Quantification and Domain Restriction in Basque

Urtzi Etxeberria

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QUANTIFICATION AND DOMAIN RESTRICTION IN BASQUE

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QUANTIFICATION AND DOMAIN RESTRICTION IN BASQUE

Urtzi Etxeberria Otaegi

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2005

Abstract

The main goal of this dissertation is to contribute to the understanding of the internal structure of Basque quantification in particular and natural language quantification in general within the framework of Generalized Quantifier Theory (see Montague (1973), Barwise & Cooper (1981), Keenan & Stavi (1986)).

Assuming that quantification in natural languages must always be contextually restricted and that quantificational domain restriction is always encoded syntactically (see Neale (1990), von Fintel (1994), Martí (2003), Stanley (2002), Stanley & Szabó (S&S) (2000)), this dissertation proposes, in line with a recent proposal put forward in Giannakidou (2004), a compositional structure for Basque strong quantifiers where the quantifier internal definite determiner is taken to act as the quantificational domain restrictor. This analysis provides support for the conclusion that the standard analysis of Generalized Quantifiers is correct (contra Matthewson (2001)). The fact that the definite article is excluded from weak quantifiers is taken as evidence for the idea that these elements are neither quantifiers nor contextually restricted, in agreement with what has

been standardly defended in the literature (cf. Milsark (1979), Partee (1988), Diesing (1992), Cooper (1996), von Fintel (1998)). Basque weak quantifiers are shown to be base generated at the predicative type (cf. van Geenhoven (1996), Landman (2002)).

The important role that the determiner plays inside quantificational expressions in languages such as Basque makes it necessary to provide an analysis of the Basque definite article -A. This dissertation claims that the article is the definite determiner everywhere (in opposition to Artiagoitia (2002)), but very flexible in its ability to type shift. This property allows us to account for the various interpretations that the article can get and concludes that existential readings of definites (that can only be obtained in some contexts) are dependent on the kind-level interpretation. For that, it is claimed that Basque is typologically in between English and French: the former makes use of bare plurals to get existential interpretations while the latter needs the definite plus the partitive preposition *de* (*du* for mass terms, *des* for plural count term) to express the same meaning; in Basque, the article is there while the preposition is not. Basque data is also claimed to provide further support for the conclusion that the position originally advocated by Carlson (1977) and extended crosslinguistically by Chierchia (1998c) must be on the right track, contra the so-called ambiguity theory defended by Wilkinson (1991), Diesing (1992), Gerstner & Krifka (1993) and Kratzer (1995).

Acknowledgements:

I finally reached the point where I have to write this part of the dissertation that appears in the very first pages but is written last. To be honest, during the process of writing this dissertation, there have been moments when I thought I would never be able to show my gratitude to those that have helped one way or another to the completion of this thesis… But well!!! Here I am…

I owe my greatest debt of gratitude to the two directors of my dissertation: Ricardo Etxepare and Fernando Garcia-Murga. I have learned a lot from them, both professionally and personally. Ricardo has been interested in my work just from the very beginning of my linguist life; it's been very inspiring and rewarding as well as the greatest of pleasures to have him as an advisor during all these years. I hope his enthusiasm and his knowledge about linguistics have found its way into my work. It was with Fernando that I started to study and understand semantics for the first time, and without his enormous help I doubt I would have been able to understand the simplest facts about semantics. I learned a lot about teaching and about linguistics from him and he showed to me that semantics can be fun… I cannot imagine having a better cocktail of directors, and I really don't know how to thank them. You are great linguists, but greater beings; I want you to know that without your time (those endless brainstorming sessions during your busiest hours), guidance, encouragement, advice, support and friendship (making me laugh about 'markets' and 'animals' at difficult moments of the process) this dissertation would have remained unwritten for sure. Thank you both for everything!!! I hope you enjoyed all this process as much as I did… Ok!! Let us forget about the last couple of months…

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CHAPTER 1

INTRODUCTION TO BASQUE QUANTIFIERS

1.1. Introduction:

Basque syntacticians have mostly concentrated on a few typologically salient aspects of the language such as ergativity, discourse configurational properties, or pro-drop. Despite some exceptions (i.e. Goenaga (1991), Eguzkitza (1993), Laka (1993), Artiagoitia (1997, 1998, 2002)) very little effort has been devoted to analyse the structure of the Basque noun phrase. The main goal of this dissertation is to explore and contribute to the understanding of the internal structure of Basque quantification and natural language quantification within the framework of Generalized Quantifier Theory (see Montague (1973), Barwise & Cooper (1981), Keenan & Stavi (1986)).

I take as the point of departure of this dissertation the observation that Basque quantificational nominal expressions show behavioural differences that have not been previously observed: Some Basque quantificational expressions (so called strong quantifiers) must necessarily appear with the article while others (so called weak NPs) are not allowed to do so. Assuming that quantification in natural languages must always

be contextually restricted and that quantificational domain restriction is always encoded syntactically (see Neale (1990), von Fintel (1994), Martí (2003), Stanley (2002), Stanley & Szabó (S&S) (2000)), this dissertation proposes, in line with a recent proposal put forward in Giannakidou (2004), a compositional structure for Basque strong quantifiers where the quantifier phrase internal definite determiner is taken to act as the quantificational domain restrictor. This analysis provides support for the conclusion that the standard analysis of Generalized Quantifiers is correct (contra Matthewson (2001)). I take the fact that the definite article is excluded from weak quantifiers as evidence for the idea that these elements are neither quantifiers nor contextually restricted, in agreement with what has been standardly defended in the literature (cf. Milsark (1979), Partee (1988), Diesing (1992), Cooper (1996), von Fintel (1998)). Basque weak quantifiers are shown to be base generated at the predicative type (cf. van Geenhoven (1996), Landman (2002)).

The important role that the determiner plays inside quantificational expressions in languages such as Basque makes it necessary to provide an analysis of the Basque definite article -A. This dissertation claims that the article is the definite determiner everywhere (in opposition to Artiagoitia (2002)), but very flexible in its ability to type shift. This property allows us to account for the various interpretations that the article can get.

The thesis begins with a short presentation of Generalized Quantifier Theory, illustrated with Basque data, and the introduction of some logical as well as some linguistic properties that help us differentiate strong from weak quantifiers in natural languages.

1.2. Generalized Quantifier Theory and Basque Nominal Quantification:

The seminal paper by Barwise & Cooper (1981) shows that natural languages contain quantifiers (such as *most*) that cannot be accounted for through Predicate Logic (which only presents the first-order logic universal ($\forall$) and the existential ($\exists$) quantifiers)[1]. Montague (1973) was also aware of this problem: he tried to solve it by showing that natural language quantifiers do not quantify over all the elements of the domain, but just over a restricted set of objects. The solution to the problems posed by Predicate Logic came from defining and representing quantifiers as *restricted quantifiers*, an approach that combines the quantifier and the common noun in a complex quantificational expression which is assigned truth conditional content by means of Generalized Quantifier Theory (GQT)[2]. An advantage of this representation is that the logical structure created by GQT is closer to the syntactic representation, and is able to solve the problem of compositionality in a neat way.

(1)   a. Syntax   b. Logical Form

                   Q-detP   GQ

         Q-det   NP   Q-det   Set expression

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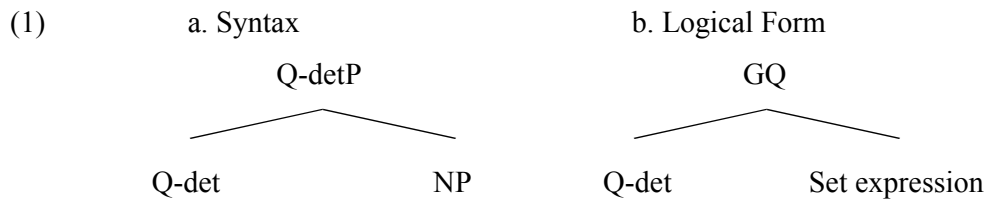
[1] This system was first introduced by Frege (1879).

[2] cf. von Stechow & Wunderlich (1991), Heim & Kratzer (1998), Kearns (2000), de Swart (1998), von Fintel (1994), García Murga (2002), among many others for a more detailed explanation of this point.

The compositionality principle[3] can be expressed as follows:

(2)   *Compositionality Principle*: The meaning of a linguistic expression is a function of the meanings of its parts plus the way in which they are syntactically combined.

The combination of the parts of the meaning is expressed in terms of Type Theory. The compositionality of a generalized quantifier, which denotes a set of sets and is assumed to be of type $\langle\langle e, t\rangle, t\rangle$[4], comes from combining a quantificational determiner $\langle\langle e, t\rangle, \langle\langle e, t\rangle, t\rangle\rangle$ (a function from sets to sets of sets (GQ)) with a Noun Phrase (NP) predicate of type $\langle e, t\rangle$.

(3)   Q-detP $\langle\langle e, t\rangle, t\rangle$

         Q-det $\langle\langle e, t\rangle, \langle\langle e, t\rangle, t\rangle\rangle$ NP $\langle e, t\rangle$
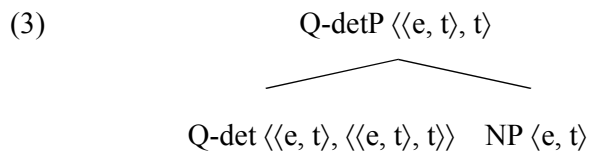
As Barwise & Cooper (1981) claim, Q-dets are functions that map common noun denotations onto generalized quantifiers; the generalized quantifier in turn takes the VP as its argument to build a proposition.

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[3] About the Compositionality Principle, see Partee (1982), Pelletier (1994), Szabó (2000), García Murga & Rodriguez (2001) and references therein.

[4] Cf. Heim & Kratzer (1998, ch.6) for discussion of why the semantic type of a GQ must be $\langle\langle e, t\rangle, t\rangle$, and not $\langle e\rangle$ or $\langle e, t\rangle$.

