l'une des contributions importantes du présent travail.

Ce document peut-être lu de manière autonome ou peut être trouvé en page 540 du manuscrit de thèse.

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Comment fabriquer des artefacts dissonants et leurs situations de communication de manière à ouvrir des espaces de contestation mutuelle (agonisme) et d'expression de voix marginales (dissensus).

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Abstract

Vivre en démocratie ou travailler en groupe nécessite l'usage de procédés délibératifs pour s'accorder et décider des manières vivre ensemble et se projeter dans des futurs désirables communs. Cependant, ces démarches restent une illusion, selon la philosophe politique Chantal Mouffe. Car, la décision par consensus marginalise les souvent les opinions minoritaires, et car la rationalité ne permet pas de venir à bout des conflits souvent enracinés dans les affects. Par conséquent, comment ouvrir des espaces de débat participatifs, inclusifs et qui mobilisent les affects ? Quelles méthodes et quels rôles pour un tel design agnostique (du grec Agon, adversaire) ?

Notre première contribution est d'avoir défini un groupe de pratiques (dont, 6 de ses propriétés communes), et le champ de recherche qui les étudie (dont, la typologie de ses objets d'études). Ce sont le « groupe » et le « champ de recherche » du design pour débattre. Parmi ces pratiques notre étude se concentre sur le « Design Discursif » pour débattre, auquel des programmes comme le Design Critique, Spéculatif et Fiction participent. Pour répondre à nos questions, trois terrains de recherche ont été explorés de manière itérative (une série de cinq projets), chez les parties prenantes (ex. une commission éthique, et un laboratoire de recherche), en nous appuyant sur des méthodes qualitatives, empruntées à la recherche-action, à l'ethnographie et aux Sciences de l'Information et de la Communication.

En réponse, l'analyse révèle comment le design peut stimuler le débat interpersonnel quand il met en « dissonance » les valeurs sociales du public. Nous avons appelé cette forme d'ethnométhodologie par le design, l'expérimentation de reliure. Second résultat au delà du simple artefact, le design peut atteindre et mobiliser un « public » (au sens de John Dewey), en allant à sa rencontre, sur son terrain. Et, en orchestrant toute une situation de communication où publics et artefacts se rencontrent. Nous en proposons un modèle descriptif, le Système de communication du Design Discursif. Ainsi, quand il déjoue la polarisation d'opinions, l'artefact endosse un rôle de diplomate non-humain, qui intensifie les conflits pour connecter des mondes qui ne s'entendent pas.

Mais aussi, en tant que média, il adopte un rôle « d'artefact médiateur agnostique », qui ouvre des situations de communication multidimensionnelles – entre acteurs humains, non-humains et fictionnels.

Les contributions de cette thèse sont conceptuelles (un glossaire des concepts liés à la « tactique de la dissonance »), pratiques (une méthode de recherche ethnométhodologique par le design et un modèle de communication du Design Discursif), empiriques (cinq études de cas et l'analyse d'une expérience longitudinale d'un an de résidence de design dans une commission éthique) et théoriques (une discussion sur la contribution spécifique du design *au politique* – définie par Mouffe comme une condition de confrontation d'opinions qui est inhérente au vivre ensemble. Nous discutons également les vertus d'un design *du politique* en tant que pratique de design professionnelle. Et, en tant que pratique de recherche proche des « breaching experiment » (Garfinkel 1967).

Nous commençons par l'analyse d'un projet de Critical Design antérieur à la recherche doctorale (Dog & Bone, 2010-2011). Ses limites – son caractère provocateur et la stratégie de l'exposition, qui n'ont pas permis de réellement débattre – nous ont amené à remettre en question le concept de « provocation » et, à la place, à explorer celui de « dissonance » (d'après Festinger 1957). Suite à cette première expérience, nous affinons notre objet de recherche central, qui comprend des pratiques qui s'inspirent du design Reflexif (Sengers et al., 2005), Discursif (Tharp & Tharp 2008), Adversarial (DiSalvo 2009) et participatif. À travers une revue de la littérature, nous affinons notre compréhension de ce que signifie concevoir pour le débat, en développant le concept d'agonisme (une situation de confrontation sans cesse renouvelée. Mouffe 2000). En cherchant d'autres moyens de diffusion que l'exposition d'art et de design, nous en venons à examiner comment orchestrer une « situation de communication » (Goffman) qui inclut les humains et les non-humains.

Se faisant, cette thèse vise à esquisser les rôles potentiels offerts au designer *du politique* dans les sociétés contemporaines.

Lecture rapide

Le résumé court, puis le résumé développé permettent de rentrer dans la complexité des 540p du manuscrit. Dans le manuscrit, les conclusions de chaque chapitre, les textes en gras et ceux en couleur rouge ont été rédigés pour accélérer la lecture. Voir également la conclusion générale (et sa fiction conclusive).

L'organisation du manuscrit peut sembler non conventionnelle aux membre de notre discipline – les Sciences de l'information et de la Communication. En effet, la structure choisie retranscrit le processus itératif de notre recherche, typique de la démarche design.

La thèse est articulée en 3 temps :

- Dans les « fondations », nous proposons de s'émanciper (en partie) du Design Critique et Spéculatif pour créer le champ du design pour débattre (CH1) ; puis nous offrons une revue critique de l'état de l'art pour défricher les questions à aborder dans ce champ (ex. CH3 | Section 11). Nous adressons ces questions de recherche en deux étapes (via les deux parties suivantes du manuscrit) ;
- L'une (CH5-8) porte sur comment designer un *artefact* qui donne envie de débattre (ici est décortiqué un projet de design développé sur notre terrain principal, à l'Hôpital Saint-Louis à Paris, en 2015) ;
- L'autre (CH9-10) explore les manières de concevoir les *conditions d'un débat*¹, autour de l'artefact. L'artefact devient média – voire médiateur, vers des sujets à débattre, des situations fictionnelles, des autres versions de nous-même (ex. CH10 | Section 45 | p.467).

En tant que designer praticien, nous avons conduit cette recherche via une série d'expérimentations (des projets développés sur le terrain). Un bon aperçu de ces contextes expérimentaux est donné dans [INTRO CH5-8 | Section 16 | p.155](#) et son annexe [p.508](#) ; puis dans [INTRO CH9-10 | Section 38 | p.351](#).

Fiche technique

Thèse démarrée en Nov. 2012,

- Déposée le 19 Oct. 2019 et soutenue le 20 Déc. 2019 ;
- Entre Nov. 2014 et juillet 2018, 10 projets de design conduits dont 5 analysés dans le manuscrit.

Ce résumé de la thèse concerne un manuscrit de :

- 3 parties | 10 chapitres | 49 sections ;
- 500 pages | +40 p. d'annexes | +147 p. dans 7 annexes en ligne ;
- 89 figures (hors *pictorials* de présentation des expérimentations)

1 À noter, dans ce résumé l'emphase typographique en italique est utilisée pour les mots en langue étrangère, les concepts clés, les mots ou phrases importantes, les noms d'œuvres ou projets, et les mots utilisés dans un sens particulier. Les guillemets français sont généralement réservés à l'indication de citations.

Candidat

Biographie :

Max est designer, enseignant à [Science-Po](#), et docteur en design et en Sciences de l'information et de la communication (à PSL/[EnsadLab](#)). Il est également conférencier et intervient notamment au [Centre-Pompidou](#) et [TEDx](#).

Actuellement, il codirige le bureau de design pour débattre [What if?](#) – situé à la Gaîté Lyrique, un lieu culturel de la ville de Paris dédié à l'exploration des cultures et des futurs alternatifs. Depuis 2014, [What if?](#) accompagne des missions de consultation publique (pour des commissions éthiques), des débats internes (pour les laboratoires de recherche de l'INRA), ou explore de grandes questions non traitées par le politique (dont le projet [Politique-Fiction.fr](#) et [CrispR-Food.eu](#)).

Diplômé en Suisse (master Media Design, HEAD-Genève, 2010), il s'éloigne progressivement de la R&D (Orange-Labs, Bell-Labs) et des expositions internationales (St-Etienne [2013](#), Milan [2010](#), [2011](#), Lift-Genève [2010](#), [2013](#)). Et il consacre ses travaux au design fiction depuis 2010. Il crée en 2017 un séminaire mensuel, le premier tiers-lieu de recherche participative sur ces pratiques en France, le [Design fiction club](#).
[maxmollon.com](#)

Impact de la thèse sur nos pratiques post-thèse :

Au travers de 10 ans de pratique et 7 années de recherche, nous avons développé une pratique spécifique du débat, par le design – analysée dans la thèse. Nous développons aujourd'hui deux pistes post-thèse :

- **Nous appliquons** le design pour débattre tel qu'analysé dans la thèse auprès : d'institutions (ex. formation/consulting avec le Ministère de la Transition Écologique et Solidaire); des organisations (ex. consulting stratégique pour la RSE d'un grand groupe agroalimentaire); d'acteurs culturels (ex. ateliers participatifs de débat public sur le futur du [système carcéral](#) au musée des Confluences Lyon ou à la Gaîté Lyrique); d'acteurs pédagogiques (ex. imaginer le *TURFU* de la banlieue avec le [Microlycée de Vitry-sur-Seine](#) ;
- **Nous explorons (et recherchons) de nouvelles formes de pratiques**, avec Sciences Po où nous formons des analystes de controverse tridisciplinaires en combinant sociologie des imaginaires (passé), cartographie des controverses (présent) et design fiction (futur) – voir [master-itn.com/](#) et [lafaimdumon.de/](#).

Résumé de la thèse *Designer pour débattre*

Citation : **Max Mollon**, *Designer pour débattre : Comment fabriquer des artefacts dissonants et leurs situations de communication de manière à ouvrir des espaces de contestation mutuelle (agonisme) et d'expression de voix marginales (dissensus)*. (Thèse de doctorat, EnsadLab, PSL Research University, 2019).

Soutenue le 20 dec. 2019 à la Gaîté Lyrique. Conduite à PSL SACRe / EnsadLab et ParisTech Codesignlab. Sous la direction d'Annie Gentès et Emmanuel Mahé.

01 THÈME **Faire place aux voix inaudibles d'un groupe ou d'une démocratie, par le design.**

Vivre en démocratie ou travailler en groupe nécessite l'usage de procédés délibératifs, pour s'accorder et décider des manières de s'organiser, vivre ensemble et se projeter dans des futurs désirables communs. Cependant, les démarches participatives restent une illusion pour deux raisons, selon Chantal Mouffe, philosophe politique Belge contemporaine, sur laquelle s'appuie notre travail. Mouffe suggère qu'une démocratie (ou une organisation) saine, qui se veut ouverte à la pluralité des points de vue, se doit d'éviter :

1) les **consensus** hâtifs qui s'imposent par la loi de la majorité, et ceux qu'un groupe d'acteurs hégémoniques rendent inébranlables, car ils marginalisent les voix discordantes. Celles-ci tendent alors à se regrouper et se radicaliser afin d'être entendues¹.

2) la **rationalité** et les argumentations raisonnées comme seuls moyens de venir à bout des conflits en société, car les discordes prennent racine dans les affects. Ces discordes inhérentes à la tentative de vie collective fondent la base « du politique » (l'expérience nécessairement conflictuelle du vivre ensemble), qu'elle définit en contraste avec « la politique » (l'administration professionnelle de la vie collective)².

En réponse, Mouffe invite donc à penser **l'ouverture de nouveaux espaces de débat participatifs, inclusifs et qui mobilisent les affects**. Dans ces espaces de confrontation, autrui est considéré comme un adversaire à défier en joute verbale, plutôt qu'à vaincre en ennemi. **C'est sa théorie dite de l'agonisme** (du Grec ancien *Agon* : adversaire) **que notre thèse contribue à développer et à outiller par le design.**

Pour parvenir à ouvrir ces espaces de débat, Mouffe argumente que les artistes et les designers occupent une place stratégique dans l'appareil de production médiatique de la société contemporaine – la société du spectacle, de l'information et de la consommation.

Cette thèse a donc cherché à identifier les éléments spécifiques que peut apporter le design à la théorie de l'agonisme, en termes de méthodes et de rôles en société.

¹ Elle cite pour exemple la politique de libéralisme économique qui fait consensus dans les partis dits de gauche, comme de droite, dans les pays occidentaux depuis Margaret Thatcher, menant à la montée actuelle des extrêmes en Europe | **Chantal Mouffe**, *On the Political* (London; New York: Routledge, 2005).

² Mouffe critique donc l'utopie selon laquelle le dialogue raisonné que propose Jürgen Habermas serait un moyen viable de résoudre les conflits en société et de s'entendre sur les conditions de la vie collective.

02 OBJET D'ÉTUDE Designer pour débattre

Notre objet d'étude est composé de pratiques de création et d'organisation de débat qui tentent d'ouvrir des espaces agnostiques. L'on pourrait les placer au carrefour : des approches récentes d'intelligence collective facilitant la délibération ; des démarches prospectives par le design facilitant la projection dans des enjeux distants ; et des pratiques médiatiques facilitant la mobilisation des publics autour d'un enjeu de société (et notamment via des outils numériques).

La première contribution de notre travail est d'avoir défini cet objet d'étude : le design pour débattre. Premièrement, le champ du design pour débattre est un vaste champ de recherche. Il est composé des travaux qui étudient le design *du politique*. Nous avons structuré ce champ en dressant une typologie de ses sujets de recherche. Deuxièmement, le « design pour débattre » réfère également à un groupe de pratiques hétérogènes (étudiées par ce champ). Elles vont du Grand Débat Citoyen, aux ateliers de débat mouvant, en passant par des pratiques plus artistiques de critique par le design.

Parmi ces dernières, notre étude se concentre sur un sous-ensemble d'approches qui visent à stimuler des débats en montrant systématiquement un artefact (une production de design) qui incarne les enjeux en question. Il s'agit du « Design Discursif »³ pour débattre. De nombreux programmes comme le Design Critique, Design Spéculatif et Design Fiction participent à ce sous-ensemble. Nous avons donc circonscrit le corpus du design pour débattre aux pratiques qui partagent 6 propriétés communes essentielles, être : **conceptif** (employer le design comme médium), **discursif** (dont l'utilité première est de porter un discours plutôt qu'être mis en fonction), **réflexif**, **critique**, **adversarial** (qui favorise la confrontation) et **participatif**⁴.

Notre objet d'étude en image (projet tiré de la thèse) :



Nous sommes sur le campus de l'INRA. Lors d'un séminaire doctoral, l'objectif de la directrice de laboratoire était d'explorer les enjeux éthiques des biotechnologies et de l'édition génomique.

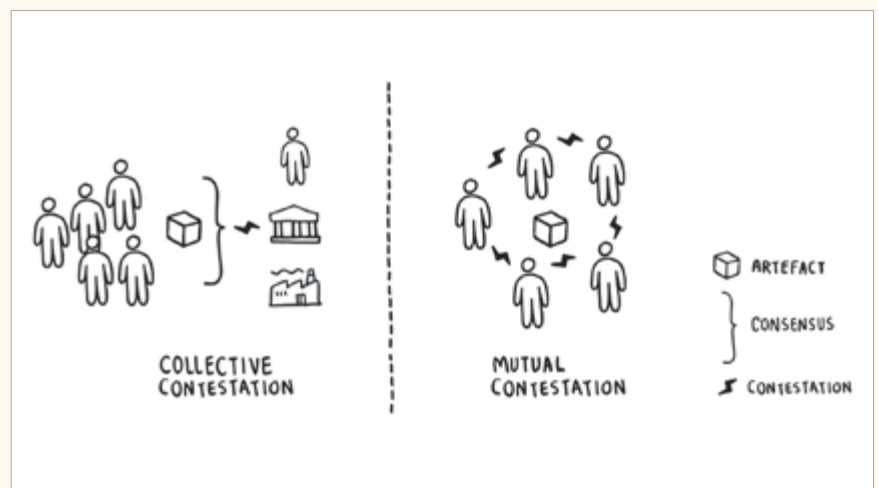
³ **Bruce M. Tharp et Stephanie M. Tharp**, *Discursive Design: Critical, Speculative, and Alternative Things*, Design Thinking, Design Theory Series (Cambridge, MA: The MIT Press, 2019), www/.

⁴ Voir CH1 | Section 2.C de la thèse pour les détails de la revue de littérature de recherche en design qui a permis d'identifier ces 6 critères essentiels.

Après un mois d'étude qualitative et d'interviews de chercheuses et chercheurs sur le terrain, nous avons proposé à l'INRA une hypothèse singulière, mais plausible⁵ : Et si les nouvelles conditions climatiques rendaient difficile l'élevage conventionnel et notre modèle agro-industriel ? Comment continuer de nourrir le monde ? Les réglementations éthiques seraient peut-être assouplies pour sélectionner et optimiser génétiquement les variétés animales les plus résistantes ? Sur cette base, les doctorants et doctorantes ont imaginé un animal improbable... mais particulièrement dérangeant, et donc utile pour déclencher la réflexion. C'est la *ChickowTrout* (poulet-vache-truite), une espèce stérile qui répond à tous les besoins de l'industrie alimentaire.⁶

Ce projet illustre qu'il existe une pratique du design qui ne fabrique pas du mobilier, qui ne résout pas des problèmes, mais qui pose des questions. C'est cela la pratique que nous étudions : le **design discursif pour débattre**, une pratique au carrefour de la prospective, du design et de la facilitation de débat (public, notamment).

Ici, il est important de différencier design politiquement engagé (qui exemplifie des valeurs à défendre), du design *du politique* (qui permet la confrontation d'opinions et d'affects). En se concentrant sur le second, nous prolongeons les travaux de 2010⁷ de Carl DiSalvo – chercheur en design américain – au sein desquels nous distinguons deux types de pratiques de design *du politique*. Celles permettant : la contestation mutuelle (ex. le débat interpersonnel) et la contestation collective (ex. le débat public ou une manifestation). Notre étude se concentre sur les pratiques qui stimulent la contestation mutuelle, qui est la moins étudiée à l'heure actuelle.



Représentation schématique des types de pratiques du design qui stimulent une contestation collective, ex. une manifestation (à gauche) ou mutuelle, ex. un débat interpersonnel (à droite).

- 5 Hypothèse construite autour de 2 facteurs : le changement climatique ; et la libéralisation de la politique européenne (qui régule l'alimentation génétiquement éditée grâce à la technologie CrispR).
- 6 Évidemment cette représentation est caricaturale, car les doctorants en biologie ne sont pas experts du design, mais cette proposition a permis de débattre avec le reste des équipes de l'INRA des événements susceptibles d'infléchir l'interdiction européenne de la transgénèse et de la CrispRfood.
- 7 **Carl DiSalvo**, *Adversarial Design* (Cambridge, MA: The MIT Press, 2012).

03 QUESTIONS **Provocations, expositions : dépasser les standards établis**

En vingt ans, les pratiques du Design Discursif⁸ se sont popularisées et diversifiées au sein des communautés de la recherche et de la pédagogie en art et en design, au point de créer un standard. Nous soutenons que ce standard est fortement limité dans sa portée agonistique, quant à ses manières de faire et de communiquer les projets. Ses limites⁹ sont de :

- Stimuler la réflexion en proposant un artefact provocateur, plutôt que créer un sentiment subtil de dérangement ;
- Proposer un sujet de débat déterminé seulement par l'auteur(e) du projet, plutôt que via une approche participative et inclusive ;
- Communiquer le projet dans des médias faits principalement pour la diffusion (ex. presse en ligne ou expositions), plutôt que dans une situation propice au débat interpersonnel ;
- Et viser la construction et la mobilisation d'un public (au sens de John Dewey) non identifié au préalable, plutôt que viser des publics latents dans un contexte spécifique.

Chaque élément de la liste précédente indique une sous-question de recherche visant à explorer : **Quelles méthodes** de design peuvent nourrir la contestation mutuelle et contribuer à faire entendre des voix discordantes et minoritaires ? **Quelles propriétés** possèdent l'artefact de design et la situation dans laquelle il rencontre son public, afin d'offrir une expérience agonistique ? **Quels rôles** pour de tels designers en société ?

Ce sont des questions essentielles quand on souhaite permettre au plus grand nombre de débattre de la pluralité des futurs désirables en société.

04 PROTOCOLE **Mettre l'agonisme en projet.**

Cette thèse fût développée au sein de la discipline Sciences de l'information et de la communication et Design.

Les fondations théoriques de la thèse ont été construites par une série de revues de littérature, en étudiant les limites de notre pratique et de celles d'autres designers.

Pour dépasser ces limites, nous avons identifié trois terrains de recherche principaux où rejoindre des publics dans leurs situations et conduire des projets de design pour débattre.

⁸ Rappel : dont l'utilité première est de porter un discours plutôt qu'être mis en fonction.

⁹ Voir CH3 | Section 11 pour les détails de la revue de littérature de recherche en design qui a permis d'identifier ces limitations et de formuler nos 6 questions de recherche.

Pour les terrains, il s'agissait :

1. d'une commission éthique indépendante à l'Hôpital Saint-Louis, nommée l'Espace Éthique sur les Maladies Neuro-Évolutives ;
2. du campus de l'INRA de Jouy-en-Josas, où nous avons débattu des conséquences possibles des recherches en agronomie ;
3. des médias en ligne pendant la campagne électorale de 2017.

Dans ces 3 terrains, nous avons organisé 5 débats.

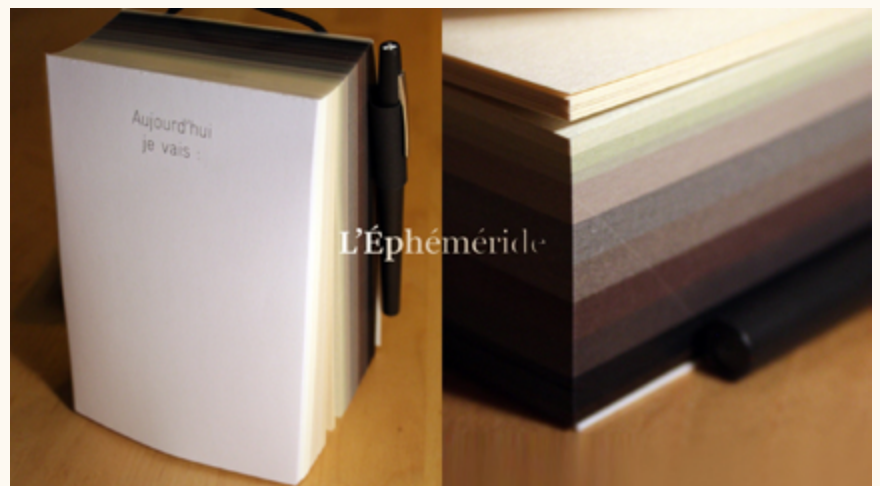
Nous avons généré et analysé nos données, en empruntant nos méthodes d'observation et d'analyse à la recherche-action et à l'anthropologie, notamment. Par exemple, lors de notre premier terrain à l'Espace Éthique, nous avons conduit une étude longitudinale qualitative de 12 mois avec :

- 32 entretiens semi-structurés réalisés ;
- 70 analyses de documents que la Commission a produit ;
- 16 observations de réunions hebdomadaires, et de 17 de leurs événements publics ;
- Et 1 situation de débat spécifiquement conçue pour la thèse : un débat de 1 h 30 sur les maladies neuro-évolutives lors de la première université d'été du Plan MND, à Nantes.

Ce matériau a permis, 1) d'analyser ma méthodologie de création, 2) d'analyser les réactions des membres du public pendant les débats, et 3) d'analyser les effets de notre démarche sur la pratique professionnelle des parties prenantes (ex. ici, la commission éthique).

05 **RÉSULTATS** **Contributions à l'ethnométhodologie, et à la théorie de l'agonisme.**

Pour présenter le premier résultat, il faut le remettre en contexte. Voici un visuel de notre première expérimentation avec l'Espace Éthique.



Ici, nous explorons une hypothèse simple : et si demain nous vivions dans un monde où les normes et les valeurs sociales avaient changé, où l'on ne prenait plus soin des personnes malades comme si elles étaient vulnérables ?

Alors, à quoi ressemblerait la vie d'une personne condamnée par le diagnostic médical d'une maladie incurable ? Si on lui annonce 2 ans ou 40 ans d'espérance de vie, comment percevrait-elle le temps ? L'objet que nous avons créé, nommé L'Éphéméride, matérialise ces questions. C'est un agenda *ambivalent*. D'un côté, il ne comporte pas l'indication normative du temps et laisse chacun vivre à son rythme avec une phrase d'espoir qui invite à écrire sur chaque page, malgré la progression de la maladie. D'un autre côté, les pages avancent irrémédiablement vers la couleur noire, jusqu'à la perte de capacité d'écrire sur le carnet. Le carnet devient une représentation linéaire et fataliste de la dégénérescence.

Cet objet incarne un futur, certes improbable dans le spectre des possibles, mais pourtant préférable pour certains. Le but était de visibiliser un point de vue minoritaire : la voix sous-entendue de certaines personnes malades, qui souffrent d'être considérées par les experts uniquement comme patients vulnérables.



Le projet a donné lieu à un débat participatif à Nantes au sein de l'Université d'été du Plan MND (le Plan National sur les maladies neuro-évolutives). L'objectif était de créer une cartographie des bonnes questions et des enjeux clés pour l'institution hospitalière.

Le résultat de cette expérimentation : une grande majorité des membres du public ont réussi à exprimer des désaccords mutuels sur l'interprétation de l'objet présenté (y compris des opinions très minoritaires – ex. 1 personne contre toutes).

L'analyse a révélé **deux ingrédients clés** pour déclencher ces prises de parole et entendre une pluralité d'opinions :

1. Le caractère *ambivalent* de l'objet de design (ex. le fait que l'agenda soit porteur d'espoir *et* soit fataliste en même temps) ;
2. La mise en *dissonance des valeurs sociales* du public.

Nous avons appelé cette méthode de travail avec les valeurs sociales : **l'expérimentation de reliure**, en référence à l'*expérimentation de brèche* d'Harold Garfinkel – en ethnométhodologie – qui, pendant les années 70, a tenté d'étudier les normes sociales implicites en les enfreignant violemment.¹⁰

¹⁰ Noter que les termes en couleur sont définis dans le Glossaire en fin de thèse. | Exemple d'expérimentation de brèche : aller tout nu commander un plat chez Mc Donald et noter toutes les raisons données pour interdire l'accès au restaurant à cette personne : *C'est interdit par la loi, il y'a des enfants, c'est répugnant, etc.* Ainsi, l'on peut sonder les normes de la nudité dans l'espace public.

Or les normes et les valeurs sont les règles implicites qui font tenir un groupe ou une société ensemble. C'est à dire, qu'**en faisant face à un scénario dissonant, les membres du public ont en fait pu débattre de leurs valeurs partagées, et de leur vision collective de ce qu'est un monde préférable** (ex. valoriser le soin face à la vulnérabilité, ou préférer valoriser l'autonomie et l'identité des personnes malades).

Ce résultat permet au design de contribuer à la théorie de l'agonisme, quand **il floute la polarisation d'opinions et l'opposition des camps Nous/Eux** essentiels à Chantal Mouffe. Se faisant, (le designer et) l'artefact endosse **un rôle de diplomate¹¹ non-humain**, qui intensifie les conflits pour faire se parler des mondes qui ne s'entendent pas.

06 **RÉSULTATS** Contributions entre sciences du design et étude des médias

Un second visuel issu de notre terrain est nécessaire pour présenter un second résultat clé de cette thèse.



Reprenons la *Chickowtrout*, la vache-poulet-truite présentée précédemment. Mettons l'aspect caricatural et l'objet lui-même de côté un instant – car, ici notre travail de design n'a pas été de designer l'objet, mais la situation de débat. Nous avons mis cette nouvelle espèce au menu de la cafétéria de l'INRA. Ce faisant, nous avons fait ingurgiter ce futur possible – leurs propres recherches – aux chercheuses et chercheurs. Puis en fin de journée, nous avons fait un débat dans les locaux, sur les enjeux éthiques de la recherche dans un futur climatique de moins en moins incertain.

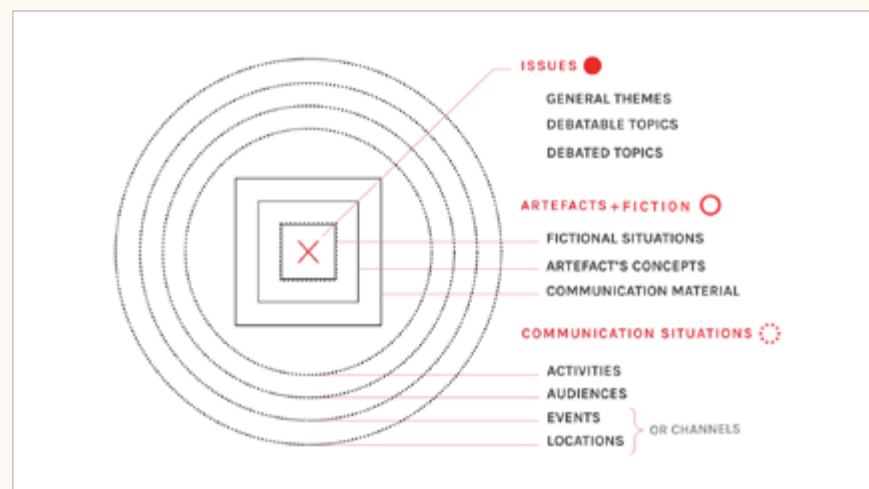
¹¹ **Isabelle Stengers**, *La Vierge et le neutrino: les scientifiques dans la tourmente* (Paris: Les Empêcheurs de penser en rond, 2006).

Résultat de l'expérimentation : le public s'est montré concerné par des enjeux latents habituellement ignorés¹².