(4)

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                              S
                    ┌─────────┴─────────┐
                 Q-detP                 VP
          ┌────────┴────────┐
        Q-det               NP
```
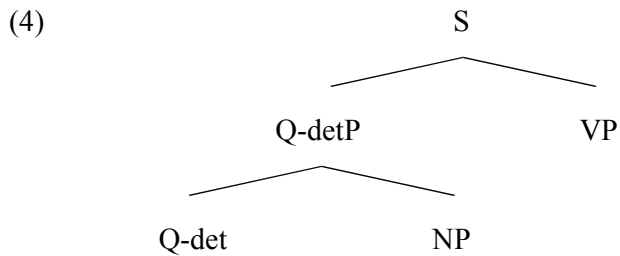
Taking a set-theoretic perspective, the denotation of a quantifier can be seen as a binary relation between sets of individuals (the set denoted by the NP) and the semantic value of the VP. The interpretation of Q-dets as relations between sets permits a unified interpretation of natural language Q-dets since the approach offered by Generalized Quantifier Theory takes into account the contribution of the head noun (NP). As Barwise & Cooper (1981) put it, natural language Q-dets 'live on' the denotation of the common noun. The 'live on' property has also been called 'conservativity'[5], and all generalized quantifiers are predicted to be conservative. What conservativity means is that the second argument of the quantifier (the VP) is evaluated in the context that the first argument (the NP) establishes. As expected, Basque nominal quantification is no exception when it comes to the property of conservativity as shown by Etxeberria (2002b); the reader is referred to this paper.

There are also certain properties that do not characterize natural language quantifiers in general, but are particular to subclasses of quantifiers. The following

---

[5] *Conservativity*, *extension* and *quantity* are the three basic constraints that are usually mentioned as the constraints that must be satisfied by (logical) quantifier-determiners. See de Hoop (1992), de Swart (1998) for a detailed discussion of these three constraints.

Conservativity being a logical/mathematical property, Chierchia & McConnell-Ginet (1990: 425-429) argue that it is possible to create non-conservative functions and that in fact natural languages have ways to express these non-conservative functions, but never by means of determiners. For more discussion on this see Westerståhl (1985) and Cohen (2001).

subsection will be dedicated to introduce some logical and linguistic properties that help us distinguish Basque strong quantifiers from weak ones.

1.2.1. Strong/Weak Distinction:

Barwise & Cooper (1981) provide the following definition in order to formalize the distinction between strong and weak[6] quantifiers:

(5)   DEFINITION: A determiner is *positive strong* (or *negative strong* resp.) if for every model $M = \langle E, | | \rangle$ and every $A \subseteq E$, if the quantifier $|D|$ (A) is defined then $A \in |D|$ (A). (Or $A \notin |D|(A)$, resp.). If D is not (positive or negative) strong then D is weak.

They also provide a test-sentence which can decide whether a quantifier has to be classified as positive strong, negative strong, or weak.

(6)   Q-det N is a N/ are Ns

To classify the quantifiers it is necessary to check whether the above sentence is automatically valid, contradictory, or contingent. When applied to Basque quantifiers this test sentence yields the following illustrative cases[7].

---

[6] The terms *strong* and *weak* are taken from Milsark (1974, 1977). Milsark argues that weak determiners are *cardinal*, whereas strong quantifiers are *quantificational*.

[7] Only three strong and three weak quantifiers are used in the examples in this chapter. The properties that these strong and weak quantifiers show apply to the rest of strong and weak quantifiers.

(7a)   Baserritar guzti-ak baserritarrak dira.

farmer   all-D.pl farmer   be.pl

'All the farmers are farmers.'

(7b)   Baserritar gehien-ak baserritarrak dira.

farmer   most-D.pl farmer   be.pl

'Most of the farmers are farmers.'

(7c)   Baserritar bakoitz-a baserritar bat da.[8]

farmer   each-D.pl farmer   one be.sg

'Each farmer is a farmer.'

(7d)   Baserritar batzuek baserritarrak dira.

farmer   some   farmer   be.pl

'Some farmers are farmers.'

(7e)   Baserritar asko baserritarak dira / baserritarra da.[9]

farmer   many farmer   be.pl/ farmer   be.sg

'Many farmers are farmers.'

(7f)   Baserritar gutxi dira baserritarrak / da   baserritarra.[10]

farmer   few be.pl farmer /   be.sg farmer

'Few farmers are farmers.'

According to Barwise & Cooper a quantifier is positive strong if the statement

created is a tautology in every model in which the quantifier is defined. A quantifier

---

[8] For many speakers Q-detPs formed with the quantifier *bakoitz* cannot appear in the subject position of intransitive sentences due to its' inherently distributive properties. See Etxeberria (2001, 2002a) for a more extensive account of the behaviour of *bakoitz*.

[9] *Zenbait, hainbat, asko, gutxi,* and *ugari* can agree with the verb in plural or in singular. This variation yields differences with respect to the strong (proportional) or weak (cardinal) interpretations of these quantifiers (cf. Etxepare (2000), Etxeberria (2001)). These facts will not be discussed in this dissertation (see Etxeberria (in progress)). One of the overt effects (among others) of focalization in Basque is the strict adjacency of the verb and the focused phrase (cf. Eguzkitza (1986), Ortiz de Urbina (1999), Uriagereka (1999) and references therein).

[10] *Gutxi* (agreement in plural) and *numeral baino gutxiago* are also more natural in preverbal position. The outcome is ungrammatical otherwise (see Etxeberria (in progress)). See footnote 22.

will be negative strong if it is a contradiction, and a quantifier will be weak if the truth of the statement depends on the model.

Universal quantifiers will be easy to classify since they always come out true even in an empty domain. Therefore, *guzti*, *den*, and *bakoitz* will be defined as positive strong. The quantifier *gehien* will be defined only if there are elements in the domain, and, when that is the case, it will be described as positive strong (following Barwise & Cooper (1981:182)). Therefore, the Basque quantifiers *guzti* (all), *den* (all), *bakoitz* (each) and *gehien* (most) should be considered positive strong quantifiers since they yield tautologies.

It is interesting to mention the fact that Basque does not have quantifiers such as English *neither*. An English sentence like (8) is translated into Basque making use of a more complex construction. *Bakar bat ere* is a Negative Polarity Item and must necessarily be licensed by a negative[11]. Despite this difference, *bakar bat ere* behaves like English *neither* and (9) is false in every model in which the domain is defined.

(8)   Neither superhero is a superhero.

(9)   [Superheroi bakar bat ere] ez da   superheroia.
        [superhero   single one even] not be.sg superhero

The characterization of weak quantifiers depends on the model, in other words, if a sentence is sometimes true and sometimes false, it is neither a tautology nor a contradiction, and the quantifier is classified as weak. Following this reasoning, a quantifier like *batzu(e)k* (some) in (7d) is described as weak because when the model

---

[11] See Etxepare (2003).

contains two or more than two farmers the sentence is judged true; but when the model

contains less than two farmers the sentence will be false. The Basque quantifiers that

behave this way are: *batzu(e)k* (some), *zenbait* (some), *hainbat* (some), *asko* (many),

gutxi (few), *ugari* (many), numerals, *numeral baino gehiago* (more than numeral),

numeral baino gutxiago (less than numeral) --cf. Etxeberria (2002b)--.[12]

1.2.1.1. Logical Properties of Basque Quantifiers:

1.2.1.1.1. Symmetry and Intersectivity:

One of the logical properties that can be used to differentiate strong quantifiers

from weak quantifiers is symmetry. For a quantifier to be symmetric it must fulfil the

---

[12] Although Barwise & Cooper's analysis helps in making a division between strong and weak quantifiers, Keenan (1987) claims that it has to face some (intuitive) problems

   (i)   given that numerals like *two farmers* or quantifiers like *some farmers* are considered weak (have no denotation defined) in models where the denotation of the common noun is the empty set,
   (ii)   when the class of quantifiers is extended to more complex but trivial quantifiers such as *at least zero*, *either infinitely many or else just finitely many*, *fewer than zero*, etc. These quantifiers would be wrongly predicted to be strong according to Barwise & Cooper's approach since existential sentences created with these quantifiers are completely grammatical

Keenan (1987)'s analysis solves these two problems by (i) introducing the zero property in the domain of quantifiers like *two* or *some* and (ii) positing a new definition that correctly predicts which quantifiers can appear in existential sentences.

   (iii)   DEFINITION:
             a. A basic determiner is called *existential* iff it is always interpreted by an existential function, where
             b. A function *f* from properties to sets of properties is *existential* iff for all properties *p*, *q*
                $p \in f(q)$ iff $1 \in f(q \& p)$

The division we get between Basque strong and weak quantifiers following Keenan's definition is identical to the division we got following the test sentence introduced by Barwise & Cooper (1981).
The Basque quantifiers that this dissertation is trying to describe does not cover the Basque counterparts of such complex expressions as *at least zero*, *either infinitely many or else just finitely many*, *fewer than zero*, etc.

equivalence presented in (10); and if that is the case, the quantifier will be described as weak.

(10)   Symmetry:
        D (A)(B) ↔ D (B)(A)

The prediction is then that *guzti*, *den*, *gehien*, and *bakoitz* (described as strong quantifiers in the previous section) will not show the equivalence presented in (10). This prediction is borne out as the examples (11a-d) show.[13]

(11a)	Euli guzti-ak itsusiak dira.	←/→	(gauza) itsusi guzti-ak euliak dira.
	fly all-D.pl ugly be		thing ugly all-D.pl fly be
	'All of the flies are ugly.'		'All of the ugly (thing)s are flies.'
(11b)	Euli den-ak itsusiak dira.	←/→	(gauza) itsusi den-ak euliak dira.
	fly all-D.pl ugly be		thing ugly all-D.pl fly be
	'All of the flies are ugly.'		'All of the ugly (thing)s are flies.'
(11c)	Euli gehien-ak itsusiak dira.	←/→	(gauza) itsusi gehien-ak euliak dira.
	fly most-D.pl ugly be		thing ugly most-D.pl fly be
	'Most of the flies are ugly.'		'Most of the ugly (thing)s are ugly.'
(11d)	Euli batzuk itsusiak dira.	← →	(gauza) itsusi batzuk euliak dira.
	fly some ugly be		thing ugly some fly be
	'Some flies are ugly.'		'Some ugly (thing)s are flies.'
(11e)	Euli asko itsusiak dira.	← →	(gauza) itsusi asko euliak dira.
	fly many ugly be		thing ugly many fly be
	'Many flies are ugly.'		'Many ugly (thing)s are ugly.'

---