L'analyse a révélé deux ingrédients clés pour atteindre et mobiliser un public concerné par un enjeu latent :

1. Aller à *la rencontre* des publics (les publics d'une controverse, au sens de John Dewey)
2. Deuxièmement, au sein de ce public, l'on peut *orchestrer toute une situation de communication* pour mieux présenter un projet et mieux impliquer un public.

Pour rendre cette méthode accessible à d'autres praticienne ou praticien, nous proposons un modèle descriptif nommé le **Système de communication du Design Discursif**.



Le Système de communication du Design Discursif représente comment articuler, dans une situation de débat :

- L'*enjeu* de société à débattre (au centre) ;
- Un *scénario fictionnel* qui explore cet enjeu et un *artefact* qui l'incarne ;
- Et la *situation de communication* où le public rencontre ce matériau (le lieu, l'événement, l'activité de débat et le public visé).

Voir le modèle **CH10 | Section 41** de la thèse.

Ainsi, le modèle permet **un travail d'analyse académique et de conception de design plus fine**, non limitée à la simple création d'un objet. Déployer la portée discursive du design à tout un système nourrit également l'**étude du design (et du Design Discursif) pour ses qualités de média**¹³. Par exemple, nous qualifions d'**artefact médiateur agonistique** les productions qui ouvrent des situations de communication multidimensionnelles – entre acteurs humains, non-humains (ex. objets de design) et fictionnels (ex. humains et non-humains imaginés dans des scénarios).

¹² Au point où un chercheur senior c'est confié à nous, lors d'une interview : « *je suis bouleversé, je n'ai pas le temps et ne suis pas formé à réfléchir à l'éthique. Qui doit m'interrompre dans ma recherche, moi-même, le législateur, le financeur, le consommateur ?* ».

¹³ Tel qu'étudié dans **Annie Gentès, *The In-Discipline of Design: Bridging the Gap Between Humanities and Engineering***, Design Research Foundations. (Cham, Switzerland: Springer International, 2017).

07 CONCLUSION Designers du politique

Pour dépasser les limitations du présent travail, il sera pertinent de tisser des liens plus forts avec la riche littérature francophone en Sciences de l'information et de la communication et en *media studies* ; d'explorer des pratiques non limitées au design ; mais aussi, en sociologie des imaginaires et sociologie des controverses.

Cela dit, cette thèse place **les situations de communication**, mais aussi, **les normes et les valeurs sociales comme médiums à part entière du politique et des procédés participatifs** (comme ceux de l'intelligence collective utilisés en design participatif).

Le présent travail renforce donc les liens interdisciplinaires de la recherche en design. Et, il enrichit les contributions du design à l'articulation des publics et de leurs problèmes en société.

Après le débat interpersonnel, de nouvelles pistes de recherche s'ouvrent en employant le design pour débattre dans les médias à grande échelle et dans le débat public. Mais aussi, le design pour débattre présente des points de contact prometteurs avec les pratiques de prospective, et de réflexion stratégique. En matérialisant des scénarios complexes et en ouvrant la prise de décision aux procédés agonistiques, participatifs et inclusifs, le design accompagne le travail de définition collective et de mise en débat des futurs désirables. C'est un enjeu crucial pour les défis écologiques contemporains, par exemple. Un tel travail sur les normes et valeurs sociales implicites est d'autant plus nécessaire quand on considère le rôle de ces dernières dans le verrouillage sociotechnique¹⁴ qui conditionne la capacité d'une société à se transformer.

Cette recherche défriche donc de nouveaux rôles pour les designers contemporains (notamment le **Diplomate** ou le **Cheval de Troy**¹⁵), autrement dit ceux de designers *du politique*.

¹⁴ P. Baret, et. al., « Dépasser les verrouillages de régimes socio-techniques des systèmes alimentaires pour construire une transition agroécologique. » *Actes du Premier Congrès Interdisciplinaire du Développement Durable*. (2013), 5-14.

¹⁵ Voir le développement de ces deux postures de designers dans le CH8 | Section 36 | p.339.

Résumé développé

Résumé développé

Introduction

POURQUOI CETTE RECHERCHE ?

Le design comme agent d'une démocratie plus pluraliste

Un des liants constitutifs des démocraties occidentales, et de la vie collective, est la capacité des personnes à se mobiliser et se regrouper pour défendre des enjeux communs, collectifs, ou en d'autres termes, publics. Cela vaut pour la mise en place d'une loi sur l'agriculture génétiquement modifiée, ou une réunion syndicale d'entreprise. Être capable de s'opposer à une situation, une institution ou à autrui est un processus crucial de la construction d'une démocratie vraiment pluraliste, d'après Chantal Mouffe. Cependant, la philosophe politique belge nous met en garde, la démocratie est principalement basée sur le **consensus**, et celui-ci est atteint par accord de la majorité au détriment des opinions, voix et visions minoritaires (et souvent, au détriment de leur simple expression).

C'est un sujet primordial pour une démocratie plus pluraliste. Car la déstabilisation du consensus peut d'une part, dépasser les accords superficiels atteints en faisant la sourde oreille aux voix marginales et divergentes². D'autre part, cela peut créer une brèche dans l'identité d'un groupe et offrir l'expression mutuelle (dans l'espoir d'une compréhension mutuelle) radicale, comme clés de la construction active d'un monde commun³.

QUEL EST LE SUJET DE NOTRE RECHERCHE ?

Les contributions spécifiques du design à l'expérience du politique

Nous portons donc notre intérêt sur les situations de conflit et de débat collectif, entre des personnes, et sur la manière dont ces débats peuvent faire place à l'expression d'opinions divergentes, voire marginales. Dans ces situations, nous avons cherché comment des pratiques de design peuvent participer à déjouer des consensus et à déployer des nuances d'opinions autour d'un désaccord sous-discuté. Nous avons exploré comment les designers peuvent offrir des expériences **agonistiques**⁴ (favorisant l'affrontement d'opinion). En d'autres termes, nous avons cherché à designer des situations de conflit de deux manières : en créant des artefacts à débattre ; ou en organisant les conditions d'un débat.

- 2 **Marc Angenot**, *Dialogues de sourds : traité de rhétorique antilogique* (Paris: Mille et une nuits, 2008).
- 3 **Elie During et Laurent Jeanpierre**, « Bruno Latour : "L'universel, il faut le faire" (Interview) », in *Critique*, N° 786, Novembre 2012 : *Bruno Latour ou la pluralité des mondes* (Paris: Les Editions de Minuit, 2012), [www/](#).
- 4 **Chantal Mouffe**, *Agonistique: penser politiquement le monde*, éd. par Eliane Chiron, trad. par Denyse Beaulieu, *D'art en questions* (Paris: Beaux-arts de Paris, 2014).

Pour répondre à ces questions, cette thèse est organisée en trois étapes.

La première est consacrée à l'étude de la littérature existante pour circonscrire un domaine de recherche dans lequel s'inscrit cette thèse, et un des types de pratiques *du politique*, prises comme objet d'étude (Chapitre 1). Nous avons aussi défini notre positionnement épistémologique (Chapitre 2). Nous basant sur le Chapitre 1, nous avons ensuite cherché les *limites* relatives aux pratiques existantes de design pour débattre, sur lesquelles concentrer nos recherches (Chapitre 3). À cette fin, nous avons passé en revue la littérature académique plus finement, en partant des limites de notre propre pratique – *Dog & Bone* (2010-2011). Les limites identifiées nous ont amenés à définir une stratégie de recherche spécifique (Chapitre 4). Nous avons choisi de mener cette recherche d'une manière conceptive (*designerly*) – via la pratique du design – par la réalisation de dix projets développés entre novembre 2012 et juin 2018, dont cinq sont examinés ici.

En s'appuyant sur un de ces cinq projets, la deuxième étape de ce manuscrit fut consacrée à étudier ce qui suscite le débat au sein du design d'un artefact. À cet égard, nous avons réalisé quatre expériences successives dans le cadre d'un projet nommé *L'Éphéméride* (2015). Pour cela, nous avons passé un an en résidence de design à l'Espace Éthique Île-de-France, une commission éthique basée à l'Hôpital Saint-Louis à Paris¹⁰. Respectivement, nous avons étudié : les qualités de notre artefact ; notre processus de conception ; les commentaires des personnes participant à une séance de débat ; et les conséquences de notre collaboration pour la partie prenante (respectivement aux chapitres 5, 6, 7 et 8).

Dans la troisième étape, sollicitant nos quatre projets restants, nous avons concentré notre attention sur l'étude de la situation dans laquelle les débats ont lieu. Nous avons fait cela par le biais de deux expérimentations (chapitres 9 et 10). Ces deux chapitres analysent, sous différents angles, nos quatre projets de design qui explorent différentes situations de débat. Dans le projet *OneHealth* (2014), nous proposons une exposition d'affiches scientifiques fictionnelles au sein d'une conférence de microbiologie. Dans le projet *#Hack.my.cafeteria* (2016) nous avons revisité le menu de la cafétéria d'un laboratoire de recherche en agronomie, en le basant entièrement sur des produits génétiquement modifiés. Avec *Epicure.app* (2015), nous avons conçu un débat spéculatif sous la forme d'un jeu de rôle, dans une commission éthique. Et, via le site *Web politique-fiction.fr* (2017) nous avons organisé un débat d'entre-deux tours et proposé une série d'articles spéculatifs en ligne, décrivant cinq versions de la France post-élections présidentielles.

10 À noter, le manuscrit de thèse détaille comment les acteurs de notre premier terrain (un laboratoire de recherche en biologie agronomique) nous ont introduits – par ricochet – dans un second terrain (une commission éthique). Le contexte de la commission éthique nous a permis de déplacer le cadre de cette étude hors des approches canoniques du design pour débattre (souvent focalisé sur l'éthique des nouvelles technologies). Nous avons tenté la mise en débat d'enjeux non-technologiques, et l'étude des normes et valeurs sociales, plutôt que l'étude de l'éthique. Cela dit, les rapports qui lient l'éthique aux normes sociales, dans ces contextes, seraient à étudier dans de prochains travaux.

Lien avec la prospective et les futures studies.

Quatre projets de design de la présente thèse emploient la spéculation et la fiction pour dépeindre des futurs (chapitres 9-10). Or, dans le terrain majeur de cette thèse (chapitres 5-8) ces moyens sont employés pour dépeindre des présents alternatifs, et non pour sonder des futurs. Ce choix vise premièrement à poursuivre les travaux de James Auger quant à l'emploi de la spéculation au passé, au futur, ou au présent¹¹.

Deuxièmement, il nous est apparu que certains projets spéculatifs partagent autre chose qu'un jeu temporel : la capacité à faire débattre du changement. Et notre étude a révélé que cette capacité repose notamment sur la nature *dissonante* du design (c'est à dire, dérangeante à l'égard des normes et valeurs sociales). Nous avons donc théorisé cette propriété dissonante plutôt que d'autres propriétés complémentaires comme la spéculation. Cela nous a semblé être un des angles morts de la littérature de recherche en design spéculatif (tel que soutenu dans le CH3). Cela dit, la spéculation est un outil complémentaire à la dissonance et nos conclusions peuvent tout à fait s'appliquer à des pratiques de design spéculatives et prospectives. Nous le mettons en pratique dans notre troisième partie (CH9-10), et au quotidien professionnellement.

Troisièmement, c'est sur le plan démocratique qu'il semble aujourd'hui urgent de développer nos capacités à *mettre en débat le futur*, en plus de celles visant à l'anticiper. À l'aube d'une fracture sociale bien entamée par les inégalités grandissantes et les crises environnementales, le défi contemporain est résolument celui d'ouvrir des espaces de confrontation bienveillante, faisant du dialogue un ciment de la démocratie. C'est pourquoi nos travaux offrent des moyens de mettre en débat les normes et valeurs sociales (les règles implicites qui soudent un corps social), et plus largement nos visions partagées (ou non) d'un futur préférable – autrement dit l'horizon d'attente collectif et implicite qu'induit la vie en société. Cette thèse invite les pratiques de la prospective à revêtir de nouveaux rôles, orientés vers la construction du débat public – des rôles propres au *diplomate* (comme développé dans le CH7 et le chapitre conclusif).

Lien avec le concept de public de John Dewey.

Selon Dewey, les citoyennes et citoyens se constituent en « publics » et se mobilisent quand un enjeu de société les affecte alors qu'aucun de leurs représentants ou représentantes ne prend le problème en charge (politiques, associatifs, autres)¹².

Dans les travaux de Dewey, ces enjeux de société sont contemporains. Mais certaines pratiques du design et de l'anticipation permettent de révéler des enjeux de société avant leur émergence dans la sphère publique. D'autre part, si William Gibson disait que « le futur est déjà là, mais inégalement réparti », ajoutons que les *enjeux* aussi, sont inégalement répartis. Ainsi, nous étudions des pratiques de design qui anticipent des enjeux sous-jacents ; qui confrontent des publics inégalement touchés par ces enjeux ; et qui confrontent des points de vue sur ces enjeux.

11 Auger, James H, « Why Heart Attacks Could Be a Thing of the Past », *Speculari, Kunstlicht* 35, n° 3/4 (2014): 3959, [www/](#)

12 John Dewey, *The Public and Its Problems, an Essay in Political Inquiry* (Denver: Swallow, 1927).

PART. I Fondations

CH1

IDENTIFIER UN CHAMP DE RECHERCHE

Designer pour débattre

Le design est souvent présenté comme une activité visant une quête du meilleur, l'amélioration d'une situation. Mais pour qui cette situation s'améliore-t-elle? Qui définit le préférable? Comment s'opposer à cette vision du préférable? Le design peut-il aider à faire émerger ces revendications? S'intéresser à de telles questions invite à distinguer différents types de relations permises par le design à l'encontre *du politique* – c'est-à-dire, à l'encontre de la confrontation d'opinion inhérente à la vie collective. Ce premier chapitre a donc tenté d'encadrer les pratiques qui composent notre objet de recherche, d'une part, et d'autre part le champ dans lequel cette thèse s'inscrit. Pour se faire, le chapitre évolue en trois temps :

- Il s'amorce par une revue de littérature d'histoire du design pour identifier un sous-groupe de pratiques à aborder dans cette recherche – CH1 | Section 1 | p.14 ;
- Puis, nous avons tenté d'identifier les propriétés essentielles qui caractérisent le sous-groupe que nous étudions – CH1 | Section 2.C | p.41 ;
- Enfin, constatant les nombreux travaux existants sur ces pratiques, nous avons esquissé les limites d'un *champ de recherche* qui prend les pratiques de design *du politique* comme objet d'étude – CH1 | Section 3.C | p.52.

La première thèse que nous soutenons est la suivante. Ce que nous appelons **designer pour débattre** peut être compris comme **une posture de conception**, une intention d'engager des personnes dans des expériences *politiques* de « contestation mutuelle » et/ou « collective ». En plus d'une intention, ce terme réfère à **un groupe de pratiques** de design qui est cohérent et hétérogène. Ce large groupe peut être mieux compris comme une branche du « design social »¹³ qui inclut également des pratiques plus conventionnelles de facilitation du débat, d'intelligence collective, d'organisation d'assemblées citoyennes, etc. Au sein de ce groupe se trouve le sous-ensemble du *design discursif pour débattre*. C'est le sous-ensemble que nous étudions dans cette thèse. Le design dit « **discursif** »¹⁴ est celui dont l'usage premier n'est pas d'être mis en fonctionnement pour agir sur le monde, il privilégie le port d'un discours.

Nous soutenons enfin qu'**un champ de recherche** cohérent prend pour objet les pratiques précédentes de design *du politique*, nous le nommons le champ du design pour débattre. Nous avons structuré ce champ en dressant une typologie de ses objets d'études.

13 Koskinen, « Agonistic, Convivial, and Conceptual Aesthetics in New Social Design »

14 Bruce M. Tharp et Stephanie M. Tharp, *Discursive Design: Critical, Speculative, and Alternative Things*, Design Thinking, Design Theory Series (Cambridge, MA: The MIT Press, 2019, www/).

L'on peut donc regrouper les travaux de recherche qui examinent :

- (A) l'objet de design lui-même ;
- (B) le processus de conception et les fonctions du projet ;
- (C) le contexte et les résultats du projet ;
- (D) les sujets du débat et l'expérience du public.

Ces quatre catégories sont liées aux différentes facettes de l'expérience de conception (et de communication) d'un projet de design qui suscite le débat – telles que décrites par Findeli et Bousbaci¹⁵.

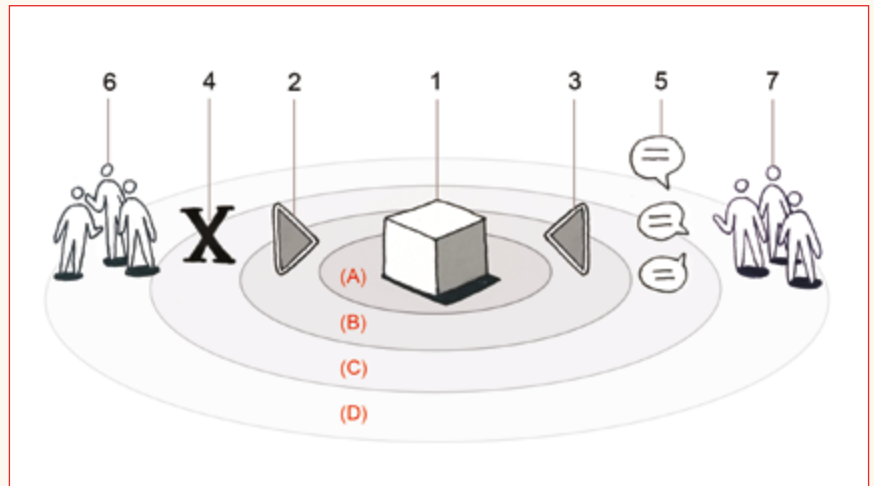


Figure 12 (du manuscrit, p.56) | Les objets de recherche abordés dans la littérature peuvent être regroupés en quatre catégories (A, B, C, D). Les catégories sont composées de deux volets, en amont et en aval du processus de conception (respectivement positionnés à gauche et à droite du diagramme). Ces catégories sont composées de différentes facettes de l'expérience de fabrication et de circulation d'objets de design qui suscitent le débat (indiqué par les chiffres ci-après).

- (A) L'artefact [1].
- (B) Le processus de fabrication du projet [2] ; ainsi que ses fonctions et le processus d'utilisation (par exemple, la diffusion) [3].
- (C) Les questions à débattre [4] ; et l'expérience du public (par exemple, les discours) [5].
- (D) Les fondations du projet (par exemple, les parties prenantes) [6] ; et les résultats du projet (par exemple, l'opinion publique) [7].

Comment en sommes-nous arrivés à l'énonciation de cette première thèse ? Il a fallu d'abord observer les différentes manières dont le design est lié *au politique* ; identifier un groupe parmi de telles pratiques ; puis nommer ce groupe.

En effet, la littérature d'histoire du design nous a permis de constater que les pratiques que nous étudions ne sont ni récentes, ni homogènes, ni limitées à une dénomination (ex. Design Fiction, Design Spéculatif ou Design Critique)¹⁶. Mais alors, comment mieux les circonscrire ? Nous avons pu faire la différence entre deux types de pratiques politiques du design. Les pratiques politiques de type « réformistes » proposent des solutions politiquement engagées (ex. un mobilier urbain permettant des comportements écoresponsables).

15 **Alain Findeli et Rabah Bousbaci**, « L'Eclipse de L'Objet dans les Théories du Projet en Design. The Eclipse of the Object in Design Project Theories », *The Design Journal* 8, n° 3 (1 novembre 2005): 3549, [doi.org/](https://doi.org/10.1080/17513758.2005.10555555).

16 Dans le manuscrit, nous utilisons des majuscules lorsque nous évoquons des « programmes » comme le Design Fiction, Design Spéculatif et Design Critique – en nous référant ici aux définitions énumérées dans le **CH1 | Section 1 | p.13** respectivement par Bleecker et Sterling ; Auger ; et Dunne et Raby.

À la différence, les pratiques *du politique* empruntent au concept de Chantal Mouffe.

Elles favorisent explicitement des relations de confrontation d'opinions (ex. un dispositif urbain de signature de pétition, et de sensibilisation d'opinions sur les espèces menacées par l'activité humaine)¹⁷. Le présent travail se concentre sur les pratiques *du politique*. Au sein de ce groupe, nous différencions les pratiques qui engagent une **contestation collective** (une forme de lutte où l'expression d'opinions conflictuelles se fait en tant que groupe après avoir atteint un consensus sur un objet de désaccord et de revendication) et la **contestation mutuelle** (exprimer des opinions divergentes à l'égard d'une autre personne, ou dans un collectif alors qu'un accord n'est pas trouvé). Ensemble, ces deux types de pratiques de design *du politique* forment un groupe de pratiques hétérogènes.

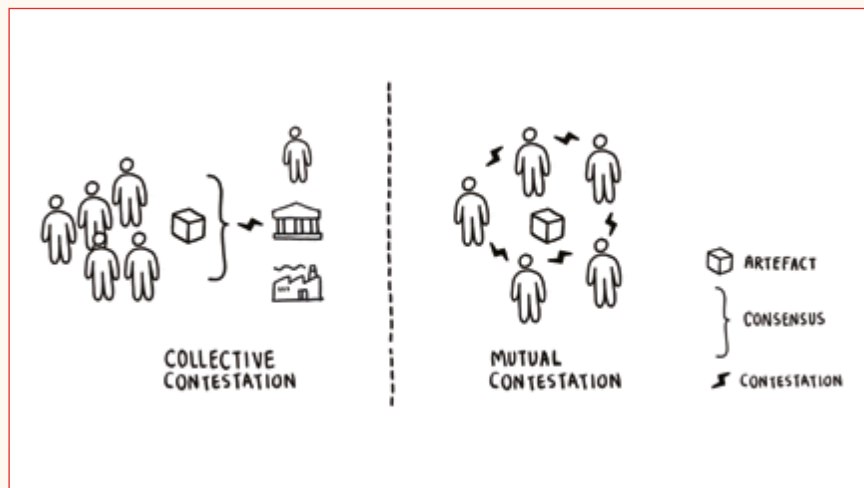


Figure 8 (du manuscrit, p.32) | Représentation schématique de deux types de relations *du politique* installées par un artefact de design.

Gauche : un groupe est parvenu à un consensus sur le sujet de revendication d'une contestation (collective) qu'il souhaite exprimer – l'état de contestation est ici provoqué par un artefact (représenté comme un cube). À droite : les personnes d'un groupe expriment leur contestation les unes envers les autres. Le désaccord est alimenté par l'expérience de la rencontre avec un artefact, placé ici au centre.

Nous avons passé en revue les corpus existants auquel ce groupe de pratiques aurait pu être rattaché, sans succès¹⁸. Nous avons donc suggéré d'y faire référence par un terme spécifique, soit les postures visant à **designer pour débattre**. Ici, « débat » réfère au résultat de la *contestation collective* (ex. le débat public), ainsi qu'au processus de *contestation mutuelle* (ex. un échange interpersonnel d'opinions), mais aussi à la lutte contre l'oppression du consensus (se débattre) si l'on profite de la polysémie du terme débattre.

17 <https://extrapolationfactory.com/Transition-Habitats>

18 Les termes « *critical design practice* », « *critical practice* », « *Design exploration research* », « *alternative and oppositional design* » et « *contestational design* » ne permettent pas suffisamment une conceptualisation de la *contestation mutuelle* du design. Des termes moins conceptualisés comme « *design friction* » ne comportent pas, par exemple, de dimension politique et collectives. Voir dans CH1 | Section 3.B | p. 50 les références respectives aux travaux de Bowen, Malpass, Fallman, Pierce, Hirsch, et Forlano & Mathew.

Considérant les nombreux programmes¹⁹ de design existants²⁰, nous soutenons également le choix du terme « débattre » afin de reconnaître l’ancrage historique anglo-saxon de ces pratiques. Afin de s’en émanciper, nous encourageons l’analyse des limitations de ces pratiques historiques (tel qu’ébauché dans le CH1 | Section 2.B. | p.34, puis mis en œuvre de manière plus systématique dans le CH3 | Section 10 | p.100.

En complément d’avoir identifié et d’avoir nommé ce groupe de pratiques, nous avons plus précisément caractérisé ses propriétés sur le plan pratique et ses contours théoriques.

Ici, c’est une autre revue de la littérature de la recherche en design qui nous a permis de mettre en évidence six propriétés essentielles, communes à ce groupe de pratiques pourtant hétérogènes :

1. le **design** comme médium pour instaurer *le politique* ;
2. la diffusion de **discours** (comme usage premier, primant sur l’exécution d’une fonctionnalité) ;
3. la mise en jeu de positions **adverses** ;
4. la dimension **participative** ;
5. **critique** ;
6. et **réflexive** sur le design lui-même ainsi que sur des enjeux sociétaux.

Une étude plus poussée de la littérature a suggéré que c’est à l’intersection de quatre « constructions théoriques »²¹ que se dessine les contours théoriques du design pour débattre, et qui englobent les propriétés précédentes :

1. le Design Réflexif ;
2. le Design Adversarial²² ;
3. le Design Participatif ;
4. et le Design Discursif ;

Ces quatre ensembles permettent de saisir et d’étudier les propriétés essentielles énumérées précédemment. Mais aussi nous proposons qu’**à leur intersection se trouve le champ de recherche que nous avons mis en lumière**, celui qui prend comme objet d’étude les pratiques de design traitant des formes de contestation, du débat et *du politique*.

19 La notion de programme est empruntée à Annie Gentès, et Johan Redström : **Annie Gentès**, *The In-Discipline of Design*, Design Research Foundations. (Cham, Switzerland: Springer International, 2017), 160 et 199. | **Johan Redström**, *Making Design Theory* (Cambridge, MA: The MIT Press, 2017), 39.

20 Voir CH1 | Section 2.A | p.33 : *Cautionary Tales, Conceptual Design, Contestable Futures, Design Fiction, Interrogative Design, Radical Design, Satire, Social Fiction, Speculative Design, Discursive Design, Design for Debate, Future Probe Design, contestational design, critical engineering, critical making, critical software, critical technical practice, counter-functional design, ludic design*.

21 Selon Carl DiSalvo, spécialiste américain du Design Adversarial, une « construction théorique », telle que le Design Réflexif ou Adversarial, se définit comme « un outil pour penser et faire avec » plutôt que comme un moyen de nommer un mouvement (ceci est notre traduction) | **Carl DiSalvo**, *Adversarial Design* (Cambridge, MA: The MIT Press, 2012), 17.

22 Ceci est notre traduction du terme « *adversarial* ».

Pour résumer ce chapitre essentiel de notre étude, les trois contributions du Chapitre 1 comprennent :

- La distinction de la contestation *mutuelle* et *collective* en tant que **deux des relations** qui lient le design et *le politique* ;
- Le *design pour débattre* comme nom d'un **groupe de pratiques** hétérogènes, qui sont caractérisées par **six propriétés essentielles** (être conceptives, discursives, réflexives, critiques, adversariales et participatives) ;
- Le *champ du design pour débattre* nommant un **champ de recherche** prenant pour objet les pratiques précédentes. Il est caractérisé par ses **contours** à l'intersection de 4 constructions théoriques (Design Discursif, Reflexif, Adversariel et Participatif) et par sa **structure** (typologie des objets d'étude, voir : Figure 12).

Ces contributions se positionnent comme complémentaires à de nombreux travaux actuels. Elles entendent donner des prises conceptuelles aux lecteurs et lectrices afin de permettre de futurs travaux pratiques et théoriques – dans un champ dont la fragmentation portait jusqu'ici à confusion.

Les chapitres suivants de cette thèse se concentrent sur un sous-ensemble des pratiques du design pour débattre, celles qui emploient des moyens discursifs et parmi elles, celles favorisant la contestation mutuelle – plutôt que collective.

Pourquoi la contestation mutuelle ? Car garantir l'expression bienveillante d'une pluralité de points de vue pourtant contradictoires et conflictuels semble être l'un des enjeux les plus pressants dans une démocratie contemporaine régulièrement remise en question. Par conséquent, cet objet d'étude nous pose une série de questions – en tant que designer, chercheur et citoyen. Quelles méthodes de design peuvent créer les conditions permettant l'expression de la contestation, et surtout de la contestation mutuelle ? Quels effets spécifiques le design génère-t-il dans une situation de débat ? Comment le design contribue-t-il de manière singulière *au politique* ? Quels rôles ces designers peuvent-ils jouer dans la société ?

Le Chapitre 2 est présenté ultérieurement, conjointement avec le Chapitre 4.

CH3 REVUE DE LITTÉRATURE CH3. Identifier six questions de recherche

Après avoir creusé et pris en considération les origines (anglaises) des pratiques du design pour débattre, il a semblé nécessaire de remettre en question certains de leurs objectifs et moyens – qui se sont peu à peu établis comme des standards depuis les années 2000.

Cette nécessité s’est imposée en faisant l’analyse de notre toute première tentative de designer pour débattre. Ce premier projet, *Dog & Bone, the Empathetic Telephone* (2010-2011) fut exposé quelques mois avant le démarrage de notre étude, en 2012, à la Biennale Internationale du Design de Saint-Étienne – dans l’espoir de déclencher un débat sur les technologies de télécommunication. Cependant, les fortes limitations de ce projet, adossées à une revue de littérature, ont permises d’identifier progressivement un espace de recherche : **une série de 6 questions**.

Sur la page suivante sont présentés les visuels du projet *Dog & Bone* (2010-2011).

Voir le pictorial complet présentant le projet dans [CH3 | Section 9 | p.84](#)

Dog & Bone (signifiant téléphone en argot londonien) est un collier pour chien kit mains libres Bluetooth relié au téléphone mobile d’un ou d’une propriétaire. Le plus fidèle ami de l’humain fait ainsi office d’intermédiaire et de réceptacle aux langages non verbaux de vos appels téléphoniques.