[13] The strong quantifiers *guzti* and *den* have different origins. *Guzti* historically derived from an adjective, *-ti* is a suffix that creates adjectives (see Chapter 2, §2.6.1.3). *Den* on the other hand derived from the relative form *den*; *dena*, a free relative, would mean 'what there is', implying that we make reference to 'everything there is', probably due to the article (*den-a*).

(11f) Euli gutxi dira itsusiak.   ← →   (gauza) itsusi gutxi dira euliak.

fly few be ugly   thing ugly few be fly

'Few flies are ugly.'   'Few ugly (thing)s are ugly.'

The quantifiers in the examples (11d-f) are symmetric and must therefore be considered weak. These quantifiers give the cardinality of a set defined as the intersection of the sets A and B; since intersection is symmetric, the roles of the A set and the B set in the relation can not differ.

(12)   Intersectivity:

$$D(A)(B) \leftrightarrow D(A \cap B)(B)$$

(13)   A = the set denoted by *euli* (fly).

B = the set denoted by *itsusia izan* (be ugly).

(14)   Strong Quantifiers

[[A guzti-ak B dira]] $A \subseteq B$

  A all-D.pl B are

[[A den-ak B dira]] $A \subseteq B$

[[A bakoitz-a B da]] $A \subseteq B$

[[A gehien-ak B dira]] $|A \cap B| > |A - B|$[14]

---

[14] It is because of the fact that *guzti, den,* and *bakoitz* are universal quantifiers that the three elements are described the same way in (14), that is, the set denoted by the common noun is a subset of the set denoted by the VP. *Gehien* is not a universal quantifier and what $|A \cap B| > |A - B|$ means is that the cardinality of the intersection of the set A and the set B is bigger than the cardinality of the set of elements in A that are not B. The important thing to observe is that with these four quantifiers it is necessary to know the elements in A (that are B) in order to derive the truth values of the sentence, and the rest of the set B is not relevant to the truth conditions. However, see Chapter 2, 2.6.2.1.1, where it is defended that *gehien* and its crosslinguistic counterparts are not quantificational expressions, but rather superlatives.

<u>Weak Quantifiers</u>

[[A batzu(e)k B dira]]	$\|A \cap B\| \geq 2$
[[Zenbait A B da/ dira]]	$\|A \cap B\| \geq 2$
[[Hainbat A B da/ dira]]	$\|A \cap B\| \geq 2$
[[A asko B da/ dira]]	$|A \cap B| = $ asko
[[A gutxi B da/ dira]]	$|A \cap B| = $ gutxi
[[A ugari B da/ dira]]	$|A \cap B| = $ ugari
[[Numeral A B dira]]	$|A \cap B| = $ numeral
[[Numeral A baino gehiago B dira]]	$|A \cap B| > $ numeral
[[Numeral A baino gutxiago B dira]]	$|A \cap B| < $ numeral

While Basque strong quantifiers express a proportion of the A set, weak quantifiers denote the cardinality of the set derived from the intersection of the sets A and B. For example, in a sentence like *euli guztiak itsusiak dira* the Q-det *guztiak* denotes a relation between the sets A (flies) and B (the individuals which are ugly). For the sentence to be true the set A must be a subset of B. If there is a member of the set A that is not also a member of the set B, the sentence will be considered false.

1.2.1.2. Linguistic Properties of Basque Quantifiers:

1.2.1.2.1. Existential Sentences:

It was Milsark (1974, 1977) who first pointed out that the strong/weak distinction plays an important role in the interpretation of existential *there be* constructions. Existential sentences exhibit the so-called *definiteness effect*, which means that although some noun phrases (indefinites) are acceptable in *there*-insertion

sentences, others (definites) are not. As a consequence, we distinguish between weak quantifiers which are acceptable in the position after *there be*, and strong quantifiers, which are unacceptable in this context. As predicted, and unlike weak quantifiers (15e-m), Basque strong quantifiers are not acceptable in existential sentences (15a-c).

(15a) ∗ Badira   zientzilari guzti-ak   laborategi honetan.
        yes-be.pl scientist   all-D.pl laboratory this-in
     '∗ There are all of the scientist at this laboratory.'

(15b) ∗ Badira   zientzilari gehien-ak laborategi honetan.
        yes-be.pl scientist   most-D.pl laboratory this-in
     '∗ There are most of the scientist at this laboratory.'

(15c) ∗ Bada   zientzilari bakoitz-a laborategi honetan.
        yes-be.sg scientist   each-D.sg laboratory this-in
     '∗ There is each scientist at this laboratory.'

(15d) Badira   zientzilari batzuk laborategi honetan.
        yes-be.pl scientist   some   laboratory this-in
     'There are some scientists at the laboratory.'

(15e) Bada/Badira zientzilari asko laborategi honetan.
        yes-be.pl   scientist   many laboratory this-in
     'There are many scientists at this laboratory.'

(15f) Laborategi honetan zientzilari gutxi dago/daude.
        laboratory this-in   scientist   few be.sg/pl
     'There are few scientists at this laboratory.'

(15g) Laborategi honetan bi   zientzilari baino gutxiago daude.
        laboratory this-in two scientist   than less   be.pl
     'There are less than two scientists at this laboratory.'[15]

---

[15] Freeze (1992) claims that existential sentences can be expressed in two different ways: on the one hand, there are languages that make use of what has been called 'locative inversion' (represented in (ib) in boldface) (see also Bresnan (1994) where arguments are provided to claim that there exists a universal argument structure for 'locative inversions'); on the other hand, "in a few languages, instead of a

constituent order alternation, we find a proform in the existential (Freeze 1992: 556)" which can never be adjacent to the locative phrase as the English example in (iib) shows.

FINNISH
(ia)	mies on huonee-ssa. man.NOM is room-INESSIVE 'The man is in the room.'	LOCATIVE:	Theme V Locative
(ib)	huonee-ssa on mies. room-INESSIVE is man.NOM 'There is a man in the room.'	EXISTENTIAL:	**Locative V Theme**

ENGLISH
(ia)	The book is on the table.	LOCATIVE:	Theme V Location
(iib)	There is a book on the table.	EXISTENTIAL:	**Proform V Theme Location**

 "The predicate locative and the existential contain essentially the same constituents but display them in different order […]: if the theme argument is definite, it is the subject, but if it is indefinite, the locative phrase is the subject. […] No language allows the existential to have a definite theme; if the theme is definite, the structure must be that of a predicate locative. […] An indefinite theme is restricted to the existential, though the subject of the predicate locative may be either definite or indefinite (Freeze 1992: 557)".

Freeze also claims that in opposition to what occurs in SVO languages, where the two kinds of existentials ('locative inversion' and proform) are found, all SOV languages (Persian, Mayo (Uko-Aztecan), and Japanese in his analysis) have 'locative inversion' kind of existential constructions and none has a proform existential.

Basque is also an SOV language, and as described by Freeze, it can make use of 'locative inversion' in order to create existential sentences (iiib). Definites can also appear in 'locative inversion' constructions in the western dialects of Basque (cf. example (iiic)). Note however that Labourdine (an eastern Basque dialect) does not accept the construction in (iiic) (thanks to Maia Duguine and Beñat Oihartzabal (p.c.) for this information and for noting that eastern dialects do not use *dago/daude* (is/are-egon) but simply *da/dira* (is/are)); what this would show is that these constructions are necessarily existentials (not locatives) in this dialect (although further research is required I believe this is also the case in the other two eastern dialects: Zuberoan and Low Navarrese).

The grammaticality of sentences like those in (iiic) in western dialects however, is not such a strong argument against Freeze's generalization, since although the definite appears in a 'locative inversion' context (contra what Freeze predicts) and there is an alteration in the word order, the sentence can not be interpreted existentially, and must be taken as locative instead.

BASQUE
(iiia)	Gizon-a gelan dago. man-ART room-LOC is-egon.SG 'The man is in the room.'	LOCATIVE: Theme Locative V
(iiib)	Gelan gizon bat dago. room-LOC man a is-egon.SG 'There is a man in the room.'	EXISTENTIAL: **Locative V Theme**
(iiic)	Gelan gizon-a dago. room-LOC man-ART is-egon.SG 'The man is in the room.'	* EXISTENTIAL ✓ LOCATIVE

Nevertheless, 'locative inversion' is not the only way in which Basque can form existential sentences. Against the prediction made by Freeze's generalization, Basque (an SOV language) has a proform *ba-* used to create, among other things, existential sentences. For other uses of *ba-* see Oyharçabal (1984), Etxepare (2003) and references therein.

(iva)	Bada gizon bat gelan. yes-is man a room-LOC 'There is a man in the room.'	EXISTENTIAL:	**Proform V Theme Location**

1.2.1.2.2. Presuppositionality:

The property of presuppositionality[16] with regard to quantificational elements is illustrated by means of a classical paradigm introduced by Lumsden (1988) (examples (43a-d) are taken from Zucchi (1995)). Considering the examples in (16) we conclude that only the strong quantifiers *guzti*, *den*, *gehien*, and *bakoitz* presuppose the existence denoted by the set they are applied to (*akats* (mistake) in the case at hand). Weak quantifiers on the other hand would not be described as presuppositonal since they do not presuppose the existence of the denotation of the common noun.

(ivb)   Badira gizon batzuk gelan.   EXISTENTIAL: **Proform V Theme Location**
           yes-are man some room-LOC
           'There are some men in the room.'

Observe that the constituent order of the sentences in (iv) is equal to the English example in (iib). Note also that definites give rise to ungrammatical sentences when existentials are formed making use of the proform *ba-* as the following example shows.

(va)   ∗ Bada gizon-a   gelan.   EXISTENTIAL: **Proform V Theme Location**
           yes-is man-ART.sg room-LOC
           '∗ There is the man in the room.'
(vb)   ∗ Badira gizon-ak   gelan.   EXISTENTIAL: **Proform V Theme Location**
           yes-are man-ART.pl room-LOC
           '∗ There are the men in the room.'

[16] The classical definition of presuppositional relations can be described as follows:

(i)   The sentence A presupposes B if and only if A entails B and the negation of A entails B.

It follows from this definition that (in bivalent systems) B has to be true for A to have a truth-value. In other words, if B is false A can not receive a classical truth-value. This is the logical test that is used to test whether a sentence A presupposes a sentence B. The pragmatic test relates the presupposition of a sentence with old/salient/given information. See Garcia Murga (1998) for discussion of this point.