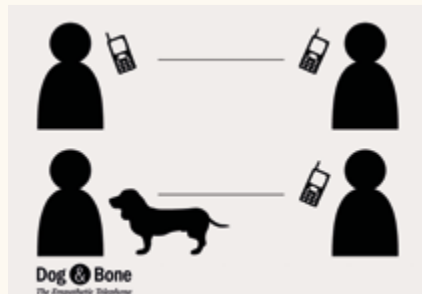
Cette proposition critique et humoristique visait à alimenter un débat sur la recherche technologique en téléprésence – principalement axée sur les écrans et les robots sociaux, à l’époque. Le chien propose une réelle « présence » à distance et pose les questions suivantes : Et si notre téléphone pouvait être sensible à la partie non verbale de la communication ? Les technologies peuvent-elles éviter d’imiter l’expérience du réel et, ici, le face-à-face ?

Le manuscrit présente l’étude ethnographique préalable au projet, un prototype fonctionnel, testé (en 2011) et exposé (en 2013) à la Biennale Internationale du Design à Saint-Étienne en France, dans le cadre d’une exposition sur les animaux et la technologie intitulée *Do Androids Dream of Electric Pig*, organisée par Marie-Haude Caraës.

Par : Max Mollon (2010-2011). Pour : projet personnel. Avec : Théo Reichel (électronique), Christiane Murner (artisan du cuir). James Auger, Jimmy Loizeau and Nicolas Nova (tuteurs). Yukiko, Elliott, Ginko et leurs maîtres, dont Daniel Pinkas (testeur).



Dog & Bone
The Empathetic Telephone



Alors que le projet *Dog & Bone* a suivi les approches canoniques existantes quant à sa *conception* et sa *diffusion*, il n'a pas suscité le débat escompté. À cet égard, nous avons identifié trois objectifs principaux du projet et trois moyens de les accomplir (respectivement en italique, et en gras, ci-dessous), qui ont tous présenté des limitations pratiques et/ou conceptuelles :

- stimuler la *réflexion critique* par la **provocation** ;
- *susciter l'intérêt* du public sur une **question choisie par nos soins** ;
- créer une *situation propice au débat* dans le cadre de **l'exposition, des médias de masse** et sur l'Internet.

La liste précédente de nos difficultés s'est montrée être un ensemble de repères particulièrement pertinent pour passer en revue la littérature des travaux récents. Cette revue a rassemblé des écrits témoignant de limitations similaires aux nôtres, rencontrées par d'autres universitaires. Nous en avons conclu de **ne pas traiter**²³, dans la présente étude, la création :

- d'un artefact **accrocheur et provocateur** ;
- traitant d'une **question déterminée seulement par l'auteur(e) du projet** ;
- circulant dans un **média fait principalement pour la diffusion** ;
- de manière à susciter la construction et mobilisation d'un **public non identifié** au préalable.

Via les choix précédents, nous avons délimité un espace de recherche par sa contre-forme.

Après la contre-forme, nous avons défini certains éléments au cœur de cet espace de recherche : **six « fonctions »**²⁴ attribuées aux pratiques du design pour débattre, et une série de *moyens* pour mettre en œuvre ces fonctions. Une de nos contributions est de rendre possible davantage de recherche sur : ces fonctions, qui manquent d'un travail de conceptualisation et ces moyens existants, qui impliquent des limites. Elles sont résumées dans le tableau suivant.

23 Cette question s'inspire de l'approche rationaliste critique du philosophe des sciences Karl Popper. C'est-à-dire tester des déclarations scientifiques indirectes. Elle a été évoquée dans son livre de 1959, et s'apparente également à un processus essentiel aux approches conceptives, la pensée abductive. | **Karl Popper**, *Popper: The Logic of Scientific Discovery*, 1st ed. 1959 (London: Routledge Classics, 2002). | **Jon Kolko**, « Abductive Thinking and Sensemaking: The Drivers of Design Synthesis », *Design Issues* 26, n° 1 (9 décembre 2009): 1528, [doi.org/](https://doi.org/10.1177/0892063009352800).

24 Plutôt que de parler d'*objectifs* visés par la pratique du design, nous parlons de « fonctions » attribuées à l'artefact lui-même, au projet plus largement, ou aux pratiques de design en général, empruntant ce terme à Findeli et Bousbaci | **Findeli et Bousbaci**, « L'Eclipse de L'Objet dans les Théories du Projet en Design ».

EXTRAIT DE	ANCIENNES FONCTIONS Les chercheu-r-ses en design ont tenté d'utiliser le design pour débattre afin de :	FONCTIONS Nous allons étudier comment le design pour débattre est utilisé de manière à :	LES MOYENS EXISTANTS QUE NOUS ÉVITERONS Mais nous accomplirons ces fonctions autrement que par l'intermédiaire de :	LIMITATIONS Nous évitons ces moyens car :	SERA ABORDÉ DANS LE :
CH3 | SECTION 09.A	Les chercheu-r-ses en design ont tenté d'utiliser le design pour débattre afin de : Cultiver la sensibilité critique	Nous allons étudier comment le désign pour débattre est utilisé de manière à : Alimenter la réflexion critique	Mais nous accomplirons ces fonctions autrement que par l'intermédiaire de : La provocation ouverte	Nous évitons ces moyens car : La provocation est un terme trompeur concernant la complexité et la subtilité de la tactique de design ici en jeu. Ce terme n'est pas le plus adapté pour décrire, comprendre, reproduire et améliorer les pratiques de design pour débattre.	CH5
CH3 | SECTION 09.B	Inciter à la prise en considération d'un enjeu de société	Impliquer le public sur une question choisie (Ou inciter à une prise en considération d'une question peu discutée. Mais aussi, transmettre les sujets choisis pour le débat)	Le choix de questions de manière descendante ('top-down')	Dans le cadre des pratiques d'identification de questions (en opposition à la résolution de problèmes), les postures d'auteur manquent de pertinence pour identifier des questions les plus importantes aux yeux des sociétés contemporaines. Elles sont soumises à l'aveuglement des designers en ce qui concerne leurs privilèges. La pertinence est relative à la capacité des designers à prendre en considération le point de vue du public.	CH6
CH3 | SECTION 10.B	Déclencher un débat	Permettre la contestation mutuelle (Aussi, être une forme de recherche sociale et une forme de pratique professionnelle du design)	Une contestation collective Des artefacts persuasifs	Les artefacts persuasifs qui expriment un désaccord frisent la manipulation de l'opinion et conduisent à une contestation collective (et non, une contestation mutuelle). Ils favorisent le consensus au sein du groupe, ce qui marginalise les opinions minoritaires	CH7+8
CH3 | SECTION 09.C	Contribuer au débat public	Atteindre le public (Mettre en place une situation favorable au débat, envers les publics)	Un media fait pour la dissémination Le débat public	L'exposition tend à décontextualiser l'œuvre et à la rendre impénétrable pour les visiteurs. La diffusion virale sur le web génère souvent des réactions en ligne superficielles. Ce sont des formats de diffusion qui n'encouragent pas le public à se rencontrer et à débattre. Ils sont fortement dépendants d'un troisième acteur chargé du travail de médiation qui n'est – du coup – pas abordé par le concepteur.	CH9
CH3 | SECTION 10.A	Inciter un public à se constituer	Impliquer un public choisi sur une question	L'implication d'un public non-identifié Le débat public	Il est difficile de contrôler sur quelles questions le public (y compris les curateurs ou les journalistes) va se mobiliser. Lorsqu'ils sont combinés à une posture d'auteur, les limitations listées précédemment s'appliquent. Et une séparation élitiste est faite entre les experts et les non-experts.	CH10
CH3 | SECTION 10.A+B	<ul style="list-style-type: none"> Déclencher un débat Inciter un public à se constituer 	<ul style="list-style-type: none"> Permettre la contestation mutuelle Impliquer un public choisi sur une question 	<ul style="list-style-type: none"> Des artefacts persuasifs L'implication d'un public non-identifié 	<ul style="list-style-type: none"> Voir ci-dessus Voir ci-dessus 	TOUS CHAPITRES

Tableau 1 (du manuscrit, p.136) | Tableau des *fonctions* attribuées dans la littérature, au design pour débattre ; des *moyens* existants pour les mettre en œuvre ; et de leurs *limitations*. Le Chapitre 3 nous amène à ce tableau en formulant une critique méthodologique de la « provocation » (inspirée par Bardzell et Bardzell) ; une critique intersectionnelle et décoloniale des privilèges des designers (formulée initialement par le Descolonising Design group, Tonkinwise et de nombreux universitaires) ; une critique de la construction des « publics » et de la manipulation d'opinions (prenant pour exemple les travaux de DiSalvo, parmi d'autres) ; et une critique de l'exposition en tant que média de diffusion du design (développé à partir de Kerridge).

Le présent Chapitre 3 a été l'occasion d'amorcer la conceptualisation des six fonctions présentées dans le Tableau 1. Ce faisant, il nous a permis d'établir deux hypothèses nécessaires pour guider notre travail expérimental à venir – et surmonter les limitations énumérées précédemment. La première hypothèse concerne l'acceptation trop floue des termes *déclencher un débat* (*spark debate*) très récurrente dans la littérature, et l'autre concerne la posture de domination de l'auteur décidant d'aborder un sujet arbitraire de débat :

- Hypothèse 1 | Un artefact de design peut susciter : une activité de **débat interpersonnel** (avant toute tentative d'atteindre un débat à une plus grande échelle par le biais des médias de masse) ; une **contestation mutuelle** (plutôt qu'une contestation collective afin d'éviter un consensus au sein du groupe) ; et il peut faire cela **sans lui-même exprimer un désaccord ou viser une forme de persuasion** (afin de maintenir une frontière entre l'encouragement du débat et l'influence d'opinion).
- Hypothèse 2 | Les designers peuvent **s'insérer dans des situations où des publics identifiés sont pré-construits** autour de sujets de préoccupation. Cela peut permettre de **se laisser instruire** du point de vue des publics sur les questions qui les préoccupent – de manière **participative et inclusive**.

Prenant appui sur les précédents éléments, nous formulons une liste de 6 questions de recherche. Elles seront abordées dans les six principaux chapitres expérimentaux de cette étude (chapitres 5-10) :

- CH5 | Comment décrire la manière dont un **artefact touche un public afin d'alimenter sa réflexion critique**, mais sans utiliser le champ lexical de la *provocation* ?
- CH6 | Comment **engager un public sur une question choisie** et sous-discutée ? Et comment le faire autrement qu'en choisissant les questions de manière descendante ?
- De plus, comment faire et comment décrire la manière dont les **artefacts de design discursif véhiculent ces questions** ?
- CH7 | Comment **rendre possible la contestation mutuelle** par le biais du design (mutuelle, en opposition à la contestation *collective*) ? De même, comment utiliser le design pour le débat comme **un moyen de recherche en sciences sociales** ?
- CH8 | Comment la stimulation de la contestation mutuelle peut-elle nourrir **une pratique professionnelle du design** ? Quels peuvent être les apports du design pour débattre, pour une partie prenante ou un client ?
- CH9 | Comment atteindre des publics et créer **une situation favorable au débat** ? Comment le faire autrement que par des moyens de communication conçus pour la diffusion (ex. exposition, média de masse) ?
- CH10 | Comment susciter l'intérêt **d'un public spécifique** – pour une question à débattre – autrement qu'en visant la construction de publics non identifiés ?

Il est pertinent de préciser que le Chapitre 3 a identifié ces questions *par la conduite d'un projet*. Cela nous a permis de structurer un espace de recherche dont les travaux seront fortement pertinents pour l'amélioration de l'enseignement et de la pratique du design.

Dans les chapitres expérimentaux à venir, nous avons répondu à ces questions en examinant la conception d'un artefact (chapitres 5-8) puis la situation dans laquelle les artefacts et le public se rencontrent (chapitres 9-10).

CH2+CH4

EPISTÉMOLOGIE, STRATÉGIE ET MÉTHODES

Ancrer la recherche dans des projets de design, et s'insérer dans des champs de tension

En fin de Chapitre 1, nous avons relevé dans la littérature un manque de travaux de recherche qui adoptent une position empirique (la création et le test de projets de design), pragmatique (conscient du réseau d'acteurs composant le tissu social d'une situation réelle, ex. avec des commanditaires), et systémique (soit, l'étude des différents niveaux d'observation d'une situation de projet de design : de l'artefact, au processus de création/usage, jusqu'aux acteurs impliqués et leurs enjeux).

Ainsi, dans le Chapitre 2, très influencé par notre formation de designer, nous avons choisi de situer notre étude dans l'épistémologie de la « recherche-projet »²⁵. Nous avons choisi de mener notre recherche à travers la pratique du design, de manière itérative (une série de projets), sur le terrain (avec des parties prenantes).

Puis (Chapitre 4), nous avons mis en place une méthode d'expérimentation sur le terrain que nous avons appelée « résidence de design » – voir CH4 | Section 14.A | p.146. C'est une forme de recherche-action, basée sur la conduite d'un projet de design, non pas en posture de prestataire, mais comme un designer intégré – le plus possible – au sein de l'équipe d'une partie prenante.

Cette approche de recherche projet fut déployée dans plusieurs terrains de recherche successifs (décrits ci-après). Afin d'aborder nos six questions progressivement nous avons divisé le manuscrit en deux grandes étapes de recherche. Nous y adressons distinctement les questions traitant du design d'un artefact (chapitres 5-8), de celles traitant du design d'une situation de débat (chapitres 9-10).

Détaillons ici les terrains auxquels nos questions de recherche se sont confrontées, et dans lesquels nous avons travaillé en tant que designer. Nous avons passé un an de résidence de design à l'Espace Éthique Île-de-France jusqu'en Février 2016. C'est un établissement indépendant et public, dont les activités oscillent entre celles d'une commission éthique, d'un think-tank, d'un centre pédagogique et d'un laboratoire de recherche en éthique. Il est situé à l'Hôpital Saint-Louis à Paris.

Ensemble, nous avons organisé un débat en septembre 2015, lors de leur première Université d'Été au sein du Plan National sur les Maladies Neuro-Évolutives (MNE), à Nantes²⁶. Ce débat traitait des questions éthiques rencontrées par les personnes vivant avec une MNE. Il était à destination du public assistant habituellement aux événements de la Commission, et ceux concernés par une MNE. Dans cette situation nous avons conduit le projet *L'Éphéméride* (2015) et mené les quatre étapes d'une expérimentation, qui constituent la première partie de notre recherche (dans les chapitres 5, 6, 7 et 8).

La deuxième partie de notre recherche (chapitres 9 et 10) s'articule autour de quatre autres projets de design menés dans des contextes différents. Ils explorent des situations de débat singulières : dans une conférence de microbiologie (projet *OneHealth* (2014)), la cafétéria d'un laboratoire de recherche en agronomie (*#Hack.my.cafeteria* (2016)), dans une commission éthique (*Epicure.app* (2015)), et pendant les élections présidentielles françaises (*politique-fiction.fr* (2017)). Parmi ces quatre projets, les deux premiers ont été développés avec l'INRA (l'Institut National de Recherche Agronomique), le suivant fut développé avec l'Espace Éthique Île-de-France à nouveau, et le dernier est un projet personnel (sans commanditaire), déployé dans un centre culturel de la ville de Paris : La Gaîté Lyrique.

En termes de génération de données, nous avons employé des méthodes qualitatives notamment empruntées à la recherche-action et à l'ethnographie. Dans notre premier terrain de 12 mois à l'Espace Éthique, 32 entretiens (principalement informels) ont été réalisés, dont 9 entretiens individuels semi-structurés (un pour chaque membre de l'équipe). Nous avons recueilli et lu 70 documents que la Commission a produits (de leur site Web aux publications imprimées). Nous avons participé à 16 réunions hebdomadaires, à 12 événements organisés sur place (dont 2 où nous avons été invités à présenter notre travail, puis 3 organisés par nos soins), et à 5 événements organisés dans d'autres institutions. À cette étude longitudinale s'ajoute la situation du débat final du projet *L'Éphéméride* – deux fois 1 h 30, sur deux jours, à Nantes en septembre 2015. Les commentaires des personnes participant à ces débats ont été analysés via une approche de théorie ancrée, en codage ouvert (« *grounded theory* » et « *open coding* »)²⁷. Dans un second temps, la matière recueillie a été présentée à la commission sous forme de carte heuristique pour produire un savoir grâce au débat, et enrichir les travaux de la commission.

26 L'acronyme MND (Maladies NeuroDégénératives) en usage dans la convention médicale n'est pas utilisé dans le présent résumé. Il est remplacé par MNE (Maladies Neuro-Évolutives) en accord avec la proposition de l'Institut Dingdong. Voir CH 7, Section 28, p. 253 | Voir le Plan National MND : <https://www.gouvernement.fr/action/le-plan-maladies-neuro-degeneratives-2014-2019> (accédé Sept 2019).

27 **Barney G. Glaser et Anselm L. Strauss**, *The Discovery of Grounded Theory: Strategies for Qualitative Research* (Chicago: Aldine, 1967).

PART. II. Résultats des expérimentations sur la dissonance

Pour présenter nos résultats, il est pertinent de partir des limitations relatives au design pour débattre, que nous ont révélé le projet *Dog & Bone* et l'étude de la littérature dans le Chapitre 3. Ces limitations nous avaient permises d'identifier une série de 5 fonctions attribuées à ces pratiques. Dans le résumé suivant, nous proposons d'articuler quatre éléments : ces fonctions, nos résultats d'expérimentations quant aux moyens d'accomplir ces fonctions, les arguments qui nous ont permis de parvenir à nos résultats et les contributions de chaque chapitre.

CH5

UN GLOSSAIRE DE CONCEPTS

Nourrir la réflexion critique via un artefact dissonant

Dans le Chapitre 3, nous avons identifié l'une des fonctions attribuées au design pour débattre : ces pratiques sont employées pour mettre à distance des situations connues pour *alimenter la réflexion critique*. Afin de reformuler cette fonction en ces termes, nous avons rappelé l'ancrage théorique du design pour débattre au sein du « **design réflexif** »²⁸ (tel qu'abordé au Chapitre 1) – qui vise notamment à alimenter la réflexion critique au sein d'un public. Alors, comment accomplir cette fonction primordiale du design pour débattre ? Pour la mettre en œuvre, l'un des moyens les plus répandus, dans l'état de l'art et de la littérature, est la *provocation*. C'est-à-dire, provoquer pour faire prendre de la distance critique sur une question. Cependant, ce moyen d'alimenter la réflexion critique semble fortement limité, d'après la littérature. Nous avons d'ailleurs employé la provocation dans le projet *Dog & Bone*, sans succès.

Forts de ce constat, nous avons questionné le terme provocation. Dans notre premier chapitre expérimental (Chapitre 5), nous avons exploré :

- Comment **décrire** la façon dont le design pour débattre dérange un public afin d'alimenter la réflexion critique ?
- Comment faire cela **tout en évitant le champ lexical de la provocation**, qui semble induire en erreur à l'égard de la subtilité et de la complexité que cette approche nécessite ?

En réponse, nous proposons la *tactique de design*²⁹ de la **dissonance** qui **perturbe les normes sociales et touche le public sur le plan émotionnel et cognitif**. Elle repose sur la création d'**une situation collective dans laquelle le public est confronté à un ensemble ambivalent de valeurs sociales, portées par un artefact de design**.

28 Phoebe Sengers et al., « Reflective Design », in *Proceedings of the decennial conference on Critical computing (CC)* (Aarhus, Denmark, 2005), 49–58, doi.org/.

29 Le concept de tactique est emprunté à DiSalvo qui le tire des travaux de De Certeau, sur les stratégies de contrôle (et contre-stratégies (appelées tactiques) d'évitement du contrôle) du public, par les institutions en position de pouvoir). | Carl DiSalvo et al., « Making Public Things: How HCI Design Can Express Matters of Concern », in *CHI '14*, (New York, NY: ACM, 2014), doi.org/. | Michel de Certeau, *The Practice of Everyday Life*, trad. par Steven F. Rendall. (Berkeley: University of California Press, 1984).

Pour arriver à cette conclusion, nous avons d'abord présenté notre premier prototype fait pour l'Espace Éthique – appelé, *Montre-Éphéméride* (2015) – à deux personnes vivant avec une Maladie Neuro-Évolutive (MNE). Parmi les retours collectés, une participante a fortement rejeté l'artefact et ses commentaires se sont largement limités à une fraction du prototype présenté. Nous en avons déduit que la provocation entravait effectivement la réflexion. Nous avons donc effectué une étude de la littérature pour réunir des concepts – utilisés dans la recherche en design de manière disparate – pour décrire avec subtilité la perturbation du public par le design³⁰. Nous avons trouvé, dans ces textes, que les qualités **familiales** de l'artefact suscitent l'auto-identification, d'une part, et que d'autre part leurs qualités **non familiales** suscitent la « **défamiliarisation** »³¹. Cette dernière incite à la mise à distance du connu, autrement dit, elle incite à la réflexion critique. Mais dans leurs textes, les designers semblent mettre en garde contre l'utilisation de ces deux qualités de manière extrême (trop familier ou trop étrange). Le but est d'atteindre une forme d'ambivalence – et d'éviter la provocation. Nous avons donc proposé le concept d'**ambivalence** pour regrouper les mécanismes visant à juxtaposer familiarité et non-familiarité. Un autre terme employé dans la littérature est, « **l'uncanny** »³² théorisé en partie par Freud. Uncanny décrit un sentiment de familière étrangeté que nous proposons comme premier exemple de mécanisme *ambivalent*. Cependant, si l'uncanny procure un engagement fort du public sur le plan émotionnel, une perturbation introspective, elle se rapproche aussi de l'effroi et de la névrose. Ainsi, cet effet s'avoisine aisément à de la provocation.

L'ambivalence ne déstabilise pas seulement les émotions, comme une catharsis le ferait. Elle est décrite comme posant un « **dilemme d'interprétation** »³³ qui favorise la réflexion critique – en résistant à l'interprétation du sens de l'artefact. Un second type d'ambivalence se passe donc sur le plan cognitif. À cet égard, le concept de « **dissonance cognitive** » de Festinger³⁴ peut être prélevé à la littérature³⁵. Il définit le malaise procuré par la juxtaposition de deux informations qui ne vont pas ensemble. Afin de conceptualiser davantage ces termes dans le domaine du design, nous nous sommes interrogés sur le sentiment de malaise suscité par le fait d'affronter un artefact composé de *deux informations qui ne vont pas ensemble*.

Ainsi, selon Festinger, la dissonance cognitive pousse l'auditoire à rétablir une situation cohérente.

30 Nous avons notamment examiné la façon dont un autre designer s'est sorti d'une situation semblable à celle que nous avons rencontrée – James Auger et le projet *Afterlife* (2001–2009). Nous avons aussi étudié la manière dont les auteures décrivent un artefact réussi ou un échec.

31 **Viktor Borisovich Shklovsky**, *L'Art comme procédé*, trad. par Kak Priëm Iskusstvo, (1st edition in 1917, at Petrograd, in Recueils sur la théorie de la langue politique, Vol 2) (Paris: Allia, 2008). | **Genevieve Bell, Mark Blythe, et Phoebe Sengers**, « Making by Making Strange: Defamiliarization and the Design of Domestic Technologies », *ACM Trans. Comput.-Hum. Interact.* 12, n° 2 (juin 2005): 149–173.

32 **Sigmund Freud**, « Das Unheimliche (The Uncanny – 1919) », in *Fantastic Literature : a critical reader*, éd. par Westport Sandner (Westport, London: Greenwood Publishing Group, 2004).

33 **Matthew Malpass**, *Critical Design in Context: History, Theory, and Practices* (London: Bloomsbury Academic, an imprint of Bloomsbury Publishing, 2017).

34 **Leon Festinger**, *A Theory of Cognitive Dissonance* (Stanford: University Press, 1957).

35 **James H Auger**, « Why Robot?: Speculative Design, the Domestication of Technology and the Considered Future » (Ph.D. Dissertation, London, Royal College of Art, 2012), www/

Nous ajoutons qu'elle incite à réfléchir et à se sentir concerné par la situation. En effet, il faut noter que la dissonance cognitive vient de la discipline de la psychologie sociale, donc il est pertinent de regarder ce concept lorsque les personnes du public sont en situation de groupe. D'ailleurs, les débats que nous étudions se déroulent également en groupe. C'est là que toute émotion ou opinion prend un autre sens, lorsqu'elles sont énoncées en public ou dans un contexte collectif. Elles sont alors soumises au jugement d'autrui et **mettent en jeu les normes sociales (ce qu'il est socialement acceptable de ressentir ou de croire)**. C'est pourquoi nous avons enfin porté notre intérêt sur l'étude des normes sociales (champ qui relève de l'ethnométhodologie). L'ethnométhodologie dispose d'ailleurs de méthodes proches de la *provocation*. L'une de ces méthodes est l'expérimentation de brèche (la « breaching experiments »³⁶ de Harold Garfinkel, dite aussi « provocation expérimentale »³⁷). Elle vise à enfreindre les règles sociales pour les révéler (ex. se présenter nu dans un restaurant ; collecter les raisons énoncées par les personnes quant au rejet de ce comportement ; et déconstruire les normes sociales relatives à la nudité dans l'espace public). Ainsi, faire face à **un artefact qui entre en conflit avec l'acceptable pourrait pousser autrui à s'exprimer pour rétablir la normalité d'une situation et donc entrer dans un débat**. Ce croisement entre ethnométhodologie et psychologie sociale semble pertinent, car toutes deux décrivent une pulsion, ou un appel à réagir et à s'exprimer. Elles nous ont permis d'éviter le champ lexical de la provocation pour faire référence aux moyens mis en place par de nombreux designers pour alimenter la réflexion critique. Nous proposons de nommer ces moyens, **la tactique de design de la dissonance**. Enfin, parce qu'elle joue avec les normes sociales – soit, les règles implicites qui régissent le vivre ensemble – nous suggérons que la dissonance peut **amorcer une discussion sur des questions « politiques »** – l'horizon commun de la vie collective – **d'une manière politique** – qui incite à l'expression du désaccord, au sens de Mouffe.

Les contributions du Chapitre 5 sont :

- un glossaire de concepts permettant une description plus fine des moyens employés pour alimenter la réflexion critique du public, via le design pour débattre (et plus spécifiquement via son pendant discursif) ;
- et une tentative de définition (formulée initialement comme une hypothèse) sur la tactique de la dissonance.

36 Harold Garfinkel, *Studies in Ethnomethodology* (Englewood Cliffs, N.J.: Prentice-Hall, 1967).

37 Alain Coulon et Presses Universitaires de France, *L'ethnométhodologie* (Paris: Presses Universitaires de France, 1987).



Figures 29 et 31 (du manuscrit, p.173 et p.176) | Haut : « La Montre *Éphéméride* est réservée aux personnes vivant avec une Maladie Neuro Évolutive. Son cadran affiche un message changeant, dont l'évolution est planifiée sur le modèle générique de dégénérescence de votre maladie. Ce message vise à vous motiver à profiter de la vie et de vos capacités au quotidien. Le bouton doit être appuyé à chaque étape de la progression de la dégénérescence pour révéler la phase suivante. Les messages peuvent être collectés, datés ou annotés au fil du temps. » – Texte de présentation du projet issu de notre carnet de terrain.
Bas : Portrait de Sophie. Rencontre au café en août 2015, avec Alexandre, l'interne en médecine de l'Espace Éthique.
Par : Max Mollon. Pour l'Espace Éthique Île de France (Paris).

CH6

PROCESSUS DE RE-DESIGN

Impliquer un public dans un enjeu soigneusement dissonant, véhiculé par le design

À cette étape de notre investigation, nous étions sur le terrain (en résidence à l'Espace Éthique), disposant d'un artefact jugé trop provocant pour susciter un débat constructif sur les maladies neuro-évolutives et leurs enjeux éthiques. Il nous restait donc à trouver comment décrire ce qu'est – et comment mettre en place – une *dissonance soignuse*. Pour y parvenir, il nous fallait re-designer notre artefact initial.

Notre hypothèse pour amorcer ce travail de re-conception était la suivante, le *soin* requis à la création d'un nouvel artefact ne peut être difficilement apporté via une posture d'auteur. Et ce soin dépend du public à qui l'on s'adresse.

Pour saisir l'importance de cette hypothèse, il faut rappeler ici les observations réalisées dans le Chapitre 3. En effet, le projet *Dog & Bone* (2010-2011) – tout comme l'artefact du Chapitre 5 – ne nous avait pas permis de faire débattre tout, ou partie, du problème qui nous intéressait. De plus, en passant la littérature en revue, nous avons rapproché notre objectif – *faire débattre d'une question spécifique* – d'une des fonctions attribuées au design pour débattre. Nous l'avons alors nommée, « inciter à reconnaître un problème sous-discuté » (« *to prompt recognition of an under-discussed issue* »³⁸). Par quel moyen le design peut-il mettre en œuvre cette fonction ? Dans le projet *Dog & Bone* le moyen que nous avons employé était de choisir un thème à débattre et de le proposer (ou de l'imposer) à un public. C'est l'un des moyens les plus répandus dans l'état de l'art : le choix d'une question de manière descendante dans une posture d'auteur (*top down*). Or, nous avons relevé – dans la littérature étudiée au Chapitre 3 – que la posture d'auteur et les questions qu'elle permet de circonscrire ont été vivement critiquées pour leur manque de pertinence quant aux problèmes les plus urgents des sociétés contemporaines. Ces critiques, ancrées dans une tradition marxiste, féministe et décoloniale, avancent que cette posture est sujette à l'aveuglement des designers quant à leurs propres privilèges. La pertinence de la posture d'auteur est également relative à la capacité des designers à prendre en compte le point de vue du public.

Par conséquent, dans le Chapitre 6, nous avons cherché à savoir :

- Comment inciter un public à **reconnaître et à s'intéresser** à un problème sous-discuté qui soit pourtant spécifiquement choisi ? Ou plutôt, comment le faire **autrement qu'en choisissant les enjeux à débattre de façon descendante** (*top down*) ?³⁹
- Aussi, puisque les enjeux du débat sont véhiculés via des artefacts de design, comment **faire**, et comment **décrire** la façon dont un artefact de design **transmet ces questions** ?

38 Karin Hansson et al., « Provocation, Conflict, and Appropriation: The Role of the Designer in Making Publics », *Design Issues* 34, n° 4 (25 septembre 2018): 37, doi.org/.

39 Veuillez noter que le terme anglais « issue » peut être traduit par problème, enjeu ou question de société (et signifie souvent les trois notions en même temps).

En réponse à la première de nos interrogations, il semble que **les designers peuvent susciter l'intérêt d'un public pour un enjeu s'ils prennent soin de relayer – via leur artefact – le point de vue des membres du public concerné** par un enjeu donné. Nous avons appelé cette approche inclusive la *reliure de différents points de vue* ou simplement **reliure** (*bridging* – CH6 | Section 25.A | p.232)⁴⁰.

À la seconde question, nous répondons **qu'en tant que média, les artefacts de design peuvent créer une relation de simulation entre un problème et un public**. Afin de transmettre un enjeu de débat, un artefact peut donc simuler la projection d'un public, dans cet enjeu, par anticipation (ex. confronter une microbiologiste aux conséquences futures de ses recherches). En poursuivant les travaux de Manuel Zacklad⁴¹, nous avons donc proposé de décrire cette relation et ces objets en termes d'**artefacts-médiateurs agonistiques** (*agonistic mediating artefact* – CH6 | Section 25.B.3 | p.238). Afin de contribuer à une expérience agonistique de débat, il faut préciser que ces artefacts peuvent **incarner (et juxtaposer) plusieurs points de vue discordants sur une question à débattre**. Ce faisant il acquiert ce que nous appelons une « ambivalence », ce qui leur permet d'éviter les postures agonistiques *persuasives* (ex. un artefact qui incite à la contestation collective en se faisant porteur d'une revendication). Quand c'est le cas, il en résulte un artefact que nous appelons « **disputable** » (« **arguable** » – voir : CH6 | Section 25.B.5 | p.243). Ces trois concepts (relier, artefact médiateur agonistique et disputable) viennent enrichir la description de la tactique de la dissonance.

40 À noter, cette traduction vers le français perd le sens double de *passerelle* et de *liaison* que possède le terme anglais *bridging*. Elle perd également la proximité phonique à la *breaching experiment* (l'expérimentation de *brèche* ou de *crise*), le concept d'ethnométhodologie auquel la reliure fait écho – voir Chapitre 7. Elle perd enfin la référence aux travaux de Gloria Anzaldúa dans *This Bridge Called my Back* sur le statut des personnes nées de deux nationalités, faisant office de passerelle entre des communautés, cultures et points de vues. *Reliure*, sans permettre ces références directes convoque toutefois un registre sémantique pertinent. Celui de créer du lien entre différents points de vues.

41 Notre concept d'*artefact-médiateur agonistique* se présente comme un type d'artefact médiateur possible, composant l'activité de communication, conçu délibérément pour stimuler une confrontation mutuelle, un débat agonistique. Il vient enrichir le concept d'*artefact médiateur* de Manuel Zacklad | Manuel Zacklad, « Design, conception, création Vers une théorie interdisciplinaire du Design », [en ligne] Wikicreation, 7 novembre 2017.

Présentation sommaire du re-design final.

Voir le *pictorial* complet présentant le projet [CH6 | Section 23.D | p.218](#)

L'Éphéméride est un calendrier inhabituel conçu pour être utilisé par les personnes ayant une Maladie Neuro Évolutive ou par leurs proches. Il ne contient aucune date, mais le dégradé des couleurs de ses pages symbolise le passage du temps, la première étant blanche et la dernière noire.

L'objet tente de mettre en débat la croyance selon laquelle les personnes atteintes de MNE ont une perception très différente du temps qui passe. Elle varie d'un patient (et d'un diagnostic) à l'autre. Néanmoins, affronter le *temps* et la *dégénérescence* est une expérience commune à tous. Pour un tel mode de vie, un calendrier régulier est-il encore pertinent ? Comment réagir à un diagnostic aussi lourd annonçant un modèle prédictif de l'évolution des symptômes ?

Ce calendrier aborde ces questions en affichant sur chaque page, même sur les plus sombres, le message « Aujourd'hui je vais » comme une invitation à réfléchir sur l'éphémère et à agir contre le fatalisme malgré la lente progression vers les pages les plus sombres.

Par : Max Mollon (design), Sophie, Marion, l'équipe de l'Espace Éthique (co-design), Victoria Darves-Bornoz (vidéo), Alexandre Mayeur (photographie), Gautier Mallet and Réanne Clot (soutien).



Nous en sommes venus à ces réponses en faisant un compte-rendu empirique de la refonte de notre premier prototype – que nous avons dorénavant appelé *L'Éphéméride* – et en articulant ce compte-rendu à une revue de la littérature. En voici la synthèse.

Dans la littérature, nous avons relevé que des auteurs comme James Auger adaptent le discours que portent leurs artefacts à leurs publics en utilisant des stratégies comparables à la rhétorique d'Aristote (c'est-à-dire : faire preuve d'une logique d'argumentation ; asseoir le crédit de l'orateur ; et toucher les émotions du public)⁴². Il semble que nous ayons fait preuve d'une adaptation similaire dans notre pratique. Elle s'est manifestée dans le processus même de design de *L'Éphéméride*, notre nouvel artefact – comparé à celui du premier prototype du Chapitre 5, la *Montre-Éphéméride*. Lors du re-design de la montre, notre approche est en effet devenue *à la fois* participative et inclusive (ex. nous avons amorcé un processus de co-design avec la personne qui avait rejeté la montre dans le Chapitre 5). Cette posture n'a pas seulement permis au second prototype d'être plus pertinent et crédible que la *Montre-Éphéméride* aux yeux du public concerné. **L'inclusivité et la participation nous ont également permis d'adopter un point de vue autre que le consensus majoritaire, sur le sujet en jeu** – soit, le point de vue d'une partie sous-représentée du public. Nous avons pris cette posture en tentant d'éviter la provocation et en essayant d'instaurer une dissonance *soigneuse* via le design de notre artefact. Se faisant, cette posture (et l'artefact) a permis de mettre en place la *reliure (bridging)* de différents points de vue.

Pour décrire comment un artefact transmet un problème à débattre, nous avons concentré notre attention sur le sous-ensemble des pratiques de design que nous étudions, celles qui emploient des artefacts qui ne sont pas (nécessairement) mis en fonction – à savoir le **Design Discursif** défini par Bruce et Stephanie Tharp⁴³. En empruntant aux Sciences de l'Information et de la Communication, nous avons pu regarder les artefacts de design de manière différente. En effet, d'après Gentès⁴⁴, les artefacts de design sont comparables à une forme de **média**. Tout comme la télévision, un livre, une pièce de théâtre, ou le langage même, les artefacts de design véhiculent du sens, mais surtout, ils créent une distance avec l'action. Ils peuvent **mettre à distance l'utilisation de l'objet**⁴⁵. Nous avons donc souligné comment les artefacts de design discursif jouent de cette distance et permettent, à l'inverse, au spectateur de se projeter dans une narration, une *simulation*, au plus proche de l'usage de l'objet. L'artefact agit comme ce que nous avons appelé, un **artefact média-teur agonistique** – en poursuivant les travaux de Manuel Zacklad⁴⁶.

42 Aristotle, *The Rhetoric and the Poetics of Aristotle*, trad. par W. Rhys Roberts et Ingram Bywater, 350 B.C.E. (New York: Random House, 1954).

43 Bruce M. Tharp et Stephanie M. Tharp, *Discursive Design: Critical, Speculative, and Alternative Things*, Design Thinking, Design Theory Series (Cambridge, MA: The MIT Press, 2019), [www/](http://www.mitpress.mit.edu/).

44 Annie Gentès, *The In-Discipline of Design: Bridging the Gap Between Humanities and Engineering*, Design Research Foundations. (Cham, Switzerland: Springer International, 2017).

45 Gentès, *The In-Discipline of Design*, 234

46 Manuel Zacklad, « Design, conception, création Vers une théorie interdisciplinaire du Design ».

Son statut de média permet à l’artefact de design d’accomplir un travail d’intermédiation entre le public et les usages relatifs à l’enjeu à débattre.

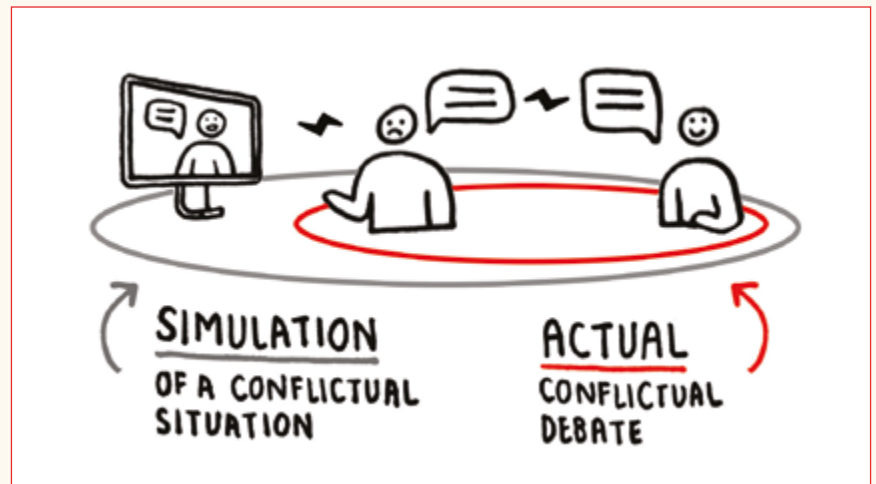


Figure 53 (du manuscrit, p.239) | Les artefacts de design discursifs pour débattre utilisent des simulations de situations de vie conflictuelles, afin d’ouvrir une situation de débat conflictuel réelle (c’est-à-dire une expérience de contestation mutuelle).

Nous avons enfin observé l’artefact de design discursif à la lumière de la littérature en Sciences Technologie et Société (STS) qui étudie comment les objets et les non-humains influencent les personnes, et font preuve « d’agentivité »⁴⁷. Dans cette discipline, le monde matériel a été étudié pour sa capacité à agir sur les pratiques humaines, mais nous avons porté notre intérêt sur la manière dont les artefacts peuvent également **influencer la réflexion** humaine. Ce fut l’un des sujets d’étude de Noortje Marres, qui propose qu’un objet puisse être chargé avec des enjeux de société par un processus de « **problématisation** » (« *issuefication* »)⁴⁸. Exemple, un poster de publicité peut charger la représentation d’une théière avec des enjeux environnementaux par le biais de slogans apposés à l’objet. Cet exemple est donné par Marres et porte sur les campagnes de sensibilisation à la consommation énergétique en Angleterre.

Mais les designers pour débattre ne semblent pas charger un artefact existant (ex. en le juxtaposant à des signes ou du texte). On assiste à une création délibérée d’un artefact. Nous avons donc étendu le concept de Marres en proposant que les designers pratiquent délibérément une « **problématisation incarnée** » dans l’artefact (« *embodied issuefication* »).

47 **Madeleine Akrich**, « The De-Description of Technical Objects », in *Shaping Technology/Building Society: Studies in Sociotechnical Change*, éd. par Wiebe E Bijker et John Law (Cambridge, MA: MIT Press, 1992), 205–224.

48 Ceci est notre traduction | **Noortje Marres et Richard Rogers**, « Recipe for Tracing the Fate of Issues and Their Publics on the Web », in *Making Things Public: Atmospheres of Democracy*, éd. par Peter Weibel et Bruno Latour (Karlsruhe, Germany / Cambridge, MA: ZKM / The MIT Press, 2005), 922–935, [www/](#).

Enfin, comme évoqué précédemment, c'est en observant que notre artefact – *L'Éphéméride* (2015) – n'incarnait pas une seule, mais plusieurs points de vue sur un enjeu à débattre, que nous en sommes venus à le qualifier de **disputable** (*arguable*). Pour se faire, l'artefact dissonant juxtapose des arguments discordants de manière ambivalente, comme un oxymore esthétique.

Exemple, *L'Éphéméride* témoigne de choix de design portant des qualités esthétiques et sémantiques contradictoires : la phrase qu'il arbore sur chacune de ses pages incite à l'espoir et l'autodétermination contre l'adversité de la maladie, mais le dégradé linéaire des couleurs des pages du blanc vers le noir peut être interprété comme l'enfoncement déterministe dans les symptômes de la dégénération neuronale.

Ainsi, en plus de résister à l'interprétation, l'artefact résiste à la persuasion. Il permet la formulation d'opinions contradictoires entre différents membres du public, sur une question en jeu. Dans un contexte de débat, la *disputabilité* de l'artefact permet l'expression d'un désaccord mutuel dans le public (cela sera évalué dans le Chapitre 7).

Enfin, il est important de noter que **les concepts** fournis dans ce chapitre aident également à **décrire comment une chose de design** (une « *design thing* »⁴⁹) véhicule et **incite à la reconnaissance d'une question, de manière à politiser les publics** et, espérons-le, à susciter un débat. Arriver à vraiment débattre et exprimer des contestations mutuelles – et non à rejeter en bloc une provocation – là est l'enjeu de notre chapitre suivant.

Les contributions du Chapitre 6 sont :

- le compte-rendu empirique de la refonte d'un artefact *provocant* transformé en artefact à la *dissonance soigneuse* ;
- un ensemble de concepts enrichissant la compréhension de la manière dont le design discursif pour débattre, véhicule et incite à la reconnaissance d'un sujet à débattre. Cela offre également une perspective discursive sur les *choses* de design.

CH7

DÉBAT PARTICIPATIF

Déclencher la contestation mutuelle comme forme d'ethnométhodologie conduite par le design

Après avoir re-designé notre artefact, nous l'avons mis au test d'une situation de débat réel, avec 60 personnes, pendant 1 h 30. Notre Chapitre 7 analyse et restitue cette mise en débat.

En septembre 2015, des personnes concernées par les problématiques liées aux Maladies Neuro-Évolutive se sont réunies à Nantes pour la première Université d'Été annuelle du Plan National MNE 2014-2019. Cette situation nous a permis d'étudier l'une des fonctions les plus centrales et le moins définies, parmi celles attribuées au design pour débattre, celle de *déclencher un débat* (*spark debate*). Parmi les moyens de déclencher un débat nous avons pointé, dans le Chapitre 3, que certains artefacts agonistiques sont persuasifs, ils expriment une contestation et frisent la manipulation d'opinion. Or, cette persuasion mène à une contestation collective et donc à une forme de consensus au sein d'un groupe de personnes. Ce sont des moyens que nous désirions éviter, car le consensus marginalise les opinions minoritaires, d'après Mouffe. Dans le Chapitre 3, nous avons donc formulé l'hypothèse suivante : un artefact de design peut susciter une activité de *débat interpersonnel* et un *désaccord mutuel*, sans lui-même *viser une forme de persuasion*. En outre, nous avons ajouté que les designers pour débattre attribuent souvent à leur pratique la fonction de *conduire une recherche sociale* (*a form of social research*)⁵⁰. Or, cette approche manque fortement de méthodes partageables, d'après la littérature. Nous en sommes venus à nous interroger :

- Comment employer le design pour inciter à la contestation mutuelle (et non à la contestation collective) ?
- Et, comment utiliser le design pour débattre comme moyen de recherche sociale ?

Nous livrons ici nos réponses en deux fois.

Premièrement, nous avançons qu'en effet, la tactique de design de **la dissonance peut être utilisée pour stimuler la contestation mutuelle et le débat** (dans le cadre d'une pratique professionnelle de consultation citoyenne, par exemple). Mais aussi, comme **une forme d'ethnométhodologie par le design**. Dans ce cas, nous proposons de l'appeler « **l'expérimentation de reliure** » (« *bridging experiment* »).

Nous en sommes venus à être convaincus de cet emploi de la dissonance – comme moyen de recherche sur les normes sociales – car notre expérimentation a partagé deux éléments méthodologiques clés avec l'expérimentation de brèche (c'est-à-dire la *breaching experiment*).

50 Shaowen Bardzell et al., « Critical Design and Critical Theory: The Challenge of Designing for Provocation », in *Proceedings of the Designing Interactive Systems Conference*, DIS '12 (New York, NY, USA: ACM, 2012), 289, doi.org/.

D'abord, elle a suivi les principales étapes de cette méthode (basée sur l'infraction et le retour à la norme) ; puis, elle a délivré le même type de connaissances (sur les éléments structurant les valeurs et normes sociales dans une situation donnée).

Toutefois, ce qui a retenu notre intérêt est que la mise à l'épreuve empirique de cette méthode a révélé des différences nettes avec l'expérimentation de brèche originale. Ces différences portent sur la manière dont la norme sociale est enfreinte (ici, *par* le design) et sur les types de réactions normatives générées (ici, qui laissent place au doute et au débat). Nous avons regroupé ces différences en quatre catégories et avons attribué leur provenance à quatre des propriétés fondamentales qui caractérisent le design pour débattre. Le fait qu'il soit : conceptif, discursif, réflexif et qu'il favorise l'adversité.

Deuxièmement, nous soutenons que dans la présente expérience, l'utilisation de **la tactique de la dissonance a favorisé quatre éléments** (développés dans les [Sections 30.A | 30.B | 30.C | 30.D](#) | p.282-294).

- La qualité *inacceptable*⁵¹ de notre artefact a **émancipé le public de sa condition passive d'utilisateur**, les incitant à être designers et citoyens – cela repose sur la propriété conceptive (*designerly*) de ces pratiques ;
- Sa qualité *d'artefact-médiateur agonistique* a permis de **transmettre au public des visions sous-discutées d'un problème**, comme le ferait un **diplomate non-humain** – cela repose sur la propriété discursive de ces pratiques ;
- La qualité *disputable* de notre artefact a **fait de la place aux voix marginales, rendant ainsi les « frontières politiques »**⁵² **visibles** – cela repose sur la propriété adversarielle (*adversarial*) des pratiques de design pour débattre ;
- Et sa qualité *ambivalente* a **permis au public de douter d'eux-mêmes**, de stimuler le **dissensus** (compris comme l'enrayement du consensus) et de **rendre les frontières politiques versatiles** – cela repose sur la propriété réflexive de ces pratiques.

Nous avons pu démontrer ces affirmations en constatant la nature des réactions normatives formulées par les participants, face à la dissonance de *L'Éphéméride*. Quatre groupes de réactions ont été relevés. Elles étaient différentes de celles d'une expérimentation de brèche.

51 En (très) résumé, cet argument avance qu'un type de dissonance très spécifique – ressentie face à l'artefact – appel à lutter contre l'artefact (et contre le designer). Cette dissonance est produite par le fait d'être confronté à un artefact *inacceptable que l'on se doit d'accepter*. Ce ressenti prend place car l'artefact, bien qu'inacceptable, impose des arguments rhétoriques et normatifs à l'utilisateur – du fait d'être un produit de design, selon Buchanan. | **Richard Buchanan**, « Design and the New Rhetoric: Productive Arts in the Philosophy of Culture », *Philosophy and Rhetoric* 34, n° 3 (8 janvier 2001): 183–206, [doi.org/](#).

52 **Chantal Mouffe**, Vive le dissensus ! in Caroline Broué (ed.)s La Grande Table, Radio France Culture, entretien réalisé par Mathieu Potte-Bonneville, 7 avril 2016, [www/](#).

Respectivement (vis-à-vis de la liste précédente), les membres du public ont :

- suggéré des contre-propositions d'usages et de design ;
- ils n'ont *pas tous rétabli une situation normale* non dissonante, mais l'ont parfois acceptée, et *l'artefact faisait office d'interlocuteur* (porteur de discours) ;
- plutôt que provoquer un rejet collectif et consensuel, des *désaccords mutuels* ont été exprimés, ainsi que des *opinions minoritaires et marginales* ;
- et enfin, le débat a été l'occasion de déclarations contradictoires et de *changements d'opinions*.

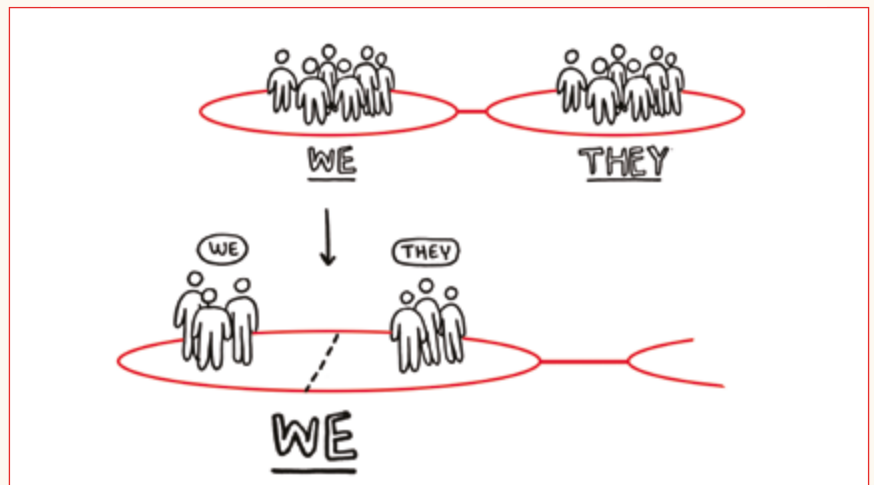


Figure 58 (du manuscrit, p.290) | Représentation schématique de la révélation d'une frontière politique, et de la scission subséquente de l'identité d'un groupe uni par un consensus. L'image du haut oppose deux groupes. L'image du bas est un zoom sur le groupe *Nous*. La dissonance permet donc d'affiner les concepts binaires de Chantal Mouffe opposants *Nous* et *Eux* dans un public propice au débat.

Finalement, les contributions de ce chapitre incluent :

- un compte-rendu empirique des retours du public dans une *expérimentation de reliure* – CH7 | Section 28-29 | P.253-281 ;
- une discussion sur ce que peuvent apporter les pratiques de design aux dimensions expérientielles et théoriques de **l'agonisme** permettant d'étendre les arguments présentant l'art et le design comme particulièrement bien équipé pour une telle tâche⁵³ – ainsi qu'une remise en question des concepts binaires « We/They » de Chantal Mouffe⁵⁴ – CH7 | Section 30 | P.282 ;
- des définitions et une ébauche de méthode quant à l'expérimentation de reliure, et à la tactique de design de la dissonance – CH7 | Section 31 | P.295.

53 **Chantal Mouffe**, « Artistic Activism and Agonistic Spaces », *Art & Research* 1, n° 2 (2007): 1–5, [www/](#). | Et plus particulièrement : **Chantal Mouffe**, *Agonistique: penser politiquement le monde*, éd. par Eliane Chiron, trad. par Denyse Beaulieu, D'art en questions (Paris: Beaux-arts de Paris, 2014).

54 **Chantal Mouffe**, « Deliberative Democracy or Agonistic Pluralism », *Social Research* 66, n° 3, *Prospects for Democracy* (1999): 745–758, [www/](#).

CH8

LE POINT DE VUE DES PARTIES PRENANTES

Permettre la contestation mutuelle, une pratique professionnelle du design ?

Dans un souci d'élargir notre analyse au-delà des qualités de l'artefact lui-même, puis de celles du processus de design et de l'expérience de débat, nous avons ensuite étudié les acteurs impliqués dans le projet. Soit, l'impact qu'a pu avoir notre collaboration, et notre résidence d'un an, sur les pratiques de la partie prenante – l'Espace Éthique. Nous nous sommes penchés sur les mêmes fonctions que dans le chapitre précédent. À l'exception près que nous n'avons pas étudié, ici, *le design pour débattre en tant que forme de recherche sociale*, mais en tant que *forme de pratique de design professionnelle*. Nos questions touchaient à nouveau au sujet de la contestation mutuelle et plus précisément, nous avons cherché à savoir :

- quel peut être l'apport spécifique du design pour débattre pour une partie prenante, par exemple, le client d'un projet de débat ?

Notre réponse pose, en premier lieu, que le design peut être employé en tant que facilitateur de l'expérience de l'agonisme (à lire en complément ou en contraste avec la facilitation de l'intelligence collective et du consensus, par exemple). À cet égard, l'apport du design ne se limite pas à produire un artefact faisant preuve d'adversité. **L'un des apports spécifiques d'une pratique agonistique du design pour débattre, à une partie prenante**, se manifeste plutôt dans **la mise en œuvre : d'une situation de communication** ; et d'une **posture publique de la partie prenante, en prise avec le conflit**, vis-à-vis de son public et ses partenaires habituels. Nous affirmons même que l'un des objectifs du design pour débattre est de **s'attaquer aux situations sociales ne laissant pas la place à des relations d'adversité**. Cela peut être bien souvent le cas d'organisations et d'institutions traversant une crise interne, où employés et dirigeants sont en désaccord sous-jacent, par exemple. Ou dans d'autres contextes privilégiant le consensus ou la transmission descendante de savoir.

Comment cette conclusion a-t-elle émergé ? Sur notre terrain, en observant l'évolution des pratiques de l'Espace Éthique au cours du temps, au-delà de notre résidence (soit, environ 24 mois), un élément a semblé prendre une place singulière. Il s'agit de la mise en place d'une situation de communication – c'est-à-dire, la situation où les acteurs d'un enjeu de débat se rencontrent autour du sujet en question, voire autour d'un artefact.

Nous avons observé que les situations de communication créées par l'Espace Éthique n'étaient pas (ou rarement) *à la fois* participatives et inclusives avant notre collaboration. C'est-à-dire que pendant ces séances de conférence ou de débat, il n'y avait très peu (ou pas) de cas où la parole – et la création de savoir résultante – était collective et *à la fois* conduite avec les personnes concernées (ex. les patients). Constater cela nous a permis de mieux analyser les commentaires normatifs formulés par un membre de la Commission lors de sa participation au débat du projet *L'Éphéméride* (retranscrit dans le Chapitre 7).

Il est apparu clairement que *le format même du débat que nous avons organisé était dissonant avec les valeurs sociales du public* (habituellement orientées vers le soin *Care* et vers la transmission descendante des connaissances)⁵⁵. Nous en avons déduit un élément essentiel : la forme même du débat (agonistique, participative et inclusive) avait été une caractéristique dissonante de la situation de communication liant la Commission à son public habituel.



Figure 59 (du manuscrit, p.313) | Vue de l'atelier d'experts de l'Espace Éthique, réunissant des scientifiques et des professionnels de la santé sur le thème « Big Data & Médecine », le 16 avril 2015 à la Fédération Hospitalière de France, Paris.



Figure 60 (du manuscrit, p.313) | Vue d'un atelier grand public organisé par la commission, montrant un espace prévu pour la diffusion verticale d'information (*top down*), 15 septembre 2015 (quelques heures avant le débat de *L'Éphéméride*, à l'Université d'été) | Photo © <http://flickr.com/photos/espace-ethique/>



Figure 63 (du manuscrit, p.316) | Vue de la session de débat de *L'Éphéméride*, 15 septembre 2015. Nous avons réorganisé la disposition de la salle, passant d'une rangée de chaises parallèles à un arc de cercle. Les figures 59-62 du manuscrit montrent que les événements de la commission permettent rarement aux experts et aux non-experts de participer publiquement au même niveau à la prise de parole et la création de connaissance.



Puis, c'est la négociation d'une posture publique de la partie prenante, orientée vers le conflit, qui s'est révélée être importante, dans l'apport d'un designer pour débattre dans un contexte professionnel. Cela fut mis en évidence en contrastant deux de nos analyses. Dans la première, nous avons récolté 22 qualités que la Commission a conférées aux débats que nous avons organisés ensemble. Nous les avons regroupées selon les propriétés fondamentales du design pour débattre – être conceptif, discursif, réflexif, participatif (et inclusif), et favoriser l'adversité. Dans la seconde analyse, nous avons observé quelles qualités ont été mises en œuvre par les membres de la Commission au fil des mois et des années, dans leurs propres pratiques et, détail notable, lesquelles ont été revendiquées dans leur communication publique. Du fait de ne pas être designer, la Commission n'a pas employé la dimension conceptive du design pour débattre – révélant par ailleurs qu'elle n'est pas exclusivement nécessaire à la démarche d'organisation d'un débat agonistique. Alors où se trouve l'apport spécifique du design pour débattre à leur pratique ?

55 Le conflit vient de la confusion faite par le public de l'Espace Éthique entre les notions d'éthique et d'espoir. Cette amalgame empêche la commission de poser des questions éthiques difficiles, sans rompre avec une certaine posture du *Care* qui les caractérise (celle d'être un relais d'espoir) – voir [CH8 | Section 35.D.3 | p.335](#).

Les pratiques de la Commission ont témoigné de l'usage de la quasi-totalité des 22 qualités. Mais leur communication publique ne mentionne que les qualités discursives, réflexives et participatives du design pour débattre.

Elle ne mentionne pas l'adversité, alors qu'elle était employé lors des séminaires via la création et la lecture de fictions dystopiques comme point de démarrage des séances. C'est pourquoi le fait même d'organiser le débat de *L'Éphéméride* nous a semblé équivaloir, pour la partie prenante, à *soutenir publiquement les valeurs de l'agonisme et à entrer en conflit avec leur image publique*⁵⁶. Afin de négocier l'installation d'une démarche agonistique publiquement assumée – ou non assumée – nous encourageons donc la poursuite de cette recherche sur deux postures qu'un designer pour débattre peut adopter au sein d'une situation de pouvoir, face à un public et aux parties prenantes : le **diplomate** et le **cheval de Troie** – CH8 | Section 36 | p.339.