The notion of presuppositionality has been widely discussed in the literature, cf. Stalnaker (1974), Kartunnen (1974), Geurts (1995), Garcia Murga (1998) and references therein.

(16a) Akats guzti-ak aurkitzen badituzu, goxoki bat emango dizut.
       mistake all-D.pl find   if-aux. candy one give   aux.
       'If you find all of the mistakes, I'll give you a candy.'

(16b) Akats gehien-ak aurkitzen badituzu, goxoki bat emango dizut.
       mistake most-D.pl find   if-aux. candy one give   aux.
       'If you find most of the mistakes, I'll give you a candy.'

(16c) Ikasle bakoitzak   liburu bat irakurtzen badu, goxoki bat emango diot.[17]
       student each-D.erg.sg book a   read   if-aux candy a   give   aux.
       'If each student reads a book, I'll give (each student) a candy.'

(16d) Akats batzu(e)k aurkitzen badituzu, goxoki bat emango dizut.
       mistake some   find   if-aux. candy one give   aux.
       'If you find some mistakes, I'll give you a candy.'

(16e) Akats asko aurkitzen badituzu, goxoki bat emango dizut.
       mistake many find   if-aux. candy one give   aux.
       'If you find many mistakes, I'll give you a candy.'

(16f) Akats gutxi aurkitzen badituzu, goxoki bat emango dizut.
       mistake few   find   if-aux. candy one give   aux.
       'If you find few mistakes, I'll give you a candy.'[18]

---

[17] Due to its inherent distributive properties, *bakoitz* is grammatical only in those situations where there is an element (a distributee which can not be the event variable) deeper in the structure over which to distribute (cf. Etxeberria (2002b)). This is the reason why I have changed the example in (16c). Note that the majority of Basque speakers judge the sentence in (i) (parallel to those in (16)) as ungrammatical

(i)   ?∗ Akats bakoitz-a aurkitzen baduzu, goxoki bat emango dizut.
          mistake each-D.pl find   if-aux. candy one give   aux.
       'If you find each mistake, I'll give you a candy.'

[18] Note that in conditional sentences the presupposition can disappear (Kartunnen (1974)). I.e., the presupposition of a factive verb (*realise* in (i)) disappears when in the antecedent of a conditional sentence.

(i)   If George realises that he didn't tell the truth about the atomic weapons, he will resign the party leadership.

However, there is still a clear distinction between the sentences in (16a-c), with strong quantifiers, and those in (16d-f), with weak quantifiers. The former clearly presuppose the existence of the denotation of the common noun, the latter do not necessarily do so. Thanks to Fernando García-Murga (p.c.) for extensive discussion on this point.

Once we consider all these properties, the division we get between Basque strong and weak quantifiers is the following (cf. Etxeberria (2002b)):

(17)

Strong Quantifiers: *guzti* (all)*, den* (all)*, gehien*[19] (most)*, bakoitz* (each).

Weak Quantifiers[20]: *batzu(e)k* (some)*, zenbait* (some)*, hainbat* (some)[21]*, asko* (many)*, gutxi* (few)*, ugari* (many)*,* numerals*, numeral baino gehiago* (more than numeral)*, numeral baino gutxiago* (less than numeral)[22]*,* etc.

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[19] See footnote 13 and 14.

[20] Montague (1973) or Barwise & Cooper (1981) treat weak/cardinal quantifiers as quantificational determiners of type $\langle\langle e, t\rangle, \langle\langle e, t\rangle, t\rangle\rangle$, which combined with a one-place predicate of type $\langle e, t\rangle$ create a GQ of the standard type $\langle\langle e, t\rangle, t\rangle$.
For ease of exposition and following standard terminology, these elements have been and will be referred to as *weak quantifiers* throughout the whole dissertation. However, as will be made explicit in chapter 3, I do not treat *weak quantifiers* as real quantifiers (see Partee (1987), Diesing (1992), van Geenhoven (1996), Landman (2002) and references therein).

[21] *Batzu(e)k*, *zenbait*, and *hainbat* are translated as 'some'. However, there is a subtle distinction between the three. While *batzu(e)k* can be used when we refer to a set of just two members, the other two seem to make reference to a bigger plurality.

    (i)   Lagun batzu(e)k etorri dira, Mikel eta Jon hain zuzen   ere.
              friend some   come aux Mikel and Jon so   correctly too
              'Some friends have come, precisely Mikel and Jon.'
    (ii)   ∗? Zenbait/Hainbat lagun etorri dira, Mikel eta Jon hain zuzen ere.
                some/some   friend come aux Mikel and Jon so   correctly too
              'Some friends have come, precisely Mikel and Jon.'

[22] *Gutxi* (few) and *numeral baino gutxiago* (less than numeral) show some particular properties that make them different from the rest of the weak quantifiers. The behaviour of these Basque downward monotonic quantifiers is similar to focus operators in that they induce a change in the basic word order of the clause (see Haegeman (2000)). They must necessarily occupy the preverbal position, irrespective of their grammatical function. Thus, *gutxi* and *numeral baino gutxiago* in (ia) and (iia) respectively, appear in preverbal position and are grammatical; in case they are moved from this preverbal position, the sentences become ungrammatical as (ib) and (iib) show.

    (ia)   Politikari gutxik irakurri zituzten Michael Moore-en liburuak.
             politician few-erg read   aux.past.pl   -gen book-D.pl.abs.
             'Few politicians read Michael Moore's books.'

1.3. Overview of the Dissertation:

This dissertation consists of five chapters, including this first one.

In Chapter 2 I first present Matthewson (2001)'s proposal, who claims that the standard analysis of quantification offers little comparative scope and puts forward a new quantificational structure based on a two-step process, where the quantifier must be combined with a DP, not with an NP as the standard analysis of Generalized Quantifiers defends. Then, I present Giannakidou (2004)'s proposal who argues that Matthewson's analysis can not be extended crosslinguistically and that the Q-detP internal D functions as a domain restrictor. She concludes that the standard analysis of GQs is in fact perfectly able to explain quantificational facts crosslinguistically. The only extra assumption that we need to make is that languages differ with respect to whether they overtly or covertly restrict their quantificational domain (see also Etxeberria (2004a)).

Assuming that quantification in natural languages must always be contextually restricted and that quantificational domain restriction is always encoded syntactically (see Neale (1990), von Fintel (1994), Martí (2003), Stanley (2002), Stanley & Szabó (2000)); Chapter 2, in line with Giannakidou (2004), proposes a compositional structure

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(ib)   ∗ Politikari gutxik   Michael Moore-en   liburu-ak   irakurri zituzten.
         politician few-erg   -gen book-D.pl.abs read   aux.past.pl
        'Few politicians read Michael Moore's books (intended).'
(iia)   Bost kazetari   baino gutxiagok ikusi zituzten Woody Allen-en   filmak.
        five journalist than   fewer-erg watch aux.past.pl   -gen film-D.pl.abs.
        'Less than five journalists watched Woody Allen's movies.'
(iib)   ∗ Bost kazetari   baino gutxiagok Woody Allen-en filmak   ikusi zituzten.
          five journalist than   fewer-erg   -gen film-D.pl.abs watch aux.past.pl
        'Less than five journalists watched Woody Allen's movies (intended).'

See Ortiz de Urbina (1989b), Etxepare (2003). See also Etxeberria (in progress).

for Basque strong quantifiers where the quantifier internal definite determiner (obligatory with strong quantifiers) is taken to function as the (overt) quantificational domain restrictor. This analysis provides further support for the conclusion that the standard analysis of GQs is correct (contra Matthewson (2001)).

Chapter 3 proposes an analysis for Basque weak quantification. Considering that the Basque definite determiner (-A) is excluded from weak quantifiers (except numerals) these elements are shown to be neither quantifiers nor contextually restricted (cf. Milsark (1977), Partee (1988), Diesing (1992), Cooper (1996), von Fintel (1998)). For situations where there is no overt definite determiner but still the proportional interpretation is available, I assume Büring (1996)'s proposal where the Topic/Focus/Background Structure accounts for the proportional reading of weak quantifiers. Basque weak quantifiers are claimed to be base generated in the predicative type, in the functional projection Number Phrase -NumP- (either in the specifier or in the head position of NumP, some allowing both positions), located below DP.

In Chapter 4, in contrast to what has been assumed by other scholars (i.e. Goenaga (1980, 1991), Euskaltzaindia (1993), Ticio (1996), Artiagoitia (1997, 1998, 2002), Rodriguez (2003), Trask (2003), among others), the Basque definite determiner -A and plural marker -K are claimed to be base generated in different syntactic positions: the base position of the plural marker -K will be [Head, NumP] while the base position of the Basque definite determiner -A is argued to be [Head, DP]. Thus, it is proposed that the Basque definite article -A, is just that, a definite article and as such must always be base generated in the DP head; in short, -A will be argued to be a definite determiner everywhere, but very flexible in its ability to type-shift (note that bare nouns are not allowed in Basque). Then, the different interpretations that definites can get in Basque

(kind, specific, existential) will be shown to follow from the Neocarlsonian approach (see Chierchia (1998c), Dayal (2004), Zamparelli (2002a, 2002b) and references therein). In that approach, the existential interpretation of definites (in object position) is dependent on the kind-level reading (see Chierchia (1998c)). Basque is claimed to be typologically in between English and French in this regard: the former makes use of bare plurals to get the existential interpretation while the latter needs the definite plus the partitive preposition *de* (*du* (< *de le*) for mass terms, *des* (< *de les*) for plural count terms) to express the same meaning; in Basque, the article is overt while the preposition is claimed to be covert.

Finally, Chapter 5 presents the concluding remarks of the thesis.

CHAPTER 2

CONTEXTUALLY RESTRICTED QUANTIFICATION

2.1. Introduction:

As mentioned in Chapter 1, the standard analysis of quantification claims that the compositionality of a generalized quantifier, which denotes a set of sets, comes from combining a quantificational determiner with a Noun Phrase (NP) predicate (see Montague (1973), Barwise & Cooper (1981), Keenan & Stavi (1986)). In (1), the generalized quantifier (GQ) *every student*, which is of type $\langle\langle e, t\rangle, t\rangle$, results from the combination of the quantifier-determiner (Q-det) *every* of type $\langle\langle e, t\rangle, \langle\langle e, t\rangle, t\rangle\rangle$ and the NP predicate *student* of type $\langle e, t\rangle$.