Les contributions du Chapitre 8 se sont faites sous la forme :

- d'une discussion de la dimension professionnelle du design pour débattre, éclairée par un retour critique sur un an de données empiriques qualitatives – CH8 | Section 35 | p.312. Elle fut complétée par l'identification d'une série de nouvelles questions de recherche sur l'ouverture d'espaces de contestation dans un lieu de pouvoir – CH8 | Section 36 | p.339 ;
- Nous avons proposé un affinage de la **définition du design pour débattre** (donnée en annexe), à partir d'une liste de 22 qualités perçues par les parties prenantes quant à notre projet – CH8 | Section 37 | p.345 ;
- Cette définition est accompagnée d'un affinage méthodologique de *l'expérimentation de reliure* permettant d'étudier des normes sociales qui ont été rendues dissonantes de façon inattendue ou involontaire – CH8 | Section 33.B | p.308.

56 Sachant que le débat de *L'Éphéméride* avait été perçu comme dissonant à l'égard des valeurs sociales du public, nous en avons conclu que la Commission peut être perçue par son public comme un environnement *consensuel* et *expert* qui pratique une transmission descendante du savoir.

PART. III Résultats des expérimentations sur la situation de communication

Le chapitre précédent a marqué la fin de nos expérimentations dédiées aux artefacts et à leur dissonance. Nous avons ensuite amorcé deux chapitres d'expérimentations sur les situations de communication où des artefacts et leurs publics se rencontrent en vue d'amorcer un débat.

Pour étudier cet aspect des démarches de design pour débattre, nous avons développé quatre projets, entre 2015 et 2017, dédiés à l'exploration de différentes situations de communication. Leur présentation est ébauchée ci-après.

Voir la présentation détaillée des 4 projets dans [INTRO CH9–10 | Section 38 | p.352-427](#). *OneHealth* (2014) | Situation de communication : une **session de posters scientifiques fictionnels dans le cadre d'une **conférence de microbiologie** – pour l'Institut National de Recherche Agronomique (INRA). En débat : ces posters spéculatifs confrontent les scientifiques aux enjeux éthiques soulevés par les applications potentielles de leurs recherches d'ici 10 ans.**

#Hack.my.cafeteria (2016) | Situation de communication : nous avons confectionné un « **menu du jour** » fictionnel, entièrement à base d'une espèce génétiquement modifiée, pour la **cafétéria du campus d'un laboratoire de recherche**. Réalisé avec les doctorants de l'INRA, ce menu leur a permis *d'ingérer* un des futurs que rendent possible leurs recherches doctorales. En débat : dans ce futur, la raréfaction des ressources invite-t-elle à infléchir les règles de l'éthique – afin de « nourrir le monde » ?

Épicure.app (2015) | Situation de communication : une **réunion d'association (fictionnelle)** menée sous la forme d'un **jeu de rôle** dans une **commission éthique**, située dans un **hôpital**. Développée pour l'Espace Éthique, la réunion de l'association fictionnelle des Malades Génomiques Anonymes présentait leur nouvelle campagne de publicité à leurs adhérents. Cette réclame présente une nouvelle app. d'échange de bons tuyaux pour personnes condamnées statistiquement à contracter une maladie grave. En débat : la prédiction algorithmique de la santé prescrit-elle les comportements individuels ?

Politique-fiction.fr (2017) | Situation de communication : une série **d'articles d'actualités** spéculatives décrivent une France « post-élections présidentielles », sur un **site Web**, puis dans un **débat d'entre deux tours**. Projet personnel présenté au centre culturel de la Gaîté Lyrique. En débat : les conséquences potentielles des programmes électoraux sur la vie des Français et Françaises, sur la question du travail.

Pour comparer ces projets, six portfolios annotés sont présentés dans le CH10 | section 44.B | p.457-464. Ici, nous résumons trois d'entre eux. Nous faisons référence aux quatre projets avec les abréviations : [OH] = *OneHealth*, [H] = *#Hack.my.cafeteria*, [Ep] = *Épiculture.app*, et [PF] = *Politique-fiction.fr*.



Figure 78 (du manuscrit, p.460) | Artefacts créés pour nourrir les 4 débats : Posters [OH], menu du jour [H], publicité pour une app. [EP] et article de journal en ligne [PF], sont quatre types de langages visuels différents. Ils cherchent à paraître familiers et à rendre le sujet à débattre plus accessible aux publics.



Figure 79 (du manuscrit, p.461) | Activités pendant lesquelles le public a rencontré les artefacts des 4 débats : Conférence [OH], déjeuner [OH], réunion d'association [EP], événement d'entre deux tours [PF]. Ces activités se veulent toutes familières au public (respectivement des biologistes, les personnes occupant un campus de recherche, des professionnels de soin et personnes malades, et des personnes appelées à voter aux élections). Mais elles le font via des stratégies différentes. Elles *imitent*, *fusionnent avec* ou *infiltrent* (par surprise) le contexte et les pratiques habituelles des publics.



Figure 80 (du manuscrit, p.462) | Lieux et événements où les activités de débat ont pris place : auditorium d'université pour une conférence annuelle [OH], cafétéria en marge d'une semaine doctorale [H], salle de réunion de commission éthique lors d'un séminaire mensuel [EP], hall d'un centre culturel lors d'une soirée de débat d'entre deux tours électoraux [PF]. En plus d'être des contextes familiers, certaines pratiques d'infiltration ont visé à surprendre le public depuis leur milieu habituel, depuis leur zone de confort.

CH9

UN MODÈLE DESCRIPTIF

Atteindre un public via un système de communication

Dans le Chapitre 9, notre étude s'est concentrée sur l'une des fonctions primordiales du design pour débattre : *atteindre un public*. Nous avons proposé de formuler cette fonction ainsi, car lors du Chapitre 3, la fonction la plus répandue dans la littérature – *nourrir le débat public* – rencontrait un grand nombre de limitations. Notamment, il semble difficile de rencontrer un public et de débattre via des médias conçus pour la diffusion (exposition, média en ligne et média de masse). Également, la littérature rapporte que l'exposition tend à décontextualiser l'œuvre et à la rendre impénétrable pour les visiteurs. La diffusion virale sur le Web, quant à elle, génère souvent de nombreux commentaires en ligne, mais ils demeurent superficiels. En outre, ces formats de diffusion sont fortement dépendants d'une tierce partie en charge du travail de médiation. Ce travail n'est généralement pas pris en compte par le designer.

Chercher à dépasser ces limitations nous a semblé important pour deux raisons. Tout d'abord, parce ces limites semblent s'appliquer à la grande majorité des projets de design pour débattre. Deuxièmement, car d'autres designers semblent avoir surmonté ces difficultés⁵⁷. Mais, étudier comment ces derniers projets très différents ont atteint leurs publics sans détenir un cadre analytique commun semblait complexe et contre-productif. Nous avons donc spécifiquement confectionné quatre projets entre 2015 et 2017, afin de pouvoir les comparer.

Dans le présent chapitre, nous questionnons donc :

- Quels sont les critères permettant de décrire et de comparer la manière dont les projets de design pour débattre atteignent leurs publics ?

La réponse est la suivante. Comparer quatre projets nous a permis de mieux comprendre ce qu'est une situation de communication (où les publics et les artefacts se rencontrent concrètement) d'une part ; et d'autre part, de mieux décrire le modèle conceptuel qui représente une telle situation générique. **Ce modèle représente un système de communication qui met en relation des problèmes à débattre, des artefacts, et des publics** (ainsi que leurs contextes). Il est composé de dix niveaux. Aussi, comme ces conclusions semblent s'appliquer au Design Discursif en général (indépendamment d'une tentative de débat), nous avons nommé ce modèle le **Système de communication du Design Discursif**. Il peut être employé comme modèle descriptif ou comme outil d'analyse. Ce faisant, nous avons établi une grille d'analyse générique, utile à l'étude d'autres situations de design pour débattre.

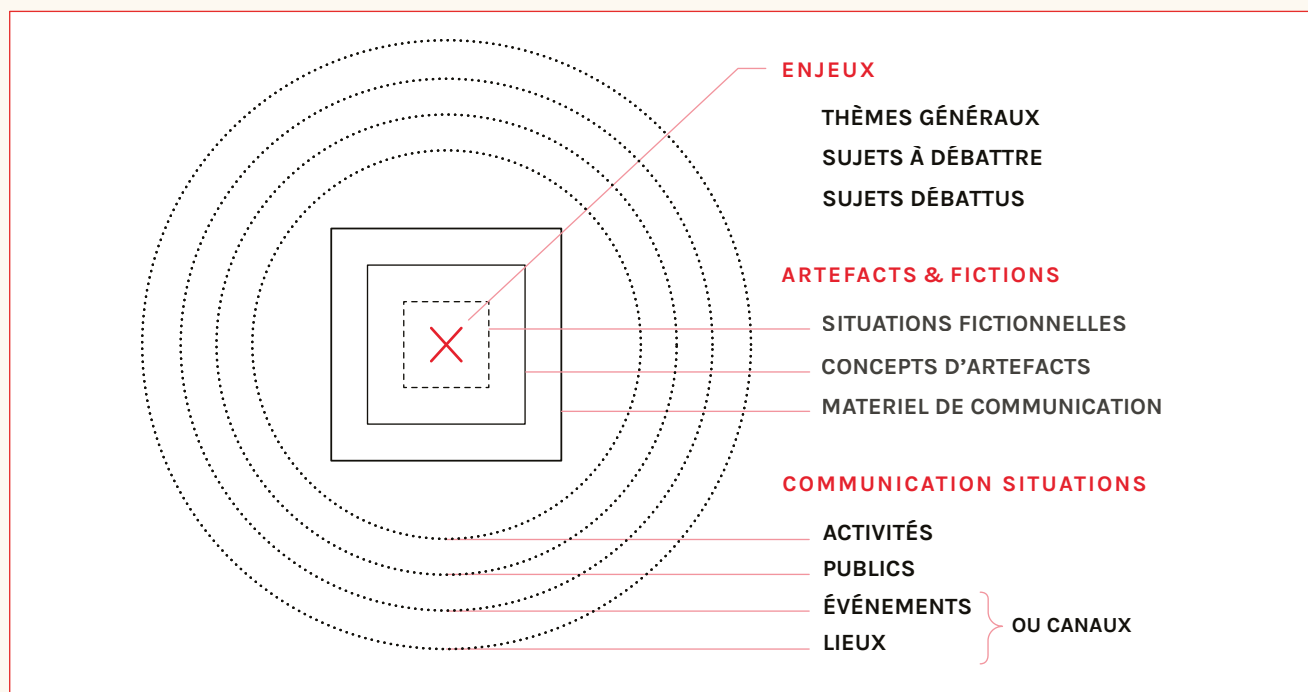


Figure 75 (dans le manuscrit, p.447) | Le modèle du système de communication du design discursif comprend dix niveaux regroupés en trois catégories : l'enjeu à débattre (représenté par un X), l'artefact (représenté par des carrés) et la situation de communication (les cercles).

Enjeux

- **Thèmes généraux** : sujets abordés par le projet/débat (choisis avec, ou par, une partie prenante, ou dans une posture d'auteur).
- **Sujets à débattre** : questions controversées visées par le débat (identifiées par l'analyse du discours ou par la co-conception avec les acteurs concernés, par exemple).
- **Sujets débattus** : sujets qui émergent du débat, évoqués par le public (qu'il soit cohérent ou non avec les sujets à débattre choisis).

Artefacts

- **Situations fictionnelles** : fiction qui soutient l'existence de l'artefact (ex. c'est un ensemble de valeurs sociales dissonantes, le résultat d'un exercice de construction de monde (*world-building*), tout un monde, une fiction, une diégèse qui réside hors cadre).
- **Concepts d'artefacts** : encore à l'état de concept, ils appartiennent à – ou découlent de – la situation, du monde ou de l'histoire précédente (l'artefact peut être appelé un « prototype diégétique »⁵⁸).
- **Matériel de communication** : représentations du concept précédent (par exemple, un accessoire, une publicité fictive, des récits d'utilisation⁵⁹).
- À travers ces trois niveaux, les artefacts incarnent des problèmes. Afin de les transmettre, ils rencontrent des publics dans des situations de communication.

Situations de communication

- **Activités** : expériences à travers lesquelles les publics entrent en contact avec le matériel de communication (par exemple, participation à une exposition, ateliers de débat, jeux de rôle).
- **Public** : il est composé de personnes *touchées* par le projet. Selon l'événement et le lieu de la rencontre, les publics peuvent être très larges et non identifiés, ou bien restreints et connus. Le public comprend souvent la partie prenante (s'il y en a une).
- **Événements** : l'occasion dans laquelle le projet est rencontré par le public.
- **Lieux** : endroits qui accueillent l'événement. Le type de lieu fixe un cadre à l'expérience de réflexion (par exemple un centre culturel ou un hôpital n'installe pas la même expérience de débat).
 - **Canaux** : lieux et événements peuvent être remplacés par un « canal » lorsque le projet circule dans les médias de masse et/ou en ligne, par exemple.

58 Bruce Sterling, « Design Fiction: Diegetic Prototypes », Wired (Blog), 5 février 2011, <https://www.wired.com/2011/02/design-fiction-diegetic-prototypes/> (consulté février 2019).

59 Matthew Malpass, *Critical Design in Context: History, Theory, and Practices* (London: Bloomsbury Academic, an imprint of Bloomsbury Publishing, 2017), 47.

Pour en venir à cette conclusion, nous avons comparé *Dog & Bone*, *L'Éphéméride*, et nos quatre projets développés spécifiquement pour cette expérimentation. Une typologie a émergé de cette comparaison. Nous avons employé cette typologie comme une grille d'analyse pour examiner les projets de trois autres designers – *Victimless Leather* (2004) de Oron Catts and Ionat Zurr ; *Symbiots* (2008–2009) de Bergström, Mazé, et al. ; et *Mantis Systems* (2018) de Superflux. Analyser efficacement ces trois projets avec la même grille nous a permis d'inférer que cette typologie est généralisable à des contextes de projets très différents (ex. exposition, recherche, prestation professionnelle).

Les contributions du Chapitre 9 sont :

- le *modèle descriptif* du Système de communication du Design Discursif – CH9 | Section 41 | p.444. ;
- et sa déclinaison en *fiche d'analyse*.

CH10

UNE TACTIQUE DE DESIGN

Impliquer un public choisi, envers un enjeu

Enfin, ce à quoi n'a pas répondu le Chapitre 9 est :

- Comment impliquer un *public choisi* dans un sujet à débattre (autrement qu'en incitant un public non préalablement identifié à se rassembler spontanément autour d'un enjeu proposé par le designer) ?

Cette dernière question de notre étude revêt une importance particulière. Elle permet de faire le point sur une de nos hypothèses, appliquée à tous nos projets depuis les difficultés rencontrées avec *Dog & Bone* – difficultés partagées par d'autres designers d'après le Chapitre 3.

Nous proposons que ces difficultés résultent de la manière dont était formulé l'une des fonctions largement attribuées au design pour débattre dans la littérature : « l'incitation du public à se rassembler » (« *prompt a public into being* »)⁶⁰. Ces difficultés se manifestent lorsque l'on incite un public non identifié à se constituer. Il devient alors très difficile de contrôler le sujet auquel le public s'intéressera, au sein d'un artefact (qui contient souvent plusieurs sujets et interprétations possibles). Le fait que *Dog & Bone*⁶¹ ait été invité à participer à une exposition internationale sur la place de l'animal dans les technologies, plutôt que sur son thème de débat initialement visé – l'absence du langage non verbal dans les technologies de téléprésence – en est un exemple frappant.

Nous avons reformulé cette fonction en termes d'*implication d'un public choisi*, dans un problème à débattre. Et nous avons fait l'hypothèse que l'on peut éviter la construction de publics non identifiés en rejoignant des publics latents ou existants⁶². Ainsi, nous avons proposé de *s'insérer* dans des publics déjà occupés (*busy*⁶³) par un problème.

60 Carl DiSalvo, « Design and the Construction of Publics ».

61 *Dog & Bone* vise à déclencher un débat sur la place de la communication non-verbale dans les technologies de téléprésence et sur les conséquences sociétales de leur popularisation.

62 Hypothèse 2 | Les designers peuvent *s'insérer* dans des situations où des publics identifiés sont pré-construits autour de sujets de préoccupation. Cela peut permettre de se laisser instruire du point de vue des publics sur les questions qui les préoccupent – de manière participative et inclusive.

63 Andreas Birkbak, Morten Krogh Petersen, et Tobias Bornakke Jørgensen, « Designing with Publics That Are Already Busy: A Case from Denmark », *Design Issues* 34, n° 4 (25 septembre 2018): 820, doi.org/.

Après avoir testé cette hypothèse dans cinq de nos projets entre 2014 et 2017, nous formulons trois réponses permettant d'engager un public choisi avec un enjeu à débattre.

- **Le public peut être compris comme le véritable utilisateur de la situation du débat.** Une telle posture permet au designer de viser des sujets de débats qui sont de réelles préoccupations pour ces personnes. Mais, cela implique : de *considérer le contexte qui préexiste à un projet de débat* ; à *se laisser informer* par ce contexte et les personnes l'occupant quant au choix d'une problématique à débattre ; et à **considérer le système de communication du Design Discursif comme un ensemble d'éléments qui peuvent être délibérément designés** ;
- Une deuxième façon d'engager le public est de **considérer les éléments qui composent le système de communication (personnes, objets, personnages de fiction) comme les membres d'une même discussion entre humains, non-humain, réalité et fiction** ;
- Troisièmement, afin d'appliquer les deux éléments précédents, nous proposons **la tactique du « miroir » (« *mirroring* »)** qui **repose sur la mise en discussion du public avec une autre version de lui-même.**

Respectivement, nous en sommes arrivés à la première conclusion en comparant à nouveau les quatre projets du Chapitre 9 – mais aussi, *Dog & Bone*, *L'Éphéméride* et les trois projets conçus par d'autres designers. Nous avons notamment employé une série de « portfolios annotés »⁶⁴ qui permettent une analyse plus fine de la dimension visuelle, sensible et empirique des projets de design.

Nous avons pu constater que certains projets – ceux pensés pour un contexte d'exposition notamment – ne présentent pas de corrélation apparente entre le sujet à débattre (ex. l'industrie alimentaire carnivore) et la situation où un public concerné peut se présenter (ex. une exposition). Alors, que d'autres projets démontrent une *forte adéquation entre sujet à débattre, situation de communication et public concerné*. Cela a montré que le public peut être non seulement mis au centre des choix de design, mais que ces choix ne se limitaient pas à la création d'un artefact – CH9 | Section 44.A | p.453. Nous avons également vu que notre approche – *l'insertion dans un public latent ou existant – pouvait prendre deux modes, l'infiltration d'un milieu existant et le détournement médiatique* – CH9 | Section 44.B | p.457. Cela nous a indiqué que notre processus de conception s'était radicalement transformé vers la mise en forme délibérée d'un système de communication – en contraste avec le projet *Dog & Bone* (2010-2011).

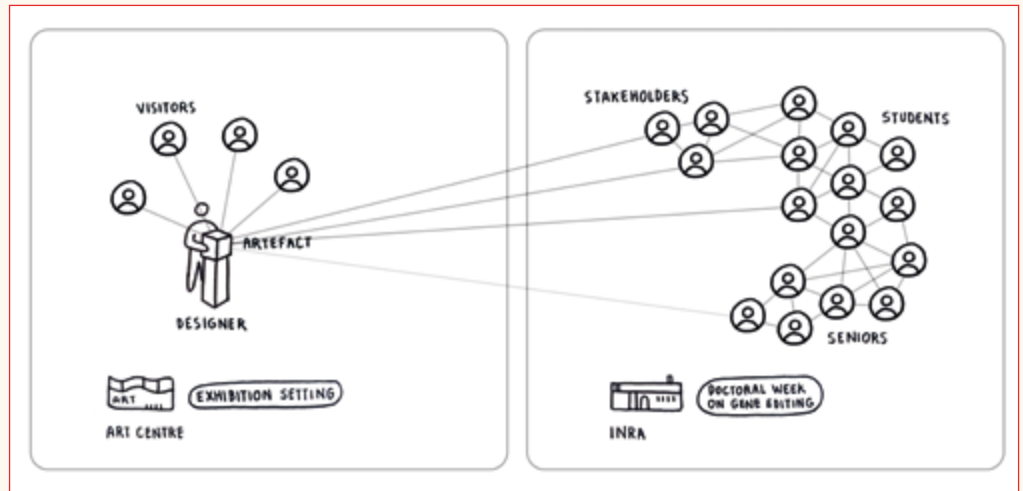


Figure 85 (du manuscrit, p.468) | Pour illustrer la démarche d'insertion, nous avons esquissé deux situations. Ici, la situation de la semaine doctorale de l'INRA est représentée comme si le projet #Hack.my.cafeteria avait été diffusé dans une exposition d'art.

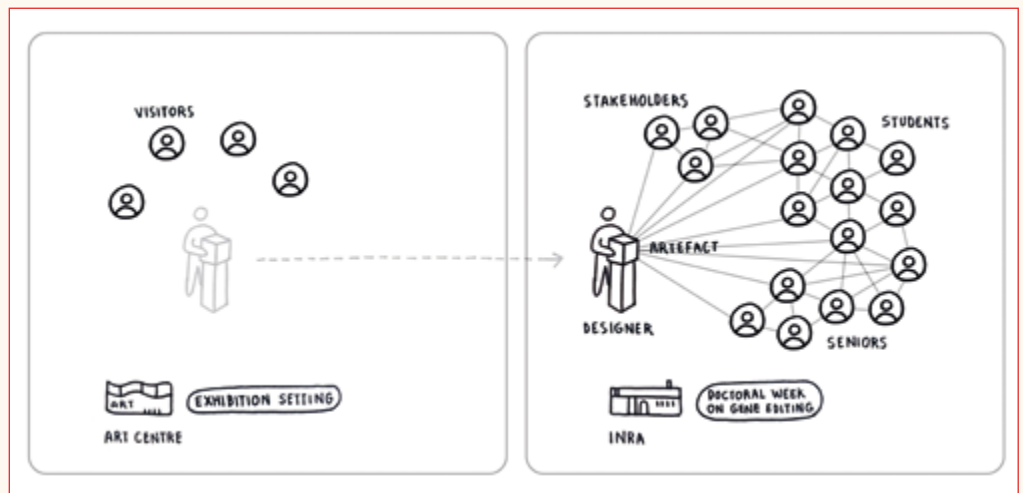


Figure 86 (du manuscrit, p.469) | Cette seconde esquisse illustre l'infiltration de l'objet dans la situation, au sein du laboratoire pendant une semaine doctorale – ex. un prospectus du projet donné à la cafétéria du campus. Par rapport à la première esquisse, des liens supplémentaires relient l'artefact aux acteurs en place à l'INRA, le jour où le débat a eu lieu.

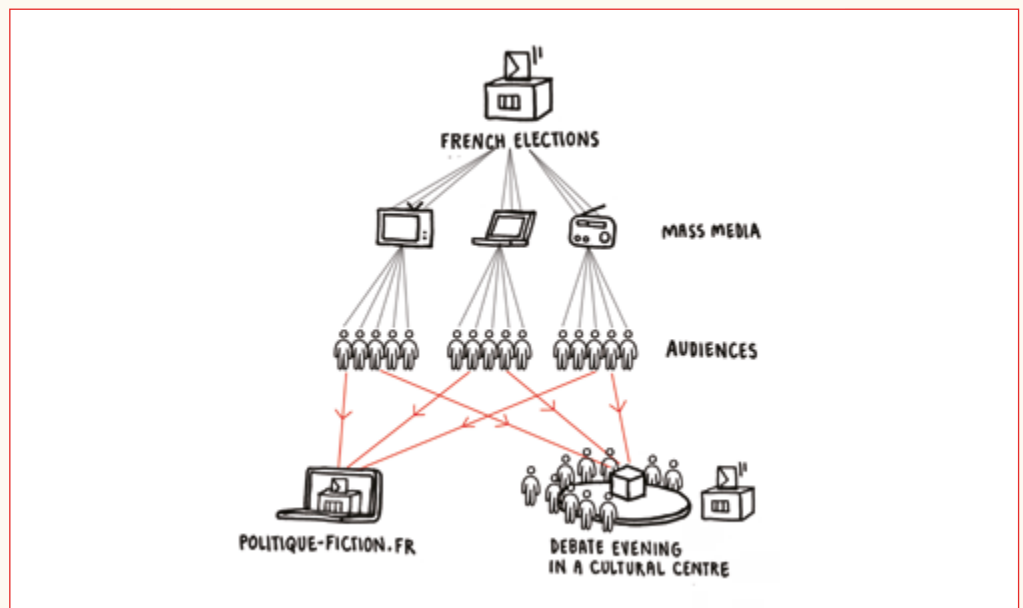


Figure 87 (du manuscrit, p.470) | Ce diagramme donne une représentation très schématique d'une situation où le site *politique-fiction.fr* et le débat qui lui est associé ont détourné l'attention du public – qui était initialement dirigée vers les élections présidentielles françaises.

Nous en sommes arrivés à notre seconde conclusion en décortiquant l'un de nos projets diffusés dans la cafétéria d'un campus de recherche, #Hack.my.cafeteria (2016). Dans ce projet, le laboratoire de l'INRA, l'OMS et McDonald's sont présentés comme ayant développé une nouvelle espèce animale chimérique génétiquement modifiée pour continuer à *nourrir le monde* malgré les difficultés posées par le dérèglement climatique. Donc, *des éléments de la situation de communication réelle étaient impliqués en tant qu'éléments de la situation fictionnelle dépeinte par nos artefacts*. Pour mieux comprendre cette situation complexe, nous l'avons regardée via le prisme de trois disciplines : communication pragmatiste, STS et Sciences de l'Information et de la Communication. Il est apparu clairement que – respectivement – les interactions entre humains face-à-face, entre humains et non humains (ici, les artefacts de design) et entre réel et fictionnel composent une situation de communication à plusieurs niveaux. *Donc, le public du débat, les artefacts et les éléments de la fiction participent d'une même situation de communication*.

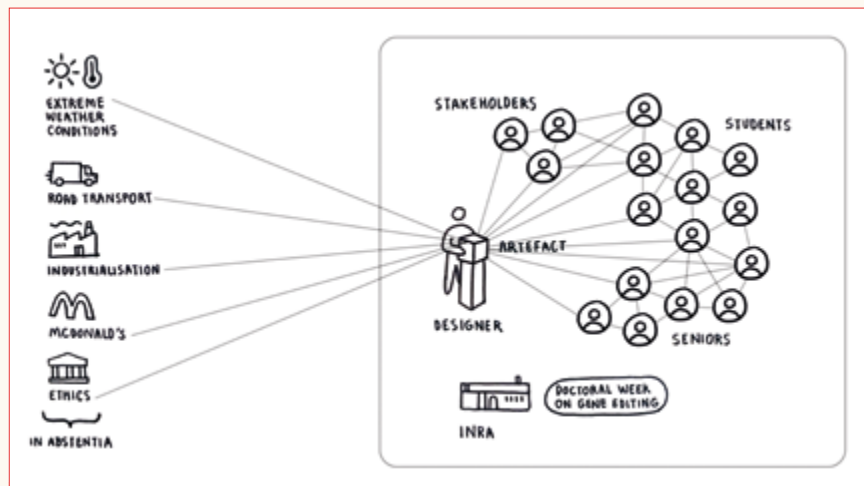


Figure 88 (du manuscrit, p.472) | Dans cette version actualisée de la Figure 86, des liens supplémentaires ont été ajoutés au réseau d'acteurs. Ces nouveaux liens comprennent les liens qui seraient nécessaires pour soutenir l'existence *non fictive* des artefacts du projet (l'animal génétiquement modifié nommé *Chickowtrout*) – c'est-à-dire McDonald, les acteurs de la réglementation éthique, les conditions météorologiques extrêmes, etc. Ces liens fictifs se fondent également avec les liens non fictifs antérieurs, existant entre l'artefact et les acteurs réels en place.

Notre troisième conclusion découle de la précédente et repose sur la manière dont la situation de communication entre humains, non-humains et fictions, peut être manipulée comme un médium de design. Ce que nous avons appelé la tactique du miroir en est une application. L'argument principal pour soutenir l'établissement de cette tactique de design nous est venu du projet #Hack.my.cafeteria, à nouveau. Nous avons discuté ce projet à la lumière du concept de « **dispositif d'articulation** » de Carl DiSalvo, inspiré de Chantal Mouffe et de Bruno Latour⁶⁵. Ce concept de DiSalvo décrit comment un artefact peut nourrir un débat et la création d'un public en *révélant les liens qui unissent un réseau d'acteurs pour mieux faire comprendre les jeux de pouvoir qui régissent ce réseau*.

65 Carl DiSalvo, *Adversarial Design* (Cambridge, MA: The MIT Press, 2012). p.95. | Ernesto Laclau et Chantal Mouffe, *Hegemony & Socialist Strategy*, 2^e éd., [1st Ed. 1985] (London: Verso, 2014). | Bruno Latour, *Politics of Nature: How to Bring the Sciences Into Democracy*, trad. par Catherine Porter (Cambridge: Harvard University Press, 2004).

Nous avons observé que *#Hack.my.cafeteria* fait cela. Il articule les liens existants entre les commissions éthiques, l'INRA, l'industrie alimentaire et le climat. Mais, il va plus loin. En simulant un monde possible où l'INRA crée une chimère génétique, le projet modifie la liste des acteurs et la nature des liens existants entre eux. Se faisant il les rend visibles et les ouvre au débat. Cela signifie que le design peut prendre les membres d'une situation de communication – regroupant humains, artefact, et éléments fictionnels – comme des ingrédients ou un médium, pour la création d'un projet de débat. Donc, une des manières de designer pour débattre est d'orchestrer des situations de communication qui réagencent ces acteurs et les liens qui les unissent – le temps d'un débat.

Nous avons également analysé que *#Hack.my.cafeteria* fait cela de manière *in situ*. Il ne vise pas le grand public pour leur permettre d'articuler les liens unissant l'INRA et les acteurs de l'édition génétique animale. Il n'invite pas non plus l'INRA à une exposition sur leurs travaux en génétique. Il *met les acteurs concernés par un enjeu à débattre face à une autre version d'eux-mêmes, dans leur propre situation* (ex. mettre de la viande génétiquement modifiée par l'INRA au menu de la cafétéria de l'INRA). C'est ainsi que nous avons proposé la tactique du miroir qui repose sur un principe simple : prendre la situation du public à la fois comme un matériau fictionnel et comme un contexte de diffusion pour le projet, afin de les faire se mélanger. Cela permet au public de réfléchir sur lui-même comme s'il regardait au travers d'un miroir déformant – qui se trouve être l'artefact, sa situation fictionnelle et son matériel de communication.

Les contributions de ce dernier chapitre expérimental sont au nombre de trois.

- Dans notre Chapitre 3, nous indiquions que populariser un projet de design via des médias initialement faits pour la diffusion est une approche limitée dont le travail de médiation n'est pas pris en charge par le designer. Une autre limitation est celle de choisir un sujet de débat et de réaliser la conception d'un artefact via une posture d'auteur, qui manque de recul auto-critique et de pertinence à l'égard des publics existants. Ainsi, l'une des contributions des chapitres 9 et 10 est un décadage conceptuel. En considérant le public comme *utilisateur* du débat, la situation de communication peut être appréhendée comme une somme d'éléments délibérément façonnables à co-designer avec les parties prenantes – [CH10 | Section 44.A | p.453](#) ;
- Les dix niveaux qui composent le modèle du système de communication du Design Discursif sont donc proposés comme des repères méthodologiques pour la pratique du design – et pas uniquement comme un outil analytique – [CH10 | Section 44.B.6 | p.463](#) ;
- Enfin, ce chapitre nous a permis de livrer une démonstration, une description et des repères méthodologiques pour développer la tactique de design du miroir – [CH10 | Section 45.C | p.475](#).

CONCLUSIONS Nouveaux rôles pour les designers du politique

RÉSULTATS DE NOS EXPÉRIENCES

Quatre manières dont le design déjoue le consensus

Formulation de deux thèses principales

La première thèse que nous soutenons se formule en deux fois. D'abord, un certain nombre d'approches disparates peuvent être rassemblées dans un ensemble cohérent de pratiques de design qui contribuent à l'engagement des personnes dans des expériences *politiques* de contestation mutuelle et collective. Ensuite, il existe un riche champ de recherche qui se concentre sur ces pratiques en tant qu'objet d'étude. Nous soutenons que ces deux éléments peuvent être affiliés aux *pratiques*, et au *domaine de recherche*, du design pour débattre. Le design pour débattre est mieux compris comme une branche du design social dans laquelle l'un des sous-ensembles utilise le Design Discursif.

Notre deuxième thèse porte sur le sous-ensemble du Design Discursif pour débattre. Nous avançons que le design peut contribuer au *politique* en rendant les normes sociales discutables, sous la forme d'artefacts de design dissonants, mis en scène dans des situations de communication qui permettent aux publics, aux artefacts et aux enjeux d'interagir. En bref, si Herbert Simon a défini le design comme toute pratique qui « conçoit des plans d'action visant à transformer une situation existante en situations préférables »⁶⁶, **le design pour débattre crée des situations propices à questionner ce qui compose le préférable – et questionner les acteurs qui ont le pouvoir de le définir. Il crée des simulations du préférable afin de remettre en cause l'hégémonie des acteurs d'une situation, et d'émanciper une pluralité de points de vue quant à la (re) définition du préférable et de cette situation.** Pour y parvenir, ces pratiques tentent de déjouer la formation du consensus.

Un agonisme conceptif, réflexif, discursif et adversarial

En résumé, quelles sont les particularités d'employer ce sous-ensemble du nouveau design social⁶⁷ qu'est le Design Discursif pour débattre et pour favoriser les expériences *du politique* ?

- La qualité *adversarielle* du design, et plus précisément la tactique de la dissonance, met en débat les normes et valeurs sociales en jouant sur leur (in)acceptabilité. Par ce biais, elle force à l'implication personnelle et au positionnement d'opinion. Tel un diplomate, elle permet au designer de mettre en tension et en débat les compréhensions mutuelles et implicites de ce qui compose un horizon de vie commune ;

66 Ceci est notre traduction. | Simon, *The Sciences of the Artificial*.

67 Ilpo Koskinen, « Agonistic, Convivial, and Conceptual Aesthetics in New Social Design ».

- La nature *conceptive* de ces pratiques incite à formuler des contre-propositions de design, soit des contre-propositions de situations de vie. Elle dépasse le clivage d'opinion et encapacite les personnes participantes à débattre de manière conceptive ;
- Cette forme de design étant *discursive*, elle joue le rôle d'une interface entre les membres d'un public et un enjeu à débattre (en tant que média permettant une simulation d'un problème, et la confrontation à des points de vue sous-discutés sur ce problème) ;
- Le caractère *réflexif* du design pour débattre incite à acquérir un recul critique sur le réseau des acteurs qui composent la situation propre d'un public. Par la tactique du miroir, il permet surtout de développer le doute et l'autocritique, qui sont probablement une étape fondamentale pour conduire un débat non stérile. Aussi, il permet de remettre en jeu – même temporairement – les clivages identitaires du Eux/Nous, si essentiels à la confrontation agonistique de Chantal Mouffe ;
- Enfin, quand il acquiert une approche à la fois *participative* et *inclusive*, le design pour débattre donne au public le statut d'utilisateur de la situation de débat. Cette posture fait du débat un terrain de pratique du design, à part entière.

Plus en détail, ci-après sont présentées quatre réponses à notre question de recherche principale, quant aux manières singulières dont le design – et plus précisément le Design Discursif pour débattre – contribue à faire le travail de l'agonisme. Ces réponses s'appuient sur une combinaison de nos résultats expérimentaux.

Les normes comme matière dissonante pour le débat

Le design peut créer des situations propices au débat quand il met en jeu des normes et valeurs sociales jusque-là implicites – et qui régissent pourtant le vivre ensemble et notre compréhension collective du *préférable*. Alors que le design conventionnel propose des visions du préférable, le design pour débattre les remet en question, et en débat. Ainsi, le design peut permettre de débattre de questions politiques (de vie en collectif), de manière *politique* (en encourageant la confrontation) lorsqu'il prend les normes sociales comme médium et les met en état de dissonance (les rend ambivalentes, disputables et inacceptables).

La contestation mutuelle déclenchée par le design

La dissonance incite au débat – elle pousse à déjouer le consensus et renouveler un état de contestation – de manière singulière, via : le *langage visuel du design* ; le caractère *inacceptable* ; *disputable* ; et *ambivalents* de tels artefacts dissonants ; designés en *prenant soin* du public.

Pour ne pas tomber dans l'écueil de la pure provocation, la tactique de la dissonance livre des artefacts qui enfreignent *soigneusement* une norme sociale. C'est-à-dire qu'ils prennent soin du point de vue du public concerné par le sujet à débattre.

Pour se faire, l'artefact se veut *disputable* – il incarne et relaye le point de vue adverse au consensus, celui des publics minoritaires. Se faisant, il libère leur expression, permet de remettre en question l'opinion majoritaire, de déclencher un dissensus (ici comprise comme la rupture du consensus), et de révéler les « frontières politiques »⁶⁸.

L'artefact peut également être *ambivalent* – il n'incarne non pas un seul, mais plusieurs points de vues sur une controverse. Il permet ainsi au public de douter de soi et des autres, il rend les frontières politiques versatiles et la contestation mutuelle possible, pendant la session de débat.

L'artefact est aussi rendu en partie *inacceptable*. L'inacceptable pousse à la réflexion, à la mobilisation du public, et à la remise en question à la fois de l'artefact, de ses designers et du statut passif de spectateur – adoptant alors une posture de conception. Le public en vient à formuler des contre-propositions de design, face à une proposition insatisfaisante.

Ces dernières réactions reposent sur *le langage visuel du design*, lorsque mis en dissonance. Car le design est souvent perçu comme offrant de meilleures manières d'habiter le monde⁶⁹. Il soumet donc le public à une injonction contradictoire – celle de percevoir l'inacceptable comme une vision du mieux.

Le design comme média

En tant que média, le Design Discursif fait office d'interface entre les différentes composantes d'un débat – contribuant ainsi de manière particulière à l'agonisme. Cela implique quatre caractéristiques : la *simulation* ; l'orchestration d'une *situation de communication* hétérogène entre *humains, non humains et fiction* ; l'emploi de la fiction comme *dispositif d'articulation* ; de manière *in situ*.

Quand le design est employé comme média, il véhicule du sens tout en mettant à distance l'usage d'un artefact. Le Design Discursif emploie cette qualité de média délibérément et offre ainsi à vivre la *simulation* d'une situation problématique. Cela permet de se projeter par anticipation et de sentir concerné par un enjeu parfois distant.

En plus d'une *situation* distante, l'**artefact-médiateur agonistique**⁷⁰ rassemble dans une même conversation hétérogène *des participants humains, non humains et fictionnels*. Mais que laisser ce travail de médiation uniquement à un tiers acteur (ex. du monde culturel ou journalistique), le designer peut à la fois designer – voire orchestrer – un artefact et la situation de communication le reliant à un public et ses enjeux.

En tant que **dispositif d'articulation**⁷¹, l'artefact emploie la fiction pour reconfigurer et ainsi révéler les liens qui structurent le réseau d'acteurs que sont les membres de cette conversation hétérogène. Cela permet de mieux comprendre les structures de pouvoir qui régissent ce réseau.

68 Chantal Mouffe, *The Return of the Political* (London; New York: Verso, 1993).

69 D'après Buchanan, le design impose donc des arguments rhétoriques et normatifs aux personnes utilisant l'artefact. Nous proposons de considérer cela comme un ingrédient de la tactique de la dissonance.

70 Concept élaboré sur les travaux de Zacklad sur l'artefact médiateur.

71 Carl DiSalvo, *Adversarial Design* (Cambridge, MA: The MIT Press, 2012). p.95.

Lorsqu'employée de manière *in situ*, cette approche permet au public de faire face à une autre version de lui-même – via la tactique du **miroir** (*mirroring*). Elle ouvre une expérience de contestation mutuelle qui n'est donc pas seulement orientée vers autrui.

Le design en tant que diplomate non humain

C'est quand le design s'ancre dans une situation, un champ de tension préexistant qu'il peut contribuer délibérément à l'émergence du pluralisme agonistique. Cette approche pragmatiste implique trois éléments : designer de manière à la fois *participative* et *inclusive* ; travailler en *s'insérant* (*s'infiltrant* ou *détournant l'attention médiatique*) d'un public latent ou préexistant ; et créer de la *reliure* conflictuelle entre points de vue du public dans une *posture de diplomate*.

Quand les designers adoptent une posture de **diplomate**⁷² – et que leurs artefacts prennent le rôle d'un diplomate non humain – ils et elles intensifient les conflits plutôt qu'elles les désamorcent. Ils ouvrent ainsi un espace de dialogue – et au travers de son artefact, ils créent de la *reliure* (*bridging*) – quant à des points de vue discordants sur une question à débattre. Ils mettent en relation des mondes qui ne se parlent pas et se font les porte-parole des voix sous-représentées (dans cette situation spécifique).

Pour cela, la designer doit considérer qu'elle démarre un débat dans une situation qui lui préexiste. En travaillant *in situ*, elle peut alors *s'insérer* dans des publics déjà concernés (*busy*)⁷³ par un problème – de deux manières. Elle peut **s'infiltrer** dans un environnement existant pour identifier des sujets et y ajouter ses artefacts. Elle peut aussi mettre en place une **diversion médiatique**, en attirant l'attention d'un public déjà concerné par un problème dans les médias⁷⁴.

Or, ces approches nous encouragent à considérer le public comme le véritable utilisateur et utilisatrice de la situation de débat – et à éviter, en partie, la posture dite d'auteur. Dans sa thèse, il y a 20 ans, Anthony Dunne suggérait que pour faire leur autocritique, les designers doivent s'émanciper des contraintes du marché en adoptant une posture d'auteur. Nous soutenons maintenant que le designer peut aussi être un diplomate, qui utilise sa pratique pour critiquer toute une série de sujets, autres que le design lui-même, et qui permet à des mondes distincts de s'entendre.

72 **Isabelle Stengers**, *La Vierge et le neutrino: les scientifiques dans la tourmente* (Paris: Les Empêcheurs de penser en rond, 2006).

73 **Birkbak, Petersen, et Jørgensen**, « Designing with Publics That Are Already Busy: A Case from Denmark ».

74 Par exemple, le projet *Politique-fiction.fr* (2017), voir : [Intro CH9–10 | Section 38.D | p.408](#)

CONTRIBUTIONS ET LIMITATIONS

Encapaciter les designers comme agents *du politique***Aperçu des contributions théoriques et méthodologiques**

Aux contributions suivantes, l'on peut ajouter le travail de traduction de concepts anglo-saxons effectué dans le présent résumé, à destination des communautés de recherche francophones.

SYNTHÉTISÉ
CI-APRÈS
EN ANNEXE

**Contributions à la recherche en design.**

Identifier ce qu'il y'a de commun à des pratiques disparates – celles qui favorisent la contestation (collective ou mutuelle) et déjouent les consensus – permettra aux personnes qui pratiquent et à celles qui recherchent le design de contribuer à un effort commun de compréhension du design *du politique*. Cela sera favorable à l'enseignement, au développement de nouvelles pratiques professionnelles et à davantage de recherches. Pour cela, nous livrons :

- **Des définitions du *champ de recherche* et du *corpus de pratiques*** du Design pour débattre – ancrés dans, mais non limités aux programmes du Design Critique, Spéculatif, et Fiction – CH1 | Section 4 | p.64 ;
- Pour structurer ce champ : **une typologie de ses objets d'étude** existants – CH1 | Section 3 | p.44 – **une série de *fonctions du design*** à étudier – CH3 | Section 12 | p.134 – et une série de **questions de recherche** à explorer – CH7 | Section 32 | p.302 ;
- Un **glossaire de concepts** sur ces pratiques de design *du politique* – ANNEXE | GLOSSAIRE | p.514 – dont un glossaire spécifique à la tactique de design de la *dissonance* – CH5 | Section 21 | p.200 ;
- **Une liste de qualités** potentielles qu'une partie prenante peut attribuer à une pratique professionnelle du design pour débattre – CH8 | Section 37 | p.345.

Pour dépasser le flou méthodologique reporté par les communautés de recherche en design à l'égard des pratiques de design visant le débat, nous livrons deux groupes d'éléments.

Premièrement, considérer le « public » (selon Dewey) d'un enjeu de société en tant qu'« auditoire » (tel que formulé dans le Design Discursif) mène à travailler avec le public en tant que vrai « utilisateur » de la situation de débat. Par conséquent, l'acte de design peut être prolongé au delà du seul artefact pour également façonner, dans sa complexité, la **situation de communication** où le public rencontre le projet et s'engage dans un débat – plutôt que d'attendre que les conditions se réunissent pour qu'un public se construise. Pour cela, nous proposons :

- **Un modèle descriptif** du *Système de communication* propre au Design Discursif – CH1 | Section 41 | p.444 ;
- **1 Fiche de repères méthodologiques** pour mettre en œuvre la tactique du miroir (*mirroring*) – c'est une forme de *dissonance in situ* – CH10 | Section 45.C | p.475.

Deuxièmement, pour engager une réflexion critique et faire débattre sur un sujet spécifique, les normes et valeurs sociales d'un public peuvent être mises en « **dissonance** », et ce, via une posture inclusive et participative de conception – plutôt que de créer, dans une posture d'auteur, un artefact ouvertement provocant pour interpeller le public. La *dissonance* met en jeu la définition collective du préférable et amorce donc un débat profond sur les valeurs qui sous-tendent un groupe ou une société – communément sujettes à un consensus implicite. À cet égard, nous proposons :

- **2 Définitions** et leurs **Fiches de repères méthodologiques**, soit pour pratiquer la tactique de la dissonance – CH7 | Section 31.C.1 | p.297 – soit, pour s'en servir comme outils de recherche en ethnométhodologie appelé « expérimentation de reliure » (*bridging experiment*) – CH7 | Section 31.C.2 | p.298.

Contributions à la méthodologie de recherche par le design :

- Une **approche méthodologique** de la recherche par projet, la « résidence de design » – CH4 | Section 14.A | p.146 ;
- Tentative de **format de mise en page** optimisant la lisibilité des textes et images – *Annexe en ligne* : cédée en licence libre sur demande via maxmollon.com/ ;
- Tentative de **format de soutenance** de thèse conduite par le design, permettant de faire l'expérience du design pour débattre avec le jury et le public – photo sur maxmollon.com/.

Contributions aux théories de l'agonisme :

- Une **remise en question du concept de frontière politique** et de l'opposition *Nous/Eux* de Chantal Mouffe, le rendant moins binaire, afin de contribuer à l'état de confrontation renouvelé qu'est l'agonisme – CH7 | Section 30.D | p.290 ;
- La **distinction de deux types de relations agonistes**, entre la *contestation mutuelle* (interpersonnelle) et la *contestation collective* (en groupe et en masse) – CH1 | Section 1.D | p.32 ;
- **Un complément au concept** de Mouffe en considérant les normes et les valeurs partagées comme un matériau important *du politique* – CH7 | Section 31 | p.295 ;
- **5 Cas d'études pratiques** passant d'une théorie parfois abstraite à la réalité complexe du travail de terrain – CH3 | Section 9 | p.84 ; CH6 | Section 23 p.206 ; CH7 | Section 28 | p.235 ; INTRO CH9–10 | Section 38 | p.352-427.

Contributions pluridisciplinaires :

- La thèse est un **exemple de dialogue interdisciplinaire** entre les sciences de l'information et de la communication, les STS et l'ethnométhodologie – en utilisant la pratique du design comme passerelle ;
- **Différents concepts** du Glossaire contribuent aux différentes disciplines précédentes (y compris l'artefact médiateur agonistique, la problématisation incarnée, le diplomate non humain) ;
- Une méthode de design appliquée à l'étude des normes sociales (ethnométhodologie) : l'expérimentation de reliure.

Limitations et pistes de recherche

Dans la recherche projet, la qualité du travail de conception est d'une importance capitale. Toutefois, son évaluation implique un degré élevé de subjectivité – et soulève des questions d'objectivité scientifique. De plus, la généralisation et la validité de nos résultats sont limitées. En particulier, nos conclusions sur la dissonance ne sont tirées que d'une seule situation expérimentale et la reproduction exacte de cette situation expérimentale est impossible. Ainsi, cette thèse, en raison de son positionnement épistémologique (recherche par le projet, recherche-action), ne prétend pas livrer des résultats strictement vérifiables. Son but est plutôt d'étendre l'horizon des vérités possibles.

De nombreuses autres limites appellent à de nouvelles recherches dont la perspective est fort stimulante.

Premièrement, il conviendrait d'évaluer dans quelle mesure nos résultats peuvent alimenter un design pour débattre qui ne soit pas discursif et/ou qui vise la contestation collective (plutôt que la contestation mutuelle). Avoir identifié plus clairement un domaine de recherche spécifique permettra sans doute ce type d'explorations.

En outre, il serait fascinant de voir comment le design en général, ou l'artificiel⁷⁵, peuvent devenir des agents du politique. Les questions que nous avons soulevées dans le Chapitre 7 à propos d'une pratique du design pour débattre *sans produits, sans design* ou *sans designers* et les travaux des STS sur la participation des objets à la vie démocratique, peuvent ouvrir la voie à une réponse à cette question.

Deuxièmement, dans le domaine des pratiques discursives et réflexives, notre travail sur la dissonance se concentre sur les normes sociales. Mais les mécanismes d'ambivalence qui sous-tendent la dissonance doivent être explorés plus avant. À cet égard, nous espérons que cette recherche soit perçue comme complémentaire des travaux en cours, tels que les stratégies de résistance du design de James Pierce et le récent livre de Bruce et Stéphanie Tharp⁷⁶.

Aussi, si cette thèse enrichit la définition des nouvelles pratiques de design social décrites par Ilpo Koskinen, il laisse en partie de côté l'expérience esthétique traitée par Koskinen, qui est pourtant centrale dans la pensée de Anthony Dunne⁷⁷. De plus, la présente recherche gagnerait fortement à ancrer ses futurs développements dans l'étude de la sémiotique contextualisée, de l'ethnométhodologie, et des sciences de l'information et de la communication⁷⁸.

75 **Clive Dilnot**, « Book 2, Ch2. The Artificial and What It Opens Towards », in *Design and the Question of History*, éd. par Tony Fry, Dilnot Clive, et Susan Stewart (New York, NY: Bloomsbury Publishing, 2015).

76 **James Pierce**, « Working by Not Quite Working: Designing Resistant Interactive Proposals, Prototypes, and Products » (Ph.D. Dissertation, Pittsburgh, Carnegie Mellon University, 2015), www/

77 **Ilpo Koskinen**, « Agonistic, Convivial, and Conceptual Aesthetics in New Social Design ». | Anthony Dunne, *Hertzian Tales: Electronic Products, Aesthetic Experience and Critical Design* (Cambridge, MA: The MIT Press, 2005).

78 **Julien Brunel, Catherine De Lavergne, et Valérie Méliani**, « Ethnométhodologie et sémiotique situationnelle : parentés et différences », *Cahiers de l'ethnométhodologie*, Colloque Contributions ethnométhodologiques à la science de l'information-communication, 20–21 novembre 2008, Laboratoire Paragraphe, 4 (décembre 2010): 177–188. | **Alex Mucchielli**, *Manuel de sémiotique situationnelle pour l'interprétation des conduites et des communications* (Montpellier: Le Moine Copiste, 2008).

Troisièmement, sur le plan des pratiques adversariales et du débat, cette recherche donne une dimension empirique au concept de chose de design – « *design thing* »⁷⁹. Cependant, elle gagnerait à être plus fortement articulée avec les nombreuses études qui existent déjà sur le sujet.

En particulier, notre travail semble compatible avec ceux qui visent – dans la continuité de John Dewey – à donner au public les moyens de démêler un enjeu de débat quant à ses causes et conséquences⁸⁰. Autre point, notre étude n’a pas démontré comment concevoir une situation de communication qui permettrait aux personnes de s’exprimer franchement ou sans crainte devant un représentant du pouvoir en place.

L’extension de la recherche sur la *parrhèsia* (discours sans peur), explorée par Foucault, mais aussi par Wodiczko, est une voie à suivre⁸¹. Penser l’après-débat et utiliser les résultats du débat pour la décision et l’action est également une voie importante et jusqu’ici peu développée. Les recherches de Christian Kock citées au Chapitre 3 et les travaux du laboratoire des politiques publiques britannique et de l’agence Nesta sur la SimPolitics pourraient être utiles à cet égard⁸².

Enfin, dans le champ de la pratique professionnelle du design, l’un des principaux domaines d’amélioration de notre travail consisterait à *résoudre* les limites que nous avons identifiées dans le Chapitre 3 plutôt que de les *éviter* (par exemple, nous avons évité de traiter du débat *public* pour nous concentrer sur le débat *interpersonnel*). Nous recommandons d’examiner les questions suivantes.

Comment les médias peuvent-ils être utilisés spécifiquement pour favoriser la contestation mutuelle (bienveillante) à grande échelle afin d’enrichir des débats souvent stériles ou difficiles à approfondir ? Nous pourrions le faire de la même manière que la créatrice Sputniko qui s’est appuyée sur MTV et Twitter pour alimenter un débat féministe au Japon⁸³. Une autre question connexe se pose : comment traiter au niveau local un sujet qui concerne un large public ? Une suggestion serait d’utiliser une plateforme en ligne nationale complétée par des rencontres physiques locales où les décideurs et les acteurs locaux pourraient débattre, par exemple, d’une future loi européenne, en prise avec leurs dépendances à leur propre situation.

Si les questions précédentes concernent l’aval du projet de design, qu’en est-il de l’amont : Comment structurer la recherche de sujets sous-discutés avec une méthodologie pratique et une base théorique ?

79 Thomas Binder et al., *Design Things* (Cambridge, MA: The MIT Press, 2011).

80 Carl DiSalvo, « Design and the Construction of Publics ». | Donato Ricci, « Tensing the Present: An Annotated Anthology of Design Techniques to Inquire into Public Issues », *Diseña*, n° 14 (31 janvier 2019): 68.

81 Michel Foucault, *Discours et vérité ; Précédé de La parrhèsia*, éd. par Henri-Paul Fruchaud, Daniele Lorenzini, et Frédéric Gros (Paris: J. Vrin, 2016). | À propos de Wodiczko et du travail de l’Interrogative Design Group sur la *parrhèsia*, voir cette annexe en ligne : maxmollon.com/permalink/PHD_Appendix-CH1-Interrogative_Reflective.pdf (consulté en septembre 2019).

82 Christian Kock, « Norms of Legitimate Dissensus », *Informal Logic* 27, n° 2 (2007): 179–196, doi.org/. | Nesta, ‘SimPolicy: Smarter Policy through Simulation,’ Company Website, Nesta, 2018, www/

83 Sputniko!, Menstruation Machine, 2010, sputniko.com/Menstruation-Machine/ (consulté en septembre 2019).

À cet égard, il serait utile de travailler sur les controverses existantes via les méthodes d'investigation anthropologique et de cartographie des controverses du Medialab Sciences Po à Paris, ou celles de la balistique des controverses, développées à l'EHESS par Francis Chateauraynaud⁸⁴.

Dans nos futurs travaux, nous aimerions concentrer nos efforts sur les éléments clés qui ont transformé notre pratique et qui pourraient transformer davantage la pratique canonique du design pour débattre. Cela comprend : le choix participatif et inclusif des sujets de débat ; la *diversion de l'attention* des médias des publics déjà occupés par une question ; et la conception de situations de communication.

Dans nos travaux les plus récents, nous avons tenté de remédier aux limites précédentes à travers trois initiatives. La première est [un cours de design pour débattre](#) donné en classe de 6^e, à des élèves de 12 ans pour les inviter à s'interroger sur leur propre avenir dans un monde inter-espèces. La deuxième est une triangulation disciplinaire entre la sociologie des imaginaires, les STS et le design pour débattre, utilisée pour explorer le passé, le présent et l'avenir d'une controverse⁸⁵. La troisième initiative s'appelle [CrispRfood](#) et est présentée dans une annexe en ligne en tant que conclusion à cette thèse, *par* le projet de design.

Fiction conclusive

Enfin, nous voudrions ici employer une de nos méthodes de travail, à savoir la fiction spéculative. La fiction présentée en page suivante énumère les implications du présent travail pour la recherche, la pratique et l'enseignement du design. Elle pose la question : Et si dans 10 ans, le premier groupe d'intérêt scientifique, sur le design pour débattre, se réunissait ?

84 Tommaso Venturini et al., « Designing Controversies and Their Publics », *Design Issues* 31, n° 3 (1 juillet 2015): 74–87, [doi.org/](#) | Francis Chateauraynaud et Josquin Debaz, « Scénariser les possibles énergétiques. Les gaz de schiste dans la matrice des futurs », *Mouvements* 3, n° 75 (16 septembre 2013): 54–69, [www/](#).

85 Nous développons ce cours, intitulé Controverses contemporaines, au sein du master Innovation et transformation numérique de Sciences Po (Paris) depuis septembre 2018 avec Stéphanie Desfriches-Doria et Stéphanie Coiffier. | [master-itn.com/](#) (consulté en septembre 2019).

[FICTION]

Tout a commencé avec un collectif de jeunes chercheuses qui ont déployé la tactique de la dissonance à la manière d'un *cheval de Troie*. Elles ont fait cela à chacune des conférences de la *Design Research Society* et de la *CHI* depuis 2025. Pour cela, elles ont systématiquement permis une contestation mutuelle des normes sociales relatives aux privilèges des personnes travaillant dans la recherche et l'enseignement du design. En suscitant le débat et la confrontation au sein de ces communautés, ces *Yes Men* universitaires ont involontairement déclenché la professionnalisation du design pour débattre. Un exemple contemporain de l'essor de ces nouvelles professions est la cérémonie annuelle de remise des prix de l'Association des praticiens qui aura lieu le mois prochain. Cette fois, elle est organisée par le *UK Policy Lab* afin de promouvoir leur livre, *After Design for Policy Making, Design for Public Debate*¹. Le *UK Policy Lab* n'est pas le seul dans ce domaine, de nombreuses ONG et des départements d'innovation du gouvernement ont engagé un agent (ou une équipe) pour le débat interne et le débat public. Ces nouvelles compétences sont souvent mises en avant dans les CV. À cet égard, notre agence est actuellement à la recherche d'un *prototypiste de dissonance* et d'un *metteur en scène de débat*².

Au-delà du design pour débattre, deux communautés du design sont désormais consacrées à une guerre intellectuelle. D'une part, le changement de comportement via la psychologie cognitive et le design thinking³ et, d'autre part, les débats agonistes du design participatif⁴. Ces deux domaines ont été considérés à un moment donné comme la meilleure option pour répondre à l'incapacité des citoyens (et des gouvernements) à surmonter leur zone de confort et à prendre au sérieux les questions climatiques et environnementales. Les praticiennes de la conception participative défendent avec audace le fait que l'agonisme nous permet d'aller au-delà de l'illusion du consensus, et de nous diriger vers des pratiques contradictoires et politiquement encapacitantes.