(1)   [$_{\text{Q-detP}}$ Every student]

$$\text{Q-detP } \langle\langle e, t\rangle, t\rangle$$

Q-det $\langle\langle e, t\rangle, \langle\langle e, t\rangle, t\rangle\rangle$ NP $\langle e, t\rangle$
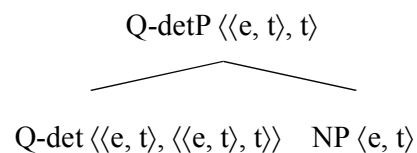
Despite the wide acceptance this analysis has had in the formal semantic tradition, it has been noted that there are many languages that seem to lack the standard construction exemplified in (1). Matthewson (2001) (see also Jelinek (1995), Baker (1995), Marlett (2000) among others) argues that when submitted to crosslinguistic scrutiny, this analysis offers little comparative bite. Based on her analysis on St'át'imcets (a Lillooet Salish language) quantifiers, she proposes a new quantificational structure based on a two-step process where the quantifier combines with a Determiner Phrase (DP), not with an NP as the structure in (2b) shows.[1]

(2a) [QP tákem [DP i   [NP smelhmúlhats]-a]]]
      [all   [D.pl [woman (pl)] -D]]]
      'All (of) the women'

(2b)   [QP Q [DP D [NP N]]]

In a recent paper, Giannakidou (2004) argues that Matthewson's central predictions can not be extended crosslinguistically. She argues that the Q-detP internal D is a nominal domain restrictor and that languages differ with respect to whether they overtly or covertly restrict their quantificational domain (see also Etxeberria (2004a)). As a consequence, she concludes (contra Matthewson (2001)) that the standard analysis of GQs can perfectly explain quantificational facts crosslinguistically.

In line with Giannakidou (2004), this chapter proposes a compositional analysis of Basque strong quantifiers and provides further support for the conclusion that the standard analysis of GQs is correct. With that aim, first Basque quantificational data

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[1] See next section for an extended presentation of Matthewson (2001)'s analysis.

will be offered, which provide clear evidence for the need of both nominal -with strongly interpreted weak quantifiers (see §2.6.1.2.)- (Stanley (2002), Stanley & Szabó (S&S) (2000a)) as well as Q-det domain restriction -with lexically strong quantifiers (see §2.6.1.1.)- (Westerståhl (1985), von Fintel (1994), Martí (2003)) and shows that Giannakidou's analysis must be correct. Crucially in Basque, the D domain restrictor (-A) only appears with strong quantifiers (lexically strong and strongly interpreted weak quantifiers), but is excluded from weak-cardinal quantifiers. This must be taken as evidence for the fact that these elements are neither quantifiers nor contextually restricted (cf. Milsark (1979), Partee (1988), Diesing (1992), Cooper (1996), von Fintel (1998)). The compositional behaviour of Basque weak quantifiers is presented in Chapter 3).

The chapter is organised as follows: Section 2.2 introduces Matthewson (2001)'s revision of Generalized Quantifier Theory. In section 2.3, some major problems with that proposal are presented. In section 2.4 I discuss two approaches that propose that the domain of quantification is contextually restricted by covert domain variables at LF and I argue (following Giannakidou (2004)) that both approaches are needed to account for the crosslinguistic quantificational data. Section 2.5 presents Giannakidou (2004)'s alternative proposal to Matthewson, where the Q-detP internal D is analysed as an overt contextual restrictor. In section 2.6 I present Basque quantificational data, which provides clear evidence for the necessity of both Q-det domain restriction as well as nominal domain restriction. Section 2.7 concludes the Chapter.

2.2. Generalized Quantifiers à la Matthewson (2001):

Matthewson (2001) questions whether the standard analysis of Generalized Quantifiers can be extended to cover the richness and variability shown by different natural languages.

After analyzing St'át'imcets, Matthewson (2001) notes that constructions paralleling the typical English case in (1) are systematically ungrammatical in this language and challenges the standard analysis of Generalized Quantifiers.

In St'át'imcets all argumental phrases require the presence of an overt Determiner (D). The omission of D results in ungrammaticality as the examples in (3), (4) and (5) show.

(3a) q'wez-ílc [ti   smúlhats-a][2]
       dance-intr. [D.sg woman-D]
       'The/one woman danced.'

(3b) * q'wez-ílc   [smúlhats]
         dance-intr. [woman]

(4a) léxlex   [i   semlhmúlhats-a]
       intelligent [D.pl woman-D]
       'The/some women are intelligent.'

(4b) * léxlex   [semlhmúlhats]
         intelligent [woman.pl]

---

[2] All the St'át'imcets examples as well as the glosses and the translations in this chapter are copied from Matthewson (1999, 2001).

(5a) wa7 ts'aqw-an'-ítas [i   t'éc-a]   [i míxalh-a]
      prog eat-tr-3pl.erg [D.pl sweet-D] [D bear-D]
      'The/some bears eat honey.'

(5b) ∗ wa7 ts'aqw-an'-ítas [t'éc]   [míxalh]
        prog eat-tr-3pl.erg [sweet] [bear]

On the other hand, Ds can not appear with predicates, which must obligatorily

lack a D. While the example in (6a), without the D, is completely grammatical; the

example in (6b) is out.

(6a) kúkwpi7 [kw-s   Rose]
      chief   [D-nom Rose]
      'Rose is a chief.'

(6b) ∗ [ti kúkwpi7-a] [kw-s   Rose]
        [D chief – D]   [D-nom Rose]

What the St'át'imcets examples in (3-6) illustrate is that in this language arguments are

Determiner Phrases while nominal predicates are Noun Phrases.

Another property of St'át'imcets is that quantifiers in argumental phrases must

always appear with determiners; as a result, arguments can not be of the form [Q NP]

and the quantifier must always be sister to a DP.

(7a) Léxlex   [tákem i   smelhmúlhats-a]
      intelligent [all D.pl   woman(pl)-D]
      'All (of) the women are intelligent.'

(7b) ∗ léxlex   [tákem smelhmúlhats]
        intelligent [all   woman(pl)]

(8a) Úm'-en-lhkan [zi7zeg' i sk'wemk'úk'wm'it-a] [ku kándi]
give-tr-1sg.subj [each D.pl child(pl)-D] [D candy]
'I gave each of the children candy.'

(8b) ∗ Úm'-en-lhkan [zi7zeg' sk'wemk'úk'wm'it] [ku kándi]
give-tr-1sg.subj [each child(pl)] [D candy]

(9a) [Cw7it i smelhmúlhats-a] léxlex
[many D.pl woman(pl)-D] intelligent
'Many of the women are intelligent.'

(9b) ∗ [Cw7it smelhmúlhats] léxlex
[many woman(pl)] intelligent

Matthewson (2001: 152) argues that "all determiners (in St'át'imcets) which combine with quantifiers necessarily introduce variables over choice functions[3] (see Matthewson (1999)). Thus, these determiners apply to NPs of type $\langle e, t \rangle$ and choose one (singular or plural) individual from the set denoted by the NP predicate. DPs containing these determiners are therefore of type e". Furthermore, Matthewson (1999) argues that choice functions must always be closed at the highest level (i.e., with widest scope).

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[3] A choice function can be defined as follows: A function f is a choice function if it applies to any non-empty set and yields a member of that set. See also Reinhart (1997), Winter (1997), Kratzer (1998), and references therein. Reinhart (1997) and Winter (1997) defend that choice function variables can be bound at any level. On the other hand, Kratzer (1998) says that choice function variables remain free at LF and must be interpreted through context. This gives rise to wide-scope effects for choice function indefinites. According to Winter (1997), indefinites are always interpreted by means of choice function, while Reinhart (1997) --only suggests-- and Kratzer (1998) defend that indefinites are ambiguous between a choice function interpretation and a generalized quantifier interpretation. See Geurts (2001a) for arguments against Choice Functions.

(10)   a. q'wez-ílc [ti   smúlhats-a]   (Matthewson 2001: 152)

dance-intr. [D.sg woman-D]

'The/a woman danced.'

b. danced (f(woman))

c. Paraphrase: the woman who is chosen from the set of women by the contextually salient function f danced.

Based on all these data, Matthewson (2001) concludes (as we said before) that the standard analysis of Generalized Quantifiers (where quantifiers combine with ⟨e, t⟩ type nominal predicates) can not account for the St'át'imcets quantificational facts and proposes a new compositional structure according to which quantification in natural languages must proceed in two steps. First, the Determiner of type ⟨⟨e, t⟩, e⟩ combines with the NP predicate of type ⟨e, t⟩ to create an individual-denoting element; and in a second step, the resulting *e* type entity is taken as an argument by the Q-det (which is of type ⟨e, ⟨⟨e, t⟩, t⟩⟩), this last combination is the one that yields the generalized quantifier of the standard type ⟨⟨e, t⟩, t⟩ (see Matthewson (1998)).

(11a) [QP zi7zeg' [DP i   [sk'wemk'úk'wm'it]-a]]]

[each   [D.pl [child(pl)   ]-D]]]

'each of the children'

(11b)   QP ⟨⟨e, t⟩, t⟩

Q ⟨e, ⟨⟨e, t⟩, t⟩⟩   DP e

D ⟨⟨e, t⟩, e⟩   NP ⟨e, t⟩
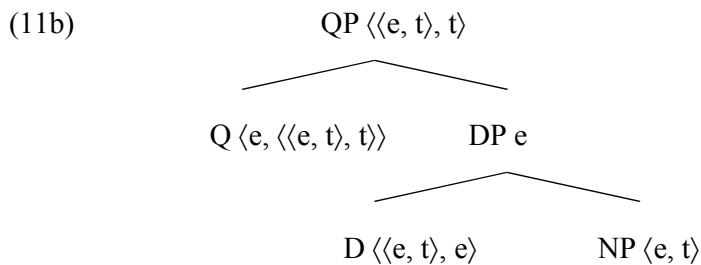
Matthewson (2001) assumes that there is no variation in the semantics of natural languages[4] and tries to apply her analysis crosslinguistically.

One of the problems that the 'no variation hypothesis' (following Matthewson's terminology) has to face is that of partitive constructions such as those in (12).

(12a)   Many of the students are on holidays.
(12b)   Most of the politicians spoke in riddles.
(12c)   Some of the teachers arrived late

Ladusaw (1982: 233) assumes "that quantifier determiners have the same denotation in Partitive NPs as they do in simple NPs" and proposes that partitive *of* is inserted to ensure that the Q-det receives an argument of type ⟨e, t⟩. What the partitive *of* makes is change the individual (type *e*) denoted by the DP into a set of type ⟨e, t⟩, the correct input for the Q-det to quantify over.

(13) $[[of NP]] = g(a)$ if $[[NP]] = I_a$; undefined otherwise.

In (13), g is a 'consist of' function which takes any group-level individual and returns the set of atoms corresponding to the generator set[5]. *Of the students* is then the same

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[4] This goes against the so-called 'transparent mapping' hypothesis where there is no requirement for all languages to share the same semantics and a wide range of semantic variation is permitted (see Partee (1995), Jelinek (1995)).

[5] Szabolcsi (1997b: 14): Generalized Quantifiers with a non-empty unique witness set are called principal filters, and their unique witness A the generator set:

   (i)   A Generalized Quantifier is a principal filter iff there is a set of individuals A such that A is not necessarily empty and for any set of individuals X; $X \in GQ$ iff $A \subseteq X$

type of object as *students*, but instead of denoting the set of all students it denotes the set of all contextually relevant students.

However, if according to Matthewson (i) Q-dets combine directly with entities of type *e*, and (ii) there should be no semantic variation across different languages, Ladusaw's explanation must be rejected. Thus, Matthewson (2001) proposes that *of* is semantically vacuous; an alternative that makes the partitive construction (i.e. *many of the students*) parallel to the St'át'imcets structure where the Q-det combines with the DP and quantifies over the individual of type *e*. This assumption dispenses with Ladusaw's 'consist of' function.

According to Matthewson (2001: 161): "the semantic vacuity proposal raises the question of why the *of* should be there at all. An obvious possibility is that it is there for case reasons". Furthermore, the fact that St'át'imcets (a language that lacks the *of* element in partitives) lacks overt case marking supports the claim that *of* is there only for case reasons.

Summing up, the following are the basic features of St'át'imcets nominal quantificational elements that are of relevance to this chapter:

(i)   The same Ds (*ti…a* for singular, *i…a* for plural) create DPs that initially can be definite or indefinite (see examples (3), (4), (5) and (10)).

(ii)   DPs are always of argumental type, and as a consequence, they are never used as predicates (see example (6)).

(iii)   DPs are existentially closed at the highest level (see Matthewson (1999)).

(iv)   Q-dets must be combined with a Determiner Phrase (DP), not with a Noun

       Phrase (NP).

(v)   St'át'imcets lacks the *of* partitive preposition in partitive constructions.

2.3. Problems with Matthewson's Analysis:

Giannakidou (2004) argues that Matthewson (2001)'s central predictions are

problematic and can not be extended crosslinguistically:

2.3.1. St'át'imcets DP Interpretation:

According to Matthewson, in this language, Ds create DPs that initially can be

definite or indefinite.

(14a)   q'wez-ílc [ti   smúlhats-a]   (=(3a))
        dance-intr. [D.sg woman-D]
        'The/a woman danced.'
(14b)   danced (f(woman))
(14c)   Paraphrase: the woman who is chosen from the set of women by the
        contextually salient function f danced.

(15)   wa7 ts'aqw-an'-ítas [i   t'éc-a]   [i míxalh-a]   (=(5a))
        prog eat-tr-3pl.erg   [D.pl sweet-D] [D bear-D]
        'The/some bears eat honey.'
(15b)   eat honey (f(bear))

(15c)   Paraphrase: the bears that are chosen from the set of bears by the contextually salient function f eat honey.

Since there is no definiteness/indefiniteness contrast in St'át'imcets determiners, Matthewson (1999), (2001) decides to treat them as indefinites interpreted as a choice function existentially closed at the highest level (see Matthewson (1999: 109))[6]. This treatment however makes them equivalent to definites: A choice function interpreted at the highest level is equivalent to a referential DP (see the paraphrases offered in (14c) and (15c)[7]). That is, a DP that denotes a contextually salient choice function should be taken to be a definite rather than an indefinite (see section 2.5 for Giannakidou's reanalysis of these facts in terms of domain restriction).

Furthermore, as has been mentioned in the previous section, Matthewson's analysis makes the prediction that St'át'imcets DPs must always be interpreted as entities of type *e* and do never type-shift to type $\langle e, t \rangle$ (predicative) or type $\langle\langle e, t \rangle, t \rangle$ (quantificational). This goes against well established facts defended in Partee (1987), where it is shown that natural language DPs (both definites and indefinites) can freely type-shift to both predicative (by means of Id[8]) and quantificational type. Within Partee's system there is a natural map between individuals and predicates, i.e. sets containing them.

---

[6] That the choice function must close at the highest level is something that Matthewson (1999) particularly argues for St'át'imcets. Other scholars claim that the choice function can be interpreted at almost any level in order to account for intermediate scopal interpretations (see i.e. Reinhart (1997), Winter (1997), Kratzer (1998)).

[7] The paraphrase (14c) is copied from Matthewson (2001: 152); the one in (15c) has been derived following the previous paraphrase.

[8] Id: $e \rightarrow \langle e,t \rangle$: Id(x) = $\lambda x[x \leq y]$ or $\lambda x [x=y]$ in case x is a singularity. Id takes an individual (singular or plural) and turns it into the set that consists of the single individual identical to that individual. It undoes what ι did via the 'part of' for plurals, and the identity relation for singulars.

2.3.2. Q-dets Do Not Usually Combine with Definites:

Matthewson's proposal (in (11b)) also predicts that Q-dets should be able to combine with definites crosslinguistically. Nonetheless, as the examples in (16), (17), (18) and (19) (from English, Spanish, Catalan and Greek respectively) show, the prediction is not borne out and the majority of quantifiers can not combine with a DP argument.

English:

(16a) ∗ every the boy

(16b) ∗ most the boys

(16c) ∗ many the boys

(16d) ∗ three the boys

(16f) all the boys

(16g) only the boys

Spanish:

(17a) ∗ cada los chicos

      lit.: 'each the boys'

(17b) ∗ la mayoria los chicos

      lit.: 'most the boys'

(17c) ∗ muchos los chicos

      lit.: 'many the boys'

(17d) ∗ tres los chicos

      lit.: 'three the boys'

(17f) todos los chicos

      'all the boys'

(17g) solo los chicos

      'only the boys'

Catalan[9]:

(18a) * cada els nois
       lit.: 'each the boys'

(18b) * la majoria els nois
       lit.: 'most the boys'

(18c) * molts els nois
       lit.: 'many the boys'

(18d) * tres els nois
       lit.: 'three the boys'

(18f) tots els nois
       'all the boys'

(18g) només els nois
       'only the boys'

Dutch[10]:

(19a) * elke de jongen
       lit.: 'each the boys'

(19b) * de meerderheid de jongens
       lit.: 'most the boys'

(19c) * veel de jongens
       lit.: 'many the boys'

(19d) * drie de jongens
       lit.: 'three the boys'

(19f) al de jongens
       'all the boys'

(19g) alleen de jongens
       'only the boys'

Greek (Giannakidou (2004):

(20a) * kathe to aghori
       lit.: 'every the boy'

(20b) * merika ta aghoria
       lit.: 'several the boys'

(20c) * tria ta aghoria
       lit.: 'three the boys'

(20d) ola ta agoria
       'all the boys'

(20e) mono ta aghoria
       'only the boys'

---

[9] Sergi Garcia and Angel J. Gallego (p.c.)

[10] Gretel de Cuyper (p.c.)

The grammatical examples in (16-17-18-19-20) are formed exclusively with *all* and *only*; elements that have been argued not to be quantifiers. For *all*, it has been said that it is a DP modifier with the semantics of an exhaustivity operator[11] (Brisson (1998, 2003))[12], and for *only*, that it is a propositional operator (von Fintel (1997)). Note that many of the ungrammatical constructions above become automatically grammatical as soon as we introduce the partitive *of* (most of the boys, many of the boys, three of the boys). This behaviour also extends to the other languages in the illustrative set.

2.3.3. Partitive 'of' Is Not Vacuous:

If Q-dets combine directly with entities (type *e*), *of* (e.g. in *many of the students*) as pointed out in section 2.2, must be semantically vacuous (contra Ladusaw (1982) where *of* ensures that the Q-det receives an input of type $\langle e, t \rangle$), so that the crosslinguistic structure of quantification parallels St'át'imcets structure.

According to Matthewson (2001) the presence of the partitive preposition *of* in constructions such as (21) is only due to case reasons.

(21a) Many of the politicians did not tell the truth.
(21b) Some of the policemen dedicated the whole day to fine drivers.

---

[11] Giannakidou (2004) has claimed that *all* is ambiguous between the DP modifier exhaustivity operator (à la Brisson) just described and the real quantificational (partitive) form *all of the NP*.

[12] In section 2.6.2.3 some occurrences of Basque *all* are argued to be analysable in Brisson (1998, 2003)'s terms.

However, this assumption is problematic: to begin with, *of* seems to be optional in some constructions, and this should not be so if the partitive preposition *of* is there only for case reasons.

(22a)   all (of) the boys
(22b)   half (of) the boys
(22c)   both (of) the boys

In addition to this problem, Adams (2005b)[13] also poses a very interesting problem to Matthewson's analysis. Adams' analysis concentrates on Zulu (a Bantu language from South Africa) where there are no overt articles on nouns to show definiteness or indefiniteness, and as a consequence, they can be interpreted as definite or indefinite depending on context. (Examples taken from Adams (2005b: 1-2) with morphological breakup).

(23)   Aba-fana ba-ya-dla.
       cl2-boy   cl2-pres-eat
       '(The) boys are eating.'

(24)   Um-fama u-ya-dla.
       cl1-boy   cl1-pres-eat
       'A/The boy is eating.'

It is also possible to mark contextual restriction overtly in Zulu by means of demonstratives.

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[13] Thanks to Nikki Adams for bringing the Zulu as well as Lomongo data to my attention.

(25)   Laba-ba-fana   ba-ya-dla.
         cl2these-cl2-boy cl2-pres-eat
         'These boys are eating.'

Partitive constructions in Zulu are used when an entity (*e* type element) is created overtly (i.e. *these boys*) or when the entity type is created covertly (through context). A quantifier can not combine directly with a type *e* element, as the following examples clearly show.

(26)   ?? Aba-ningi laba-ba-fana   ba-ya-dla.
            cl2-many   cl2these-cl2-boy cl2-pres-eat
         Lit.: 'Many these boys are eating.'

(27)   ∗ Ezi-nye lezo-zi-nyoni   zi-ya-cula
            cl10-one cl10those-cl10-bird cl10-pres-sing
         Lit.: 'Some those birds are singing.'

According to Matthewson (2001), demonstratives (just like definite determiners) create *e* type elements, exactly the type that she claims quantifiers take as arguments crosslinguistically. However, the examples in (26) and (27) show that Zulu does not support this claim. Zulu also provides evidence for the fact that it is undesirable to maintain that *of* is there just for case reasons. Note that the following sentences are both grammatical.

(28)　Aba-fana aba-ningi ba-ya-dla.
　　　cl2-boy   cl2-many cl2-pres-eat
　　　'Many boys are eating.'

(29)　Aba-ningi **b**-aba-fana   ba-ya-dla