Dans la société civile, en dehors du design, de nouveaux espaces de confrontation apparaissent. De manière croissante, c'est en 6e que nous apprenons à nous projeter dans d'autres futurs et à en débattre⁵. Le *Speaker's Corner* des anglophones est revenu à la mode.

Les associations militantes – dont *Extinction Rebellion* a été le chef de file – utilisent des modes d'action similaires au Cheval de Troie pour faire entendre leurs revendications dans les lieux de pouvoir et de décision politique. Dans les médias, le dernier épisode de la série *Black Mirror* a une fois de plus suscité un débat au sein du gouvernement anglais sur la loi écologique de la décroissance post-Brexit. L'épisode censuré est accusé d'être à l'origine d'une violente manifestation organisée par une minorité jusque-là silencieuse. À savoir, les travailleuses et travailleurs étrangers, les immigrantes et immigrants climatiques et les familles nombreuses. On pouvait lire sur leurs banderoles : « Vous avez défoncé la planète, votre problème! » ou « Décroître? Après vous. À notre tour de profiter! »

Enfin et surtout, l'enseignement du design fut le point de départ de tout cela. Nous nous souvenons, en 2014, être intervenus dans une école de design privée à Paris pour présenter nos recherches. Nous avons été surpris d'avoir été annoncés comme enseignant de philosophie auprès des étudiants⁶. Ces dernières années, ces cours ont changé et ont été inclus dans le programme de *New Social Design*⁷. Toute une série de méthodes a été développée. Elles ont permis aux éducatrices et éducateurs de design (dont nous-même) d'éviter de laisser les étudiants face à un dilemme. Ce dernier était trop souvent présenté comme le *statu quo* et la seule option viable pour les jeunes professionnels : soit gagner sa vie dans l'industrie (grâce à un design *affirmatif*), soit être critique, mais en quelque sorte en dehors du marché (en tant qu'artiste, universitaire, superstar-designer, ou en travaillant sur des projets *pro bono*)⁸. En d'autres termes, la mise en place des méthodes du design pour débattre a permis à la critique du design de quitter l'espace neutralisant des galeries d'art où elle était jusqu'à présent cantonnée. Cela dit, le développement de ces méthodes et programmes éducatifs a nécessité un certain nombre de changements dans les pratiques de design pour débattre : prendre en compte le contexte qui préexiste à un projet de débat ; se laisser instruire par ce contexte et les personnes l'occupant quant aux questions à aborder ; mais surtout, éviter une posture exclusive de *designer en tant qu'auteur* au profit du *designer en tant que diplomate* (c'est-à-dire faire preuve d'un pragmatisme inclusif en s'ancrant dans des situations existantes, afin de les politiser).



Figure 89 (de la thèse, 499) | Le jour de l'inauguration de la présidence Trump. 22 janvier 2017. Ville inconnue, USA. Crédit : @AlbertLloreta #inaugurationday sur twitter.com (consulté Sept. 2019).

- 1 **Spéculations inspirées de** : [pro-topublics.org/](https://topublics.org/) | openpolicy.blog.gov.uk/2015/02/26/policy-making-through-possible-futures/ | imagination.lancs.ac.uk/sites/default/files/outcome_downloads/protopolity_design_report_print.pdf | core77.com/posts/45693/Governments-Warming-up-to-Discursive-Design/ | Consultés en septembre 2019.
- 2 **Exemples de compétences** (fictionnelles) à trouver sur [LinkedIn.com](https://www.linkedin.com) : *Exploratrice de sujets sous-discutés*, *Passeuse* (également connu sous le nom de *Bridger*, ou *Porte-voix*), *Discordeuse*, (celle qui affine les points de tension des normes sociales), *Chercheuse de poux*, *Testeuse de dissonance*, *Recruteuse de publics hétérogènes*, *Débusceuse d'argumentation biaisée*, *Facilitatrice de discours vulnérables*, *Curatrice d'arguments*, *Consultante en décisions spéculatives*, *Analyste de l'impact des débats publics*.
- 3 **Leonard**, « Richard H. Thaler, Cass R. Sunstein, Nudge: Improving Decisions about Health, Wealth, and Happiness ».
- 4 **Erling Björgvinsson, Pelle Ehn, et Per-Anders Hillgren**, « Agonistic participatory design: working with marginalised social movements », *CoDesign* 8, n° 23 (1 juin 2012): 12744, doi.org/.
- 5 **Superflux**, *Cartographies of Imagination*, 2018, <http://superflux.in/index.php/cartographies-of-imagination> | **What if?** (Mollon, Labidi), *Et si nous vivions en alliance avec d'autres espèces ?*, 2019, https://www.ac-paris.fr/portail/jcms/p2_1897676/festival-ateliers-partages-gaite-lyrique-et-le-college-paul-verlaine | Consultés septembre 2019.
- 6 **Communication personnelle** avec un étudiant à la fin du cours, École de design privée (anonymisée), Paris, 20 novembre 2014.
- 7 **Ippo Koskinen**, « Agonistic, Convivial, and Conceptual Aesthetics in New Social Design ».
- 8 **La plupart des praticiennes** référencées dans le cadre de cette thèse, vivent de leurs positions académiques ou du mécénat dans le domaine de l'art et de la culture, et non de leur pratique – selon un rapide examen de leurs positions professionnelles et du financement de leurs projets, mais aussi, selon les entretiens que nous avons menés, par exemple **Elliott P. Montgomery (Extrapolation Factory)**, Communication personnelle, Entretien par vidéoconférence, New York City – Paris, 15 août 2018.

Annexes du résumé de thèse

Annexes : Conclusion par la pratique du design



Après la conclusion conventionnelle, nous proposons une conclusion à cette recherche, conduite par le projet. Cette annexe en ligne présente un aperçu de certaines des contributions de la présente étude à l'évolution de notre propre pratique.

Conclure cet ouvrage de manière conceptive (*designerly*) – par la présentation de ce projet – nous semble important pour deux raisons. Afin de rendre à la pratique du design des réponses à des questionnements venus de la pratique du design. Et, comme manière de transmettre ces connaissances au-delà des communautés de recherche, aux communautés de pratique du design.

Donc, dans le cadre de ce projet appelé *CrispRfood.eu* (2018), nous tentons de dépasser les limites de notre recherche (énumérées dans la conclusion précédente).

En a émergé une toute nouvelle série de questions de recherche liées :

- aux enjeux de débats a priori stériles ;
- à la construction active d'un public par le biais d'une stratégie de communication ;
- à la cartographie des controverses.

CrispRfood.eu présente un projet d'assemblée citoyenne sur l'acceptabilité sociale de l'optimisation génétique, appliquée à l'agriculture à l'horizon 2050, via la technologie CrispR/Cas9. Le projet a été développé dans un contexte d'élaboration juridique en cours en Europe et aux États-Unis. Lors de ce débat fiction de 2 h, nous avons regroupé des membres de la Commission européenne, des scientifiques, des professionnels de l'agriculture, de la cuisine, etc. pour débattre des résultats d'une loi européenne en *cours* de législation sur les aliments génétiquement modifiés.

Voir : maxmollon.com/permalink/PHD_Appendix-crisprfood.pdf

SYNTHÈSE DES
CONTRIBUTIONS
(UTILISABLE COMME
PAGES AUTONOMES)

→ Contributions de la thèse : Définition du design pour débattre

Définition de la *posture* adoptée en designant pour débattre :

- **Designer pour débattre** est une posture, une intention d'engager des personnes dans une contestation mutuelle ou collective. Elle peut être mise en œuvre par le biais d'*artefacts* qui incarnent et véhiculent des questions, qui initient ou approfondissent la *réflexion (critique)* individuelle en favorisant l'expression du *désaccord* dans un cadre de débat *participatif* et inclusif. (En italique sont indiquées les six propriétés principales du design discursif pour débattre, tirées du Chapitre 1 et évoquées ci-dessous.)

Définition du *corpus de pratiques*

du design pour débattre – CH1 | Section 4 | p.64 :

- Le **design pour débattre** est un ensemble de pratiques de design qui visent à susciter la contestation et le débat. Cette branche du design sociale comprend des pratiques de facilitation du débat, d'intelligence collective, d'organisation d'assemblées citoyennes, etc. Au sein de cet ensemble, les pratiques employant des artefacts discursifs peuvent être comprises comme un sous-ensemble – c'est-à-dire **le design discursif pour débattre**. Les pratiques qui composent ce sous-ensemble partagent **six propriétés principales**, elles sont *conceptives, discursives, réflexives, critiques, adversariales et participatives*.

En détaillant ces propriétés, voici la **liste de 22 qualités** attribuées à une pratique professionnelle du design pour débattre par une partie prenante – CH8 | Section 37 | p.345 :

- **Ces pratiques utilisent des artefacts conceptifs et discursifs.** Cela signifie qu'ils véhiculent des discours et des *questions* à travers des *supports* physiques d'*enquête* et de *conversation* qui projettent *instantanément* le public dans des *situations d'utilisation concrètes*.
- **Grâce à leur caractère réflexif et agonistique**, ces artefacts peuvent être utilisés soit pour *initier* et *approfondir* la réflexion, soit pour fouiller des enjeux *impensés*. Ils permettent l'émergence de *controverses productives* au-delà des *certitudes* et de rendre visible des problèmes *sous-discutées*
- **Étant participative et inclusive**, cette activité d'*expression de soi* conduit à *rendre explicites* les représentations subjectives dans des débats *participatifs* et *conflictuels* de manière inclusive car elle rend la complexité *accessible* aux experts et aux *non-experts* à travers différentes *échelles d'abstraction* (des artefacts aux concepts).
- **Ses applications peuvent comprendre** la *communication* ou l'identification et la *collecte d'enjeux de société*. Ces pratiques peuvent également être utilisées comme un outil d'auto-réflexion pour une organisation, servant de base *pour l'action* ou pour effectuer un travail de *réflexion éthique*.

La littérature attribuée à ces pratiques **une série de fonctions** qu'elles peuvent accomplir – CH3 | Section 12 | p.134. Le design discursif pour débattre peut donc être utilisé de manière à :

- Alimenter la *réflexion critique* ;
- *Impliquer* le public sur une question choisie, *Transmettre* les questions à débattre choisies, Puis *inciter à une prise en considération* d'une question peu discutée) ;
- *Permettre la contestation* mutuelle, Soit, comme forme de *pratique professionnelle* du design, Soit comme forme de *recherche sociale* ;
- *Atteindre* le public (mettre en place une situation favorable au débat, envers les publics) ;
- Impliquer *un public choisi* sur une question.

Pour travailler davantage la définition des pratiques du design pour débattre, nous avons identifié des pistes de recherche à poursuivre dans de futurs travaux – CH7 | Section 32 | p.302.

- Ce type spécifique de design pourrait-il inciter les personnes, non seulement à reconnaître des problèmes spécifiques, mais aussi à respecter la différence d'autrui ?
Comment permettre de s'entendre sur les éléments du désaccord, transformant ainsi une discorde stérile en débats productifs ?
- Comment concevoir un artefact à débattre et/ou les conditions d'un débat de manière à ce que les personnes appartenant à la norme sociale dominante puissent également ressentir l'effet de la marginalisation ?
- Quelles autres pratiques peuvent offrir une expérience de débat agonistique qui ne démarre pas d'un "produit" (discursif, fictionnel ou diégétique), voire même, sans employer le design ?
Ainsi, comment remettre en question et redéfinir la position du designer dans les pratiques de conception participative (et de débat) ?

Définition du champ de recherche du design pour débattre

Définition – CH1 | Section 3 | p.44 :

Le **design pour débattre** est également le nom d'un **champ de recherche** qui prend les pratiques du design *du politique* comme objet d'étude. Les objets de recherche abordés dans la littérature de ce champ forment une typologie en quatre catégories (A, B, C, D). Les catégories sont composées de deux volets, en amont et en aval du processus de conception (respectivement positionnés à gauche et à droite du schéma ci-dessous). Ces catégories sont composées de différentes facettes de l'expérience de fabrication et de circulation d'artefats de design qui suscitent le débat (indiqué par les chiffres ci-après) :

- (A) L'artefact [1].
- (B) Le processus de fabrication du projet [2] ; ainsi que ses fonctions et le processus d'utilisation (ex. la diffusion) [3].
- (C) Les questions à débattre [4] ; et l'expérience du public (ex. les discours) [5].
- (D) Le fondations du projet (ex. les parties prenantes) [6] ; et les résultats du projet (ex. l'opinion publique) [7].

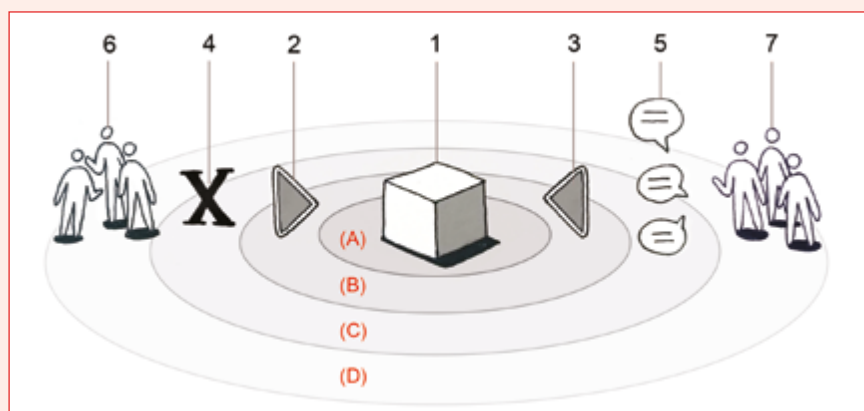


Figure 12 (du manuscrit, p.56) | Schéma représentant la typologie des objets de recherche composant le champ du design pour débattre, d'après la revue de littérature du Chapitre 1.

Contributions méthodologiques : dissonance et expérimentation de reliure

Plutôt que de créer, dans une posture d'auteur, un artefact ouvertement provocant pour interpeller le public. **La tactique de design de la dissonance** met en débat la définition même du préférable et des valeurs qui sous-tendent un groupe ou une société – communément sujettes à un consensus implicite. Définition :

- La **dissonance** est une tactique de design qui stimule la réflexion critique et le débat *politique* en déstabilisant le public sur le plan émotionnel et cognitif. Elle repose sur la mise en place d'une situation collective dans laquelle l'auditoire est confronté à un ensemble ambivalent de valeurs sociales, portées par un artefact de design. Cela pousse l'auditoire à s'exprimer, à prendre part à une discussion sur des questions « politiques », c'est-à-dire sur ce qui définit l'horizon commun qui soude un groupe, d'une manière *politique*, c'est-à-dire qui favorise l'expression du désaccord.

Pour mettre en dissonance des valeurs sociales, les designers peuvent créer un artefact **ambivalent** (qui juxtapose des valeurs discordantes). Si ses propriétés de design incarnent des points de vues discordants sur la situation connue par le public, l'artefact peut en venir à jouer le rôle d'un **diplomate non-humain** (qui porte des voix sous-représentées et intensifie les tensions afin de mettre en deux mondes qui ne s'entendent pas).

- L'**ambivalence**, dans la conception d'un artefact, est obtenue par la juxtaposition d'éléments familiers et non-familiers, à la manière d'un oxymore esthétique. Cela suscite dans le public un dilemme d'interprétation et peut déclencher une impulsion à s'exprimer lorsque l'artefact est porteur d'un discours perçu comme inacceptable par le public. (Cette impulsion est également décrite, dans la littérature, comme une **familière étrangeté** ou une **dissonance cognitive**).

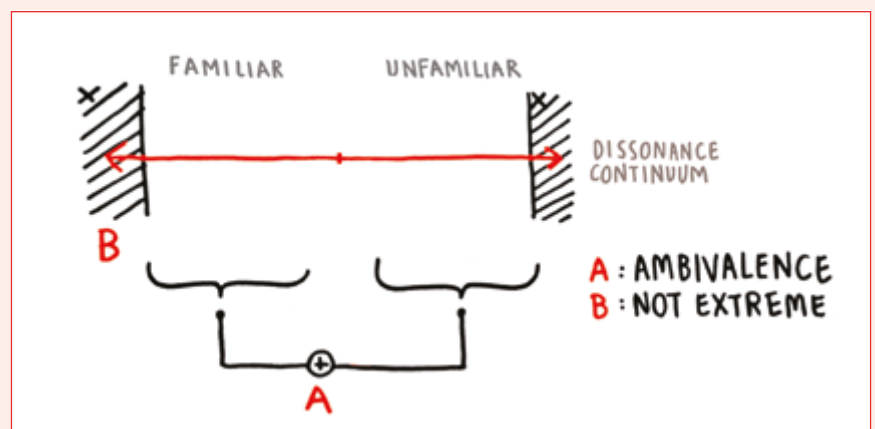


Figure 37 (du manuscrit, p.197) | La littérature décrit les artefacts ambivalents et non-extrêmes comme aptes à susciter une dissonance réussie, tel que résumé par ce schéma.

Fiche de repères méthodologiques pour établir une **dissonance** de design – CH7 | Section 31.C.1 | p.297.

LE PUBLIC ET SA SITUATION :

- Cibler ou s'insérer dans une situation spécifique où **rencontrer un public**. Voire, mettre en place une collaboration avec ce public (qui peut inclure les parties prenantes). Puis, tenter de faire les étapes suivantes de manière participative et inclusive ;

ENJEUX À DÉBATTRE ET VALEURS SOCIALES :

- Identifier un **thème général à débattre** (ou un sujet controversé latent) lié aux préoccupations du public. Ex. via une étude de terrain. Ce thème sera révisé et affiné au fil des étapes ;
 - Formuler l'**hypothèse de l'existence d'une valeur sociale** chère au public ciblé. Pour identifier cette valeur, il est utile d'imaginer quelles situations pourraient soi-disant « dépasser les bornes » du point de vue de ce public, sur le sujet précédent⁸⁶ ;

FICTION ET INFRACTIONS DES VALEURS :

- Imaginer un monde où la **situation inacceptable précédemment identifiée est devenue la nouvelle normalité**. Les étapes suivante veilleront à éviter de tomber dans la provocation ;

ARTEFACT

- **Concept de l'artefact** : Concevoir un artefact et son scénario d'usage, construits sur cet ensemble de valeurs – et donc, en conflit avec celles du public. Il s'agira donc de designer normalement dans un monde anormal, comme dans l'approche de la « value fiction »⁸⁷ ;
- **Matériel de communication** : Communiquer l'artefact au travers de prototypes, vidéos d'usages, fausses publicités, site web et autres productions visant à crédibiliser l'existence de l'artefact.

AJUSTEMENT DE LA DISSONANCE

- L'artefact peut incarner une dissonance soigneuse vis à vis du public :
 - En **valorisant une situation/valeur non-familière** qui est en infraction avec celles du public ;
 - Ou, en **juxtaposant**, dans l'artefact, deux valeurs discordantes.
- Selon l'approche employée, l'ajustement minutieux de l'infraction de la valeur sociale peut se faire :
 - En **réduisant l'intensité** d'une non-familiarité trop extrême ;
 - Ou, en renforçant la présence d'une autre valeur discordante, **augmentant ainsi l'ambivalence** de la proposition (la pratique régulière de tests-utilisateurs aide à ajuster ces choix) ;
- Dans les deux approches d'ajustement, le travail de design peut :
 - Incarner la (non)familiarité en jouant avec les différentes **dimensions de la dissonance** (les « passerelles sémantiques » que sont la connaissance, la culture, la psychologie, l'esthétique et surtout les valeurs sociétales partagées) ;
 - Ou, déployer le travail de « **problématisation** » aux **différents niveaux de l'échelle** du Diagramme du système de communication.

SITUATION DE DÉBAT

- Créer une situation de débat dans laquelle placer l'artefact ;
- Documenter le processus et le débat (photo, vidéo, enregistrement audio, questionnaires, interviews, etc.).

Définition d'un outils de recherche en ethnométhodologie appelé « **expérimentation de reliure** » (*bridging experiment*, cousine de la *breaching experiment*, l'« expérimentation de brèche »), qui emploie la dissonance pour étudier les normes et valeurs sociales en place au sein d'un public – CH7 | Section 31.C.2 | p.298.

- L'**expérimentation de reliure** (*bridging experiment*), est une approche de l'ethnométhodologie par le design. Elle utilise un artefact discursif qui n'enfreint pas violemment les normes, mais les place soigneusement dans un état de dissonance, dans un contexte donné (vers un public donné).

86 Méthode initiale de l'Expérimentation de brèche de Garfinkel : 1. faire l'hypothèse de l'existence d'une norme ; 2. adopter un comportement qui n'est pas conforme à cette norme (par exemple, dans un espace public) ; 3. recueillir des réactions pour évaluer et qualifier l'hypothèse.

87 **Anthony Dunne et Fiona Raby**, *Design Noir* (Basel, London: Springer, Birkhäuser, 2001).

Fiche de repères méthodologiques pour employer la dissonance comme outils de recherche en ethnométhodologie appelé « **expérimentation de reliure** » (*bridging experiment*) – CH7 | Section 31.C.2 | p.298.

Afin de mettre en place l'expérimentation de reliure, commencer par créer un artefact dissonant en suivant les étapes décrite dans la fiche de repères méthodologiques de la tactique de la dissonance. La seule différence est que chaque étape est documentée avec une rigueur académique.

Une fois cela effectué, analyser le matériel documenté comme indiqué ci-après :

Codage de l'artefact et des verbatim d'entretiens (basé sur la théorie ancrée (grounded theory) et le codage ouvert (open coding) – c'est à dire, attribuer des mots clés aux éléments de notre corpus puis les regrouper en catégories pour en faire émerger du sens) :

- Avant la séance de débat :
 - Analyse sémio-pragmatique de l'artefact afin de lister ses caractéristiques et émettre des hypothèses sur les interprétations qui en seront faites par les personnes participant au débat.
- Après la session de débat :
 - Utilisation du codage ouvert pour trier les commentaires des participants :
 - Quelle est la nature du commentaire :
 - Une question de clarification ?
 - Une critique (une opposition) ?
 - Une suggestion d'amélioration ?
 - Quelles sont les caractéristiques de design ou les utilisations de l'objet visées par le commentaire ?
 - Le commentaire vise-t-il :
 - Une caractéristique attendue (déjà listée) ?
 - Un élément non-anticipé ?
 - L'interprétation de la caractéristique ou de l'usage de l'artefact, faite par la personne, est-elle :
 - Négative ?
 - Positive ?
 - Selon les commentaires des autres participants sur la même caractéristique ou le même usage, l'interprétation formulée fait :
 - Un consensus ?
 - Un désaccord ?

Interprétation de l'expérience :

- **Décrire l'hypothèse initialement formulée concernant les valeurs sociales** qui existent probablement parmi les personnes du public – et qui a été mise en dissonance par l'intermédiaire de l'artefact.
- Identifier ce que le public a rejeté/soutenu :
 - **Comparer la liste des caractéristiques de l'artefact** auxquelles vous attendiez une réaction, à la liste de celles effectivement commentée par les participants (et les classer par fréquence des commentaires).
 - Trier ces **interprétations** : séparer les positives et négatives ; puis les classer en deux catégories : l'interprétation fait consensus ou provoque un désaccord.
 - Sur cette base, identifier les angles morts et les opinions marginal(isées).
- Rechercher des raisons pour lesquelles ces éléments ont été rejetés/approuvés :
 - Rechercher pourquoi et comment les participants ont **rétabli la normalité** en observant les **justifications** de leurs interprétations (ex. Chercher les réponses à des questions telles que « pourquoi pensez-vous cela »).
 - Sur cette base, démêler les tensions et les croyances qui sous-tendent l'ensemble des valeurs étudiées.
 - Possibilité de démêler les tensions et les croyances qui sous-tendent les valeurs sociales étudiées en comparant les résultats de l'analyse avec des documents supplémentaires (par exemple, des extraits de citations, des questionnaires, des entretiens et focus-groupes). **Rechercher les récurrences ou paradoxes** concernant les résultats de l'analyse dans d'autres contextes.
 - Dans une section dédiée, regrouper : les caractéristiques de l'artefact qui ont été commentées de manière **non-anticipée**, les interprétations inattendues qui en ont été faites, et les sujets et valeurs inattendues abordés.

Contributions méthodologiques : Situation de communication

L'un des défis majeurs à relever pour permettre le développement des pratiques de design discursif pour débattre est de poursuivre le geste de design au delà de la création des seuls artefacts.

Considérer le « public » (selon Dewey) d'un enjeu de société en tant qu'« auditoire » (tel que formulé dans le Design Discursif) mène à travailler avec le public en tant que vrai « utilisateur » de la situation de débat. Par conséquent, l'acte de design peut être prolongé au delà du seul artefact discursif employé souvent comme déclencheur de débat, pour également façonner – dans sa complexité – la situation de communication où le public rencontre le projet et s'engage dans un débat. Cela permet d'éviter d'attendre que les conditions se réunissent pour qu'un public se construise, au risque que le projet ne touche aucun public.

Pour cela, ci-après, nous proposons :

Une fiche décrivant le modèle descriptif du *système de communication* propre au Design Discursif,

Une fiche d'aide à l'analyse basée sur ce modèle – *toutes deux tirées du CH1 | Section 41 | p.444 ;*

Une fiche de repères méthodologiques pour mettre en œuvre la tactique du miroir (*mirroring*) – c'est une forme de *dissonance in situ* – *CH10 | Section 45.C | p.475.*

Modèle du Système de communication du Design Discursif :

Pour considérer le travail de design au delà de celui qui permet de créer de simples artefacts, on peut comprendre l'artefact comme faisant partie d'un plus grand système de communication qui met en relation des **problèmes à débattre, des artefacts, et des publics** (ainsi que leurs contextes). Une fois représenté sous forme de modèle, ce système est composé de dix niveaux.

Comme ces conclusions semblent s'appliquer au Design Discursif en général (indépendamment d'une visée agonistique), nous avons nommé ce modèle le **Système de communication du Design Discursif**.

Modèle du Système de communication du Design Discursif :

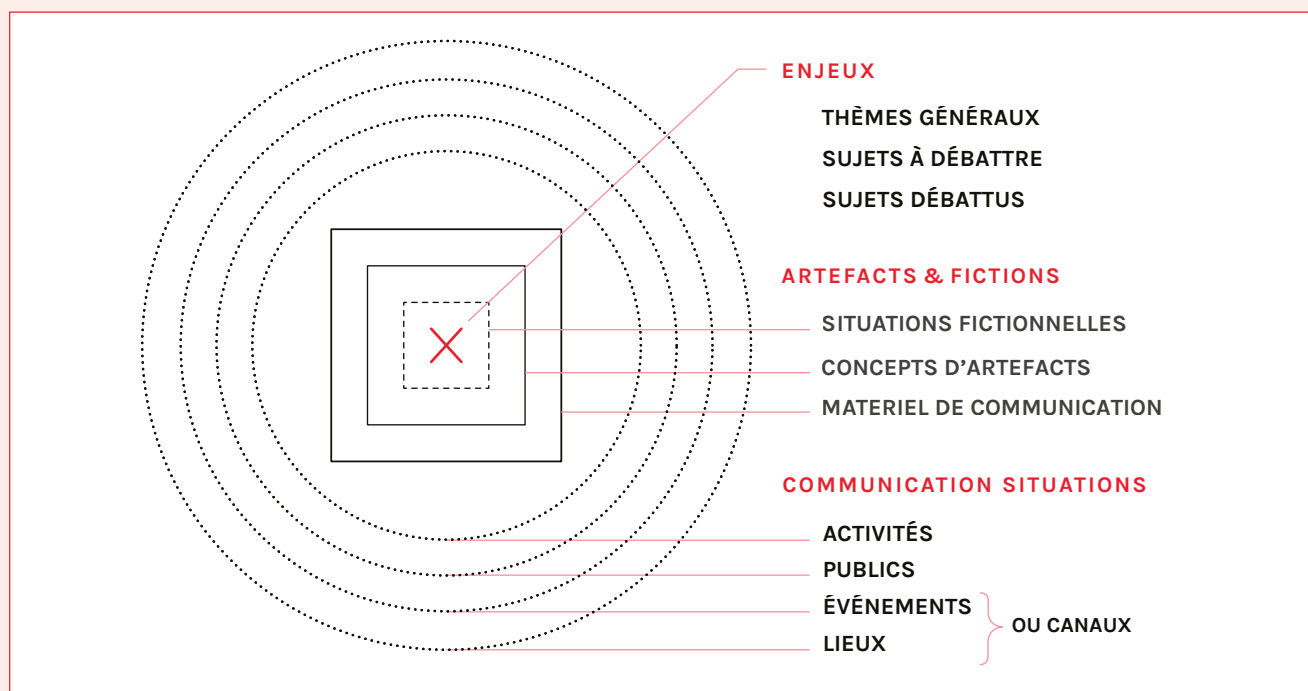


Figure 75 (dans le manuscrit, p.447) | Le modèle du système de communication du design discursif comprend dix niveaux regroupés en trois catégories : l'enjeu à débattre (représenté par un X), La fiction et l'artefact (représenté par des carrés) et la situation de communication (les cercles).

Enjeux

- **Thèmes généraux** : sujets abordés par le projet/débat (choisis avec, ou par, une partie prenante, ou dans une posture d'auteur).
- **Sujets à débattre** : questions controversées visées par le débat (identifiées par l'analyse du discours ou par la co-conception avec les acteurs concernés, par exemple).
- **Sujets débattus** : sujets qui émergent du débat, évoqués par le public (qu'il soit cohérent ou non avec les sujets à débattre choisis).