　　　cl2-many   cl2part-cl2-boy cl2-pres-eat
　　　'Many of the boys are eating.'

The grammaticality of (28) and (29) shows that if the only role of the partitive preposition *of* is to assign case to the NP, it is unexpected that both sentences should be correct. Otherwise, we would have to claim (Adams (2005b: 4) "one of two things: that (i) this case is optionally checked in Zulu, which is not a generally acceptable syntactic statement or (ii) that is somehow required for a contextually-restricted NP but not for a non-contextually-restricted NP, also a very strange-sounding case". This last statement can not be correct since there are quantifiers like *-nke* (=all) (in opposition to other quantifiers like *-ningi* in (29)) that are able to take contextually restricted NPs (i.e. *these NP*) but do not accept the partitive.

Furthermore, as we said in section 2.2, Matthewson (2001) defends the claim that the fact that St'át'imcets (a language that lacks the *of* element in partitives) lacks overt case marking supports the claim that *of* is there only for case reason. Zulu, just like St'át'imcets, lacks overt case marking but contra Matthewson's assumption it possesses a partitive.

2.3.4. Episodic *Most* and Contrast with *All*

According to Matthewson, non-partitive *all* and *most* contain bare NPs that can only be kind denoting (*e*-type arguments) in order for the Q-det to get the correct input.

(30a) Most football players are millionaires.
   √ GENERIC

(30b) All football players are millionaires.
   √ GENERIC

But this is not the only interpretation that non-partitive *most* or *all* may get as the following examples show.

(31a) Most golf players at yesterday's party were millionaires.
   √ EPISODIC

(31b) ? All golf players at yesterday's party were millionaires.[14]
   √ EPISODIC

Cooper (1996) claims that the difference between *most NP* and *most of the NP* is that the former can not be restricted to a particular situation in opposition to what happens with the latter. However, von Fintel (1998) shows that in fact, *most NP* can be restricted and need not always create non-restricted generic interpretations as the following example shows.

---

[14] Not every English speaker agrees with the fact that sentence (31b) is not entirely natural. Thanks to Richard Larson and Bill Haddican (p.c.).

(32)   On our school trip, almost everyone stayed up late on the first night. The next morning, as was to be expected, the teachers were at the bus on time, but **most students** arrived late.

Most students in (32) is clearly non-generic since it makes reference to the students of the school trip. Thus, the episodic interpretation seems to be the only available interpretation in the case at hand.

The second prediction is that languages without kind denoting bare plurals will not allow *all*/*most* with bare NP arguments. Giannakidou provides Greek data to show that this prediction can not be on the right track. Greek does not possess kind denoting bare plurals, but still, *i perissoteri* (=most) allows both generic as well as episodic interpretations even when there is no D present as is the case in (33a)[15].

(33a) I   perissoteri (i)   fitites   doulevoun sklira
       D.pl most   (D.pl) students work.3pl   hard
       Most students work (imperfective) hard
              √ GENERIC
(33b) I   perissoteri (i)   fitites   efigan   noris
       D.pl most   (D.pl) students left.past.perfective.3pl   early
       Most students left (perfective) early
              √ EPISODIC

---

[15] Note that aspect (imperfective in (33a) and perfective in (33b)) plays a very important role in the interpretations that the sentences in (33) obtain. This observation seems to be valid for generic and episodic interpretations in general: *students* in example (i) is necessarily interpreted as generic, while in (ii) the interpretation we get is episodic (existential).

       (i)   John works with students.
       (ii)   John is working with students.

2.3.5. Variable Position of Q-det and D

Languages show evidence for both [Q-det D] and [D Q-det] constructions so it is not the case that an *e* type DP is always complement to the Q-det as Matthewson's analysis claims.

Although the majority of the St'át'imcets quantifiers combine with a DP argument (34a-b), Matthewson also presents some data where her own quantificational structure does not seem to be obeyed, see (35a), (35b) --both with strong quantifiers-- and (35c) --with weak quantifiers that receive wide scope interpretations--.

(34a) tákem i   smelhmúlhats-a   [Q-det D]
       all   D.pl woman(pl)-D
       Translated: all the women

(34b) zi7zeg' i sk'wemk'úk'wm'it-a   [Q-det D]
       each D.pl child(pl)-D
       Translated: each of the children

(35a) i   tákem-a smúlhats   **[D Q-det]** (Matthewson 2001: fn.5)
       D.pl all-D   woman
       Translated: all the women

(35b) i   zí7zeg'-a sk'wemk'úk'wm'it   **[D Q-det]** (Matthewson 1999: 41c)
       det.pl each-det   child(pl)
       Translated: each child

(35c) i   nxwexw7útsin-a twéw'w'et   **[D Q-det]** (Matthewson 1999: 15)
       D.pl four(HUM)-D   boy
       Translated: four boys

As Giannakidou (2004) shows, it is also possible to find examples in Greek where the Q-det appears under D as in (36b).

(36a) Oli i   fitites   [Q-det D]
       all det.pl students
       Translated: all the students

(36b) O   kathe fititis   **[D Q-det]** (Giannakidou 2004: 32b)
       det.sg each students
       Translated: each student

Basque also provides evidence in favour of the existence of these two constructions: Lexically strong Q-dets (see Etxeberria (to appear) as well as section 2.6.1.1.), and not their nominal arguments, are composed directly with the D in opposition to what Matthewson claims[16].

(37a) Mutil **guzti-ak**   **[Q-det D]**[17] (=D Q-det)
       boy   all-D.pl

---

[16] Marlett (2000) analyses the counterpart of English *all* in Seri. In this language, the equivalent of *all* can apparently combine with a DP as in (i), or else appear under D as in (ii).

      (i)   Haxaca coi **cooxo** haxöl coi iyóiitoj
               dogs   the all   clams the they.ate.them
               'All the dogs ate the clams.'
      (ii)   Ihámoc quih **coox** cah   ziix_ccah quih cazíim   quih cohmquécöl
               night the all   the/focus music   the that.is pretty the I.listen.to.it
               'Every night I listen to pretty music.'

Initially it would seem as though this language also shows both orders: [Q-det D] and [D Q-det]. However, the example in (ii) makes use of two determiners (*quih* with the noun, *cah* with the Q-det), thus, it may be too premature to conclude that Seri's quantification also shows both quantificational orders and it might well be the case that these constructions are explained following different strategies. Basque does also show similar constructions, and as we will see later (see section 2.6.2.3), they are analysed following Brisson (1998), (2001). Brisson's analysis might also be applicable to Seri *all*.

[17] Note that Basque is a head-final language an that lexically strong quantifiers are formed by the combination of the [NP+Q-det+D] what in a head-initial language would be [D+Q-det+NP].

Lit.: 'boy all the(pl)'

Translated: all the students

(37b) Mutil **bakoitz-a**   **[Q-det D]**   (=D Q-det)

boy   each-D.sg

Lit.: 'boy each the(sg)'

Translated: each student

Observing the problematic facts about Matthewson's analysis, Giannakidou (2004) makes the following proposal:

(i)   Q-detP internal D is a (nominal) contextual restrictor (see also Etxeberria (2004)[18]),

(ii)   domain restrictors can also appear in Q-dets,

(iii) languages differ with respect to whether they overtly or covertly restrict their quantificational domain,

(iv)   the standard generalized quantifier analysis can explain quantificational facts crosslinguistically.

Before we move on to expose the assumptions that are going to be made in this chapter and the details of the proposal, the next section (§2.4) presents possible analyses that have been offered in the literature to defend that contextual variables have a

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[18] Despite the problems and inadequacies of Etxeberria (2004), I do still believe (and so I defend) that the intuition that the Basque definite determiner restricts the quantificational domain -proposed for the first time in Etxeberria (2004a)- is correct.

syntactic (explicit or implicit) realization (one of the core assumptions of this dissertation).

2.4. Contextual Domain Restriction (Contextual Variables):

Contextual variables are elements of the semantic representation that receive a value from the context and play a major role in natural language quantification (realised as a simple variable C in (38), but see below). In this dissertation it is assumed that quantificational expressions are associated with contextual variables at LF in languages like e.g. English (cf. Partee (1989), Neale (1990), von Fintel (1994, 1998), Stanley (2000, 2002), S&S (2000), Martí (2003)) while in some other languages this contextual domain restrictor appears in the overt syntax (Etxeberria (2004), Giannakidou (2004))[19].

Consider a situation like (38):

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[19] Note that the analysis in terms of contextual variables is not the only possible analysis in the semantic literature. Some authors explain the same facts making use of *situations* (see i.e. Kratzer (2004), Carlson & Storto (to appear)). Kratzer (2004) i.e. is worried about the fact that (i) the variable is claimed to appear with the Q-det by some authors and with the nominal by others (both ways being able to explain some facts but unable to explain both nominal and adverbial quantification) and, that (ii) apparently every natural language makes use of (only) covert domain variables since no language has been shown to have overt contextual domain restrictors. According to Kratzer these problems are solved if we assume situations (partial worlds) to be what restrict both nominal as well as adverbial quantification.
However, if as this dissertation (following Giannakidou (2004)) claims Q-detP internal Ds are contextual domain restrictors (i) we would have evidence for overt contextual domain restriction in many different languages, (ii) it could be possible to assume that nominal and adverbial quantification are distinct. In nominal quantification the contextual variable would appear in the nominal element by default (and sometimes in the Q-det -see §2.3.5 and §2.6.1.1-) while in adverbial quantification the contextual variable would appear in the adverb (*situations* would restrict the adverbial quantificational domain). Note that it is in fact no non-sense to take nominal and adverbial quantification to be different: Nominal quantification always subcategorizes a syntactic domain, relates set of individuals, and as a consequence the contextual variable need be a set of individuals. Adverbial quantification on the other hand comes with a domain from the context, it relates sets of situations, and the contextual variable will be a set of situations.