Fiction et Artefacts

- **Situations fictionnelles** : fiction qui soutient l'existence de l'artefact (ex. c'est un ensemble de valeurs sociales dissonantes, le résultat d'un exercice de construction de monde (*world-building*), tout un monde, une fiction, une diégèse qui réside hors cadre).
- **Concepts d'artefacts** : encore à l'état de concept, ils appartiennent à – ou découlent de – la situation, du monde ou de l'histoire précédente (l'artefact peut être appelé un « prototype diégétique »¹).
- **Matériel de communication** : représentations du concept précédent (par exemple, un accessoire, une publicité fictive, des récits d'utilisation²).

À travers ces trois niveaux, les artefacts incarnent des problèmes. Afin de les transmettre, ils rencontrent des publics dans des situations de communication.

Situations de communication

- **Activités** : expériences à travers lesquelles les publics entrent en contact avec le matériel de communication (par exemple, participation à une exposition, ateliers de débat, jeux de rôle).
- **Publics** : il est composé de personnes *touchées* par le projet. Selon l'événement et le lieu de la rencontre, les publics peuvent être très larges et non identifiés, ou bien restreints et connus. Le public comprend souvent la partie prenante (s'il y en a une).
- **Événements** : l'occasion dans laquelle le projet est rencontré par le public.
- **Lieux** : endroits qui accueillent l'événement. Le type de lieu fixe un cadre à l'expérience de réflexion (par exemple un centre culturel ou un hôpital n'installe pas la même expérience de débat).
 - **Canaux** : lieux et événements peuvent être remplacés par un « canal » lorsque le projet circule dans les médias de masse et/ou en ligne, par exemple.

1 **Bruce Sterling**, « Design Fiction: Diegetic Prototypes », Wired (Blog), 5 février 2011, <https://www.wired.com/2011/02/design-fiction-diegetic-prototypes/> (consulté février 2019).

2 **Matthew Malpass**, *Critical Design in Context: History, Theory, and Practices* (London: Bloomsbury Academic, an imprint of Bloomsbury Publishing, 2017), 47.

Fiche d'analyse des systèmes de communication du Design Discursif:

Le système précédent peut être employé comme modèle descriptif ou comme une grille d'analyse générique, utile à l'étude de diverses situations de design pour débattre (présentée ci-dessous).

À noter, en complément de la représentation géométrique abstraite du modèle, l'analyse peut se faire via des représentations figuratives. Voir dans le manuscrit anglais [Appendix | CH9 | Analytical Tool](#).

Fiche d'analyse du Système de communication du Design Discursif

Titre du projet (année), Auteur·e·s :

.....

ENJEUX/Thèmes généraux :

.....

ENJEUX/Sujets à débattre :

.....

ARTEFACTS/Situations fictionnelles auxquels appartiennent les artefacts:

.....

ARTEFACTS/Concepts d'artefacts :

.....

ARTEFACTS/Matériel de communication :

.....

COM SITU/Activités de rencontre entre le public et le projet :

.....

COM SITU/Public :

.....

COM SITU/Événement :

.....

COM SITU/Lieux (ou canaux) :

.....

ISSUES/Sujets débattus :

.....

.....

.....

.....

Figure 76 (dans le manuscrit, p.448) | Fiche d'analyse du Système de communication du Design Discursif. Le champ Sujets débattus est placé au bas de la fiche dans le cas où des extraits de prise de parole nécessitent davantage de place pour être pris en note.

Fiche de repères méthodologiques pour mettre en place la tactique de design du « **miroir** » (*mirroring*) – CH10 | Section 45.C | p.475.

Afin de provoquer le débat, la tactique de la dissonance (la mise en dissonance des normes sociales d'un public) peut dépasser la simple création d'un artefact et impliquer sa mise en situation.

Notamment, le miroir est une tactique de design qui met le public en débat face à une autre version de lui-même. Pour cela, les designers travaillent *in situ* et prennent le contexte du public comme matériel de création de leur fiction, et comme situation où diffuser le projet, mixant ainsi la fiction et la réalité. Le projet fonctionne alors comme ce que DiSalvo nomme un « **dispositif d'articulation** ».

Mettre en place la tactique de design du miroir :

Comment travailler avec la situation du public comme étant à la fois le matériel de création d'une fiction et le contexte de diffusion du projet, afin de les mêler ?

- Commencer par viser une situation spécifique où rencontrer un public, et vous insérer dans cette situation et/ou mettre en place une collaboration avec les publics qui y figurent. Identifier leurs problèmes (enjeux à débattre). Lister ce qui caractérise le contexte et les activités des publics. Considérer la position des publics dans un réseau plus large d'acteurs humains et non humains, liés à cette question. En ce qui concerne l'insertion. Veuillez noter que « l'infiltration » dans les activités du public ou le « détournement » de l'attention médiatique peuvent être deux façons de mettre en place la posture *in situ* qui est nécessaire pour réaliser le miroir.
- Prenez ces éléments de contexte comme ingrédients pour la création d'une situation fictionnelle agonistique soutenant l'existence des artefacts.
- Déployer la **problématisation** (*issuefication*) dans toute l'échelle des niveaux composant le système de communication – si possible, ou composer avec les contraintes existantes.
- Prendre la situation initiale comme contexte pour diffuser le projet – et orchestrer ainsi une situation de communication dissonante qui mêle fiction et réalité.

Exemple d'application :

installer dans la cafétéria d'un campus scientifique, un artefact qui représente les scientifiques et leur cafétéria, dans le futur (voir le projet #Hackmycafeteria, dans le Chapitre 10).

Glossaire (traduit)

Cette liste de mots-clés utilisés, ou définis, dans la thèse est organisée par thème. Cela vise à faciliter sa lecture en tant que document autonome.

La politique, la contestation et la conception du débat

- **L’adversariel** est la qualité d’un élément qui s’oppose à un autre (souvent en termes d’opinion ou d’affects) et qui suscite une expérience agonistique.
 - Le **Design Adversariel**⁸⁸ est une construction théorique⁸⁹ qui s’inspire de la théorie de l’agonisme de Mouffe. Il englobe des pratiques de design qui favorisent des expériences de confrontation, c’est-à-dire qui incitent à reconnaître l’existence d’enjeux (*issues*) insuffisamment discutés, à exprimer un désaccord et à permettre une forme de contestation.
 - Le **Design Discursif**⁹⁰ est une construction théorique regroupant des pratiques de design qui conçoivent, délibérément et explicitement, des objets dont l’utilité est de transmettre un sens (plus que d’exercer une fonctionnalité), souvent à l’égard de questions sociétales.
 - Le **Design Réflexif**⁹¹ est une construction théorique s’appuyant sur la Théorie critique et qui rassemble un ensemble de pratiques de design qui impliquent le public à acquérir un recul critique sur une situation.
 - Le **Design Participatif**⁹² est historiquement ancré dans les mouvements de défense des droits des travailleurs et travailleuses des années 1960 et fait référence à un ensemble de pratiques qui donnent un rôle de conception aux personnes qui bénéficient des résultats d’un processus de design.
- **L’agonisme**⁹³ est un concept (et une situation expérientielle) décrivant un état de contestation sans cesse renouvelé envers autrui, en tant qu’adversaire (*agon* en grec) plutôt qu’ennemi. Il vise à remettre en question les consensus et les hégémonies établis, ceux qui sous-tendent l’état des choses. Il favorise ainsi les conditions et les relations *du politique*.

88 **Carl DiSalvo**, *Adversarial Design* (Cambridge, MA: The MIT Press, 2012). – Ceci est notre traduction en français.

89 Selon DiSalvo, une « construction théorique », telle que le Design Reflexif ou Adversariel, se définit comme « un outil pour penser et faire avec » plutôt que comme un moyen de nommer un mouvement (ceci est notre traduction) | **DiSalvo**, *Adversarial Design*, 17.

90 **Bruce M. Tharp et Stephanie M. Tharp**, *Discursive Design: Critical, Speculative, and Alternative Things*, Design Thinking, Design Theory Series (Cambridge, MA: The MIT Press, 2019), 13, [www/](#).

91 **Phoebe Sengers** et al., « Reflective Design », in *Proceedings of the decennial conference on Critical computing (CC)* (Aarhus, Denmark, 2005), 49–58, [doi.org/](#).

92 **Kristen Nygaard et Olav Terje Bergh**, « The Trade Unions - New Users of Research », *Personnel Review*, 1 février 1975, [doi.org/](#). | **Susanne Bødker**, « Creating Conditions for Participation: Conflicts and Resources in Systems Development », *Hum.-Comput. Interact.* 11, n° 3 (septembre 1996): 215–236, [doi.org/](#).

93 **Chantal Mouffe**, *On the Political* (London; New York: Routledge, 2005).

- Le **pluralisme agonistique**⁹⁴ est une vision de la démocratie fondée sur une contestation permanente (et la défiance envers ceux en position de pouvoir). Elle valorise l'expression du désaccord comme base du pluralisme démocratique.
- Le **consensus** est un état d'accord collectif d'opinions entre les membres d'une majorité de personnes. Il privilégie donc la majorité, installe des hégémonies et implique la marginalisation, le regroupement et la montée des opinions extrêmes.
- **Contestation** :
 - La **contestation collective** est l'action d'exprimer des opinions conflictuelles en tant que groupe ayant atteint un consensus quant à l'objet d'une revendication (collective).
 - La **contestation mutuelle** est l'action d'exprimer des opinions conflictuelles contre autrui ou dans un collectif, alors qu'un n'est pas trouvé.
- Le **débat** fait autant référence au processus qu'au résultat : de la contestation collective (autrement dit, le débat public) ; de la nature conflictuelle de la contestation mutuelle (c'est-à-dire le débat interpersonnel) ; et il peut aussi véhiculer un sens de la lutte contre l'oppression du consensus (se débattre).
- **Designer pour débattre** est une posture, une intention d'engager des personnes dans une contestation mutuelle ou collective. Elle est mise en œuvre par le biais d'*artefacts* qui incarnent et *véhiculent* des questions, qui initient ou approfondissent la *réflexion* individuelle en favorisant l'expression du *désaccord* dans un cadre de débat *participatif* et inclusif. Autrement dit, ces pratiques sont donc *conceptives, discursives, réflexives, adversariales et participatives* (définition donnée au CH8).
 - Le **design pour débattre** est un ensemble de pratiques de design qui visent à susciter la contestation et le débat. Cette branche du design sociale comprend des pratiques de facilitation du débat, d'intelligence collective, d'organisation d'assemblées citoyennes, etc. Au sein de cet ensemble, les pratiques employant des artefacts discursifs peuvent être comprises comme un sous-ensemble – c'est-à-dire le design discursif pour débattre.
 - Le **design pour débattre** fait également référence à un **champ de recherche** qui prend les pratiques précédentes comme objet d'étude. Il peut être structuré selon la typologie suivante. Elle regroupe les travaux de recherche qui traitent de : (A) l'artefact lui-même ; (B) le processus de fabrication, et les fonctions du projet ; (C) les sources, et les conséquences du projet ; (D) les questions de débat, et l'expérience du public.
- Le **désaccord** est l'état atteint lorsqu'un collectif ne parvient pas à un consensus, c'est l'expression discursive du conflit et le contraire du consensus.

- Le **dissensus**⁹⁵ (de Chantal Mouffe) est compris comme un état de conflit atteint lorsque quelque chose ou quelqu'un déjoue un consensus existant. Cela vise à émanciper de l'emprise des relations de pouvoir en place, les personnes et les opinions sous-représentées dans cette situation.
- **Les experts d'un enjeu** (*issues experts*)⁹⁶ sont des termes qui définissent toutes les personnes ayant une expérience pertinente d'une controverse donnée. Ce concept brouille la distinction faite entre les *experts officiels* et les *profanes*.
- **Le politique**⁹⁷ est l'essence de ce que peut être l'expérience de la vie collective, enracinée dans les affects et l'antagonisme.
- **La politique** est l'administration de la vie collective (y compris les personnes, les institutions, les emplois, etc. liés à ces tâches).
- Les **choses de design** (*design things*)⁹⁸ sont des artefacts qui rendent les questions, les sujets de préoccupation et leurs implications manifestes pour le public, permettant ainsi la réflexion et l'action.

Tactique de design de la dissonance

- **L'ambivalence**, dans la conception d'un artefact, est obtenue par la juxtaposition d'éléments familiers et non-familiers, à la manière d'un oxymore esthétique – ce qui suscite un dilemme d'interprétation. L'ambivalence peut déclencher une impulsion à s'exprimer lorsque l'artefact est porteur d'un discours perçu comme inacceptable par le public. (Cette impulsion est également décrite, dans la littérature, comme une **familière étrangeté** ou une **dissonance cognitive**).
- La **dissonance cognitive**⁹⁹ est ressentie lorsque deux pensées ne se succèdent pas. Elle incite le public à considérer et à gérer le malaise de la situation, c'est-à-dire de se sentir concerné.
- La **réflexion critique**¹⁰⁰ est l'activité de réflexion qui permet de prendre conscience des facettes inconscientes d'une expérience. Sans elle, l'on adopterait sans réfléchir des valeurs et des expériences quotidiennes.
 - **Stimuler la réflexion critique**, c'est amener le public à prendre de la distance par rapport à ce qu'il connaît, afin de s'interroger sur les implications d'une situation (causes et conséquences) qui ont été négligées.

95 **Mouffe.**

96 **Tommaso Venturini et al.**, « Designing Controversies and Their Publics », *Design Issues* 31, n° 3 (1 juillet 2015): 74–87, doi.org/.

97 **Chantal Mouffe**, *The Democratic Paradox*, Phronesis (London: Verso, 2000).

98 **Thomas Binder et al.**, *Design Things* (Cambridge, MA: The MIT Press, 2011).

99 **Leon Festinger**, *A Theory of Cognitive Dissonance* (Stanford: University Press, 1957).

100 Nous proposons ces termes en d'appuyant sur le Design Réflexif (de Sengers et al.) qui s'inspire de la Théorie critique et préconise une forme de design qui incite à la réflexion critique. | **Sengers et al.**, « Reflective Design ».

- La **défamiliarisation**¹⁰¹ est la perception d'une situation familière comme si elle était étrangère. La défamiliarisation est déclenchée par la non-familiarité. Elle apporte une distance par rapport au connu, stimulant ainsi la réflexion critique.
- **Dilemme d'interprétation**¹⁰², c'est un état de confusion lors de l'interprétation d'un artefact, ressenti face à quelque chose qui a plusieurs significations ou qui résiste à l'interprétation. Ce dilemme favorise la réflexion critique.
- La **dissonance** est une tactique de design qui stimule la réflexion critique et le débat *politique* en déstabilisant le public sur le plan émotionnel et cognitif. Elle repose sur la mise en place d'une situation collective dans laquelle l'auditoire est confronté à un ensemble ambivalent de valeurs sociales, portées par un artefact de design. Cela pousse l'auditoire à s'exprimer, à prendre part à une discussion sur des questions « politiques », c'est-à-dire sur ce qui définit l'horizon commun qui soude un groupe, d'une manière *politique*, c'est-à-dire qui favorise l'expression du désaccord.
 - Cette tactique est décrite comme une **dissonance soigneuse** lorsqu'elle est pratiquée avec précaution (bienveillance) pour un public spécifique (elle est pragmatique, située).
 - Le concept de **tactique de design**¹⁰³ est emprunté à DiSalvo, qui s'inspire des travaux de De Certeau sur les *stratégies* mises en place par les institutions dans une position de pouvoir afin de contrôler le public. Les *tactiques* sont des contre-stratégies pour éviter ou pour négocier ce contrôle.
- L'**implication émotionnelle et cognitive** du public permet l'auto-identification (envers les situations décrites par le projet de design) et la réflexion critique. Elle suscite l'intérêt du public pour l'artefact et envers la question de débat visée. Elle peut être atteinte en concevant un objet ambivalent, non extrême et soigneusement dissonant.
 - Les artefacts dissonants réussis sont décrits comme n'étant **pas extrêmes**. Ils évitent d'être *trop* ou *pas assez* forts. Ils occupent *un juste milieu fécond* entre le familier et le non-familier.

101 **Viktor Borisovich Shklovsky**, *L'Art comme procédé*, trad. par Kak Priëm Iskusstvo, (1st edition in 1917, at Petrograd, in Recueils sur la théorie de la langue politique, Vol 2) (Paris: Allia, 2008).

102 **Matthew Malpass**, *Critical Design in Context: History, Theory, and Practices* (London: Bloomsbury Academic, an imprint of Bloomsbury Publishing, 2017).

103 **Carl DiSalvo**, « Design and the Construction of Publics », *Design Issues* 25, n° 1 (janvier 2009): 52, [doi.org/](https://doi.org/10.1162/desi.2009.25.1.52) | **Michel de Certeau**, *The Practice of Everyday Life*, trad. par Steven F. Rendall. (Berkeley: University of California Press, 1984).

- La **familiarité** est dite d'un artefact qui permet à l'auditoire de s'auto-identifier au projet. Elle peut également susciter un sentiment positif, agréable, attractif, d'utilité, etc.
 - La **non-familiarité**, à l'inverse, confronte le public à un **écart** (*gap*)¹⁰⁴ de perception – entre ce qui est connu du public et la proposition de design. Cela provoque un effet de défamiliarisation. Dans la littérature, il est souvent question d'étrangeté, de familière étrangeté, de bizarrerie, d'étrangeté.
- Les **passerelles perceptuelles** (*perceptual bridges*)¹⁰⁵ sont les caractéristiques d'un artefact qui permettent au public d'entrer en relation avec lui. Elles peuvent jouer sur différentes dimensions (esthétique formelle, culturelle, psychologique, connaissance, etc.). Les façonner permet de gérer cette mise en relation (par exemple, être un peu/très familier ou un peu/très étrange). Ces passerelles fonctionnent donc comme des continuums entre la familiarité et la non-familiarité.
- La **familière étrangeté** (*uncanny*)¹⁰⁶ est comprise comme un sentiment conflictuel suscité par le fait d'être confronté à quelque chose qui est *à la fois familier et non-familier*. Et qui permet une catharsis émotionnelle, une perturbation introspective, proche de la peur et de la névrose. Elle est difficile à gérer, peut virer à la pure provocation et empêcher la réflexion.

Normes, reliures et situation de communication

- **Disputable** (*arguable*), se dit d'un artefact qui n'incarne pas une, mais plusieurs opinions sur une question de débat – offrant une multiplicité d'interprétations possibles. Il en devient prétexte à discuter ces interprétations divergentes.
- **L'auditoire** (*audience*), dans le cadre du design pour débattre, correspond aux personnes atteintes par un artefact discursif, et qui deviennent potentiellement un public – soit, des personnes qui se rassemblent pour traiter d'un sujet de préoccupation commun, au sens de Dewey. Cette définition de *audience* prend donc la perspective du Design Discursif sur le concept de « public » de Dewey.
- **Relier** (*bridging*), l'abréviation de *relier différents points de vue*, est – au sein du processus de création d'un artefact discursif dissonant – l'action d'adopter le point de vue du public et (1) de pondérer les qualités non familières d'un artefact avec des éléments familiers. En rendant l'étrange plus familier, relier permet (2) de rendre visible un point de vue non-familier aux yeux d'autrui. Il s'agit d'une stratégie rhétorique qui est une composante essentielle de ce qui rend la dissonance soigneuse – et qui évite l'écueil de la pure provocation.

104 **Anthony Dunne et Fiona Raby**, *Speculative Everything: Design, Fiction, and Social Dreaming* (Cambridge, MA: The MIT Press, 2013), 35.

105 Nous avons élaboré cette définition à partir de la thèse d'Auger : **James H Auger**, « Why Robot?: Speculative Design, the Domestication of Technology and the Considered Future » (Ph.D. Dissertation, London, Royal College of Art, 2012), [www/](#).

106 **Sigmund Freud**, « Das Unheimliche (The Uncanny – 1919) », in *Fantastic Literature : a critical reader*, éd. par Westport Sandner (Westport, London: Greenwood Publishing Group, 2004).

- La **rhétorique** est l'art de la parole et de la persuasion. Dans le cadre du design pour débattre, elle désigne les moyens mis en place par les designers pour adapter leur projet à un public.
- L'**expérimentation de reliure** (*bridging experiment*), est une approche de l'ethnométhodologie qui relève du design. Elle utilise un artefact discursif qui n'enfreint pas violemment les normes, mais les place soigneusement dans un état de dissonance, dans un contexte donné (vers un public donné).
 - L'**ethnométhodologie**¹⁰⁷ est l'étude des méthodes utilisées pour comprendre et produire l'ordre social dans lequel nous vivons (par exemple les normes sociales).
 - L'**expérimentation de brèche** (*breaching experiment*)¹⁰⁸ est l'une de ces méthodes qui consistent à étudier les normes sociales en les enfreignant (violemment).
- La **circulation**¹⁰⁹ d'un projet de design correspond à sa communication. Ce terme fut pensé comme une alternative au terme diffusion pour inciter les designers à concevoir des moyens de médiation ostensiblement ouverts à la participation du public.
- La **situation de communication** est le contexte concret dans lequel des artefacts de design discursif rencontrent des publics. Il est souvent chargé d'acteurs, d'activités préexistantes et de discours. Cette situation peut être délibérément agencée, elle rassemble – dans une même activité de communication – des acteurs du débat qui sont humains, non humains, réels et fictifs.
- Le **modèle du système de communication du Design Discursif** est une structure conceptuelle qui aide à décrire la manière dont les artefacts sont liés aux enjeux de débat qu'ils visent et aux contextes dans lesquels ils circulent (c'est-à-dire les situations de communication). Il est composé de trois catégories principales et de dix sous-catégories. Ce système peut être utilisé comme un modèle descriptif, un outil analytique ou comme des lignes directrices méthodologiques pour la pratique du design.

107 **Harold Garfinkel**, *Studies in Ethnomethodology* (Englewood Cliffs, N.J.: Prentice-Hall, 1967).

108 **Alain Coulon et Presses Universitaires de France**, *L'ethnométhodologie* (Paris: Presses Universitaires de France, 1987).

109 **Tobie Kerridge**, « Designing Debate: The Entanglement of Speculative Design and Upstream Engagement » (Ph.D. Dissertation, London, Goldsmiths, University of London, 2015), doi.org/www/.

- Le **diplomate** (artefact) ou diplomate non humain, se dit d'un artefact de design qui déjoue les hégémonies et les consensus en rendant visible des visions et opinions sous-représentées, dans une situation consensuelle donnée, et ce qu'importe le camp. Les artefacts diplomates font un travail de traduction, reliant des mondes qui ne communiquent pas habituellement. Ce lien s'appuie sur la nature disputable des artefacts dissonants.
 - Le **diplomate** (designer) peut également être compris comme une posture spécifique d'un designer envers une controverse. En tant qu'intermédiaire agonistique il n'est d'aucun côté. Il vise à contrecarrer les hégémonies et les consensus dans tous les camps.
 - Le **cheval de Troie** est une deuxième posture où le designer travaille comme un infiltré, permettant aux voix minoritaires d'être entendues au sein d'un public détenant l'opinion majoritaire (en nombre ou en pouvoir d'action). C'est-à-dire, au sein de leur contexte social et médiatique habituel, au sein de leur zone de confort.
- L'**insertion** (d'un objet ou du designer lui-même), est le fait de rejoindre un public spécifique dans son contexte pour développer un projet et/ou y faire circuler un artefact finalisé. L'infiltration et le détournement sont des modes différents d'insertion dans des publics latents ou pré-construits.
 - L'**infiltration** décrit la manière dont les designers et les artefacts peuvent se joindre physiquement à des auditoires dans leurs contextes respectifs.
 - Le **détournement médiatique** décrit la manière dont un flux médiatique d'attention du public – déjà construit autour d'un sujet abordé dans les médias de masse ou en ligne – peut être redirigé vers une autre situation de communication.
 - Le **miroir** (*mirroring*) est une tactique de design qui met le public en discussion avec une autre version de lui-même. Pour cela, le designer travaille in situ et prend le *contexte* original dans lequel se trouve le public comme un matériau pour créer une fiction, et comme une situation pour diffuser le projet, mêlant ainsi fiction et réalité. De cette façon, le projet fonctionne comme un dispositif d'articulation.
 - Un **dispositif d'articulation**¹ est un artefact de design qui révèle les liens existants entre des acteurs, des discours et des pratiques (apparemment disparates). Cela permet au public d'articuler des chaînes de signification concernant leur appartenance à un collectif d'humains et de non-humains qui est structuré par des rapports de force.

- La **problématisation** (*issuefication*)² est le fait de *charger* un artefact avec une signification concernant un enjeu de société (par exemple, des slogans entourant un objet sur une affiche publicitaire).
- La **problématisation incarnée** (*embodied issuefication*) est la création délibérée d'un artefact afin de transmettre des enjeux à débattre (par opposition à l'ajout de slogans à des artefacts existants).
- Les **artefacts médiateurs agonistiques** (*agonistic mediating artefact*) permettent de *simuler* l'interaction d'un public avec un problème. Ils rapprochent l'auditoire d'une situation lointaine – décrite via le récit d'une situation d'usage fictionnelle – tout en éloignant l'utilisation réelle de cet artefact (l'artefact est donc une forme de média).
- Un **média**³, tel qu'un film ou une pièce de théâtre, éloigne le spectateur de l'action afin de la vivre par l'imagination et la fiction. Un artefact de design peut faire de même et être compris comme un média également.
- Un **usage rhétorique**⁴ est la projection d'un auditoire dans l'utilisation d'un artefact (souvent fictif). L'usage est soutenu par des récits d'usages qui donnent un sens et un contexte à l'artefact – décrit par le biais d'un film, d'images, d'un photomontage, etc.

2 **Noortje Marres et Richard Rogers**, « Recipe for Tracing the Fate of Issues and Their Publics on the Web », in *Making Things Public: Atmospheres of Democracy*, éd. par Peter Weibel et Bruno Latour (Karlsruhe, Germany / Cambridge, MA: ZKM / The MIT Press, 2005), 922–935, [www/](#).

3 **Annie Gentès**, *The In-Discipline of Design: Bridging the Gap Between Humanities and Engineering*.

4 **Malpass**, *Critical Design in Context: History, Theory, and Practices*, 47.

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RÉSUMÉ

Vivre en démocratie ou travailler en groupe nécessite l'usage de procédés délibératifs pour s'accorder et décider des manières vivre ensemble et se projeter dans des futurs désirables communs. Cependant, ces démarches restent une illusion, selon la philosophe politique Chantal Mouffe. Car, la décision par consensus marginalise les souvent les opinions minoritaires, et car la rationalité ne permet pas de venir à bout des conflits souvent enracinés dans les affects. Par conséquent, comment ouvrir des espaces de débat participatifs, inclusifs et qui mobilisent les affects ? Quelles méthodes et quels rôles pour un tel design agnostique (du grec Agon, adversaire) ?

Notre première contribution est d'avoir défini le groupe de pratiques et le champ de recherche du design pour débattre. Parmi ces pratiques notre étude se concentre sur le «Design Discursif » pour débattre, auquel des programmes comme le Design Critique, Spéculatif et Fiction participent.

Le travail de terrain (5 projets de design chez les parties prenantes) a révélé comment le design peut stimuler le débat interpersonnel quand il met en « dissonance » les valeurs sociales du public. Nous avons appelé cette forme d'ethnomethodologie par le design, l'expérimentation de reliure. Second résultat au delà du simple artefact, le design peut atteindre et mobiliser un « public » (au sens de John Dewey), en allant à sa rencontre, sur son terrain. Et, en orchestrant toute une situation de communication où publics et artefacts se rencontrent. Nous en proposons un modèle descriptif, le Système de communication du Design Discursif. Ainsi, quand il déjoue la polarisation d'opinions, l'artefact endosse un rôle de diplomate non-humain, qui intensifie les conflits pour connecter des mondes qui ne s'entendent pas. Mais aussi, en tant que média, il adopte un rôle « d'artefact médiateur agnostique », qui ouvre des situations de communication multidimensionnelles – entre acteurs humains, non-humains et fictionnels.

MOTS CLÉS

Agonisme, Ethnomethodologie, Dissonance, Design critique, Design participatif, Design fiction

ABSTRACT

Living in a democracy or working in a group requires the use of deliberative processes to agree and decide on ways of living together and projecting ourselves into common desirable futures. However, these processes remain an illusion, according to the political philosopher Chantal Mouffe. Because, decision by consensus often marginalises minority opinions, but also, rationality does not make it possible to overcome conflicts. They are rather often rooted in affects. Consequently, how can we open spaces for debate that are participatory, inclusive and that mobilise the affects? What methods and roles for such an agnostic design (from the Greek Agon, adversary)?

My first contribution is the definition of the group of practices and of the research field of design for debate. Among these practices, my study focuses on "Discursive Design" for debate, in which programmes such as Critical Design, Speculative Design and Design Fiction participate.

The fieldwork (5 design projects) revealed how design can stimulate interpersonal debate when it generates a 'dissonance' among the social values of the public, by presenting an ambivalent artefact (which juxtaposes discordant values). I have called this form of ethnomethodology through design, the bridging experiment. As a second result, beyond the simple design of an artefact, design can reach and mobilise a "public" (in the sense of John Dewey) concerned by a latent issue, by joining it in its own context. And, by orchestrating a whole communication situation where audiences and artefacts meet. I offer a descriptive model called the Discursive Design Communication System. Thus, when it thwarts the polarisation of opinions, the artefact takes on the role of a non-human diplomat, which intensifies conflicts in order to connect worlds that do not speak to each other. But also, as a media, design adopts the role of an "agnostic mediating artefact," which opens up multidimensional communication situations—between human, non-human and fictional actors.

KEYWORDS

Agonism, Ethnomethodology, Dissonance, Critical design, Participatory design, Design fiction