(38)   [Speaker A is relating to speaker B the experiences of last night, when A and some of her students went out for a pizza]

A: Everybody$_C$ had a great time   (von Fintel (1994: 28))

It is standard assumption that in (38), the speaker A does not intend to convey the idea that everybody, literally, had a great time; instead, a sentence like (38) refers to a contextually restricted set of individuals, those who went out for a pizza last night with A.

A common notational device for contextual variables is the one presented in the example (38) by means of a subscript C; according to this notation, C is of a simple nature. C can be free or bound (see i.e. Martí (2003) where she defends that the contextual variable C is a (silent) pronoun)[20]. In the example in (38) the contextual

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[20] Cappelen & Lepore (2002, 2005) argue that C can not be a pronominal element since it does not behave as such in that i.e. it does not enter into anaphoric relations (as overt pronouns do, see example (i)).
However, Martí (2003: 58) claims (contra Cappelen & Lepore (2002, 2005)) that it is possible to maintain that C behaves as a pronominal element. She argues that although in the sentence in (ii) C can not enter into anaphoric relations (*it* can not make reference to C); when the potential covert pronoun is made overt, anaphoric relations are possible as the example in (iii) shows where *it* can be dependent on C. Examples taken from Martí (2003a: 58-59). "Hence, (ii) is not an indication that C is not a pronoun. What seems to be wrong with the example is that a referent for C must be provided (Martí (2003a: 60))"

(i)   He's a senator, but nobody respects him.
(ii)   * Many students failed, and *it* is a big domain.
(iii)   Many students in this domain failed, and it is a big domain.

According to Cappelen & Lepore (2005: Ch.7), there are some conditions that an element must fulfil in order to be considered context sensitive. They argue that there are very few elements that are contextually sensitive (indexicals such as i.e. *I*, *here*) and that quantificational expressions should not be grouped with them. One of the conditions that a contextually sensitive element must fulfil is that it must block disquotational indirect reports. For an element to be contextually sensitive it must shift its semantic value from one context of utterance to another. Cappelen & Lepore argue that C (Basque definite determiner in nominal quantificational expression --see §2.6--) can not be context sensitive since it never shifts its value from a context to another the way indexicals do. In (iv) nothing needs to be changed and the report is true.

(iv)   Maia: Every student came late.
          Aritz: Maia said that every student came late.

(v)   *Basque*:

variable is free and refers to a contextually salient property, the property of having gone

out for a pizza with A.

However, the C (associated with the quantifier in (39), but see below) can also

be bound by a preceding quantificational expression.

(39)   Most of John's classes were so good that every$_C$ student passed the exam.

In (39), the domain of the second quantifier expression varies with the values of

the first quantifier expression. Thus, the most salient reading of this sentence is 'for

most x such that x is a class of John's was such that x was so good that every student in

x passed the exam'.

Maia:	Ikasle guzti**ak** berandu etorri ziren.
	student all-D.pl late come aux.past
	'All of the student came late.'
Aritz:	Maiak esan zuen ikasle guzti**ak** berandu iritsi zirela.
	Maia-erg say aux.past student all-D.pl late come aux.past-comp
	'Maia said that all of the student came late.'

Indexicals do not support Inter-Contextual Disquotational Indirect Reports.

(vi)   Maia: **I** came late.
            Aritz: ∗ Maia said that **I** came late.
                        Maia said that **she** came late.

However, the fact that C (Basque definite determiner) does not behave as an indexical does not necessarily mean that C is not contextual. The relevant comparison class (von Fintel (1994), Martí (2003a)) are third person pronouns that show exactly the same behaviour as C in terms of disquotational indirect reports. In both sentences in (vi), *he* can have the same value and I'm sure Cappelen & Lepore don't want to say that *he* is not contextually sensitive:

(vi)   Maia: He came late.
            Aritz: Maia said that he came late.

Thus, it is perfectly possible that the way indexicals vary from one context of utterance to another is different to the way in which other elements vary from context to context. And it seems clear that something like 'every student' picks out different sets in different contexts as the example in (38) shows. See also Szabó (2005b: 7) "To sum up: I think Cappelen and Lepore present strong arguments against radical contextualism, but only a weak case against moderate contextualism". According to Szabó, quantifiers (such as *every*) are indeed context sensitive.

This reading, according to von Fintel (1998: 15), suggests that C can not just be a simple variable but that instead, it must have a more complex structure[21]:

(40) $C = f_i (x_j), i,j \in |N|$

It will be composed of a free functor variable which takes an argument variable which in turn can be bound when another quantifier expression as in the example in (39) precedes it in the sentence. Therefore, the analysis of (39) will be as shown in (39'):

(39')   [Most of John's classes]$_1$ were so good that [every$_{f2(x1)}$ student] passed the exam.

The internal structure of a quantificational expression like *every student* would be as follows (Martí (2003a: 29))[22]:

(41)

                                student

every

f_2 x_1

---
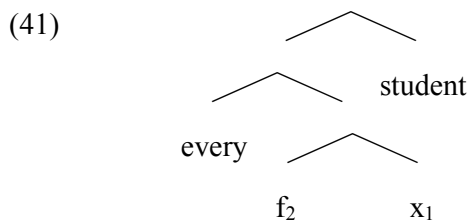
[21] The complex structure of the contextual variable is accepted by every analysis (that assumes the existence of C) that is mentioned in this section. This structure is also assumed to be the correct representation for contextual variables in this dissertation. See Stanley (2002: 373) for arguments (mainly syntactic) in favour of the existence of the *functional* variable.

[22] Martí (2003) defends that adverbial quantification has the same structure. This dissertation does not treat adverbial quantification.

In (39'), the upstairs quantificational element (*most of John's classes*) binds the argumental variable (x1) of the complex contextual variable. Martí (2003b: 241): "The functional variable stays free and is assigned a salient function as its value (of type ⟨e, ⟨e, t⟩⟩; a function that takes a class (of type *e*) and gives back the set of individuals in that class (of type ⟨e, t⟩). The functional variable takes the argumental variable as its argument and results in a set of individuals, which is intersected with the noun *student* via Predicate Modification".[23]

Up until now, the contextual variable C has been presented as being associated with the Q-det of the quantificational expression. One of the arguments in favour of the analysis that relates C to the Q-det comes from adverbial quantification (von Fintel (1994, 1998), Martí (2003)). In the example (42), the bound reading is available (only one summer x was so bad that all situations in which it rained during x were situations in which I missed the bus) but there are no nominal expressions present to which we could associate the contextual variable, since the quantificational element is an adverb (*always*).

(42)   Only one summer was so bad that, if it rained, I always missed the bus
        (Martí (2003: 36))

Yet, there is still an alternative possibility, one that associates the contextual variable to the nominal[24]. The alternative analysis that associates contextual variables to

---

[23] According to Stanley (2002: 366) the intersection is done by means of set-theoretic intersection, and no Predicate Modification is mentioned.

[24] Pelletier (2003) argues that C should be associated with the whole Q-detP (i.e. *every student*)

the nominal is the one put forward by Stanley & Szabó (S&S) (2000a) and defended in

Stanley (2002) and subsequent work.[25]

According to S&S (2000), a problem that the alternative supporting that the

contextual domain variable is implemented in the quantifier, rather than in the nominal,

would have to face are constructions involving cross-sentential anaphora.

(43)   Most people regularly scream. They are crazy.   (S&S (2000: 257))

S&S (2000: 257): "Suppose the domain is a set of things in a certain village.

There are two anaphoric readings of the pronoun in the second sentence in *(43)*. On the

first reading, it refers to all the people in the village. On the second reading, it refers to

those people in the village who regularly scream."

The theories defending that the contextual variable is on the Q-det would have

difficulties explaining the second reading because "ideally, one would wish to say that

cross-sentential anaphora of this sort requires antecedents that are constituents of a

preceding logical form. However, if the domain variable co-habits a terminal node with

'most', there is no single node in the logical form of the first sentence in *(43)* whose

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[25] In fact, Stanley & Szabó (2000a) consider many different approaches to how contextual information
can give meaning to restricted quantificational domains and conclude that all but the one they defend
(where they posit contextual variables LF -semantic account-) are incorrect. Among those approaches
they consider there is one where the contextual domain restrictor is associated to the whole Q-detP, but
they discard it due to some compositional problems that this analysis would have to face (see Stanley &
Szabó (2000a: 255). Pelletier (2003) on the other hand, argues that C should be associated with the whole
Q-detP (i.e. *most students*) since speakers have the intuition that it is the whole quantifier that is restricted
and not just the Q-det or just the nominal. He argues against Stanley & Szabó (2000a)'s criticism to this
approach claiming that if their analysis (where the domain restrictor is attached to the nominal) is
compositional, so it is the one that he defends where C is associated with the whole Q-detP.
Pagin (2005: fn.17) concludes: "however, since neither party of the debate clearly distinguishes between
context dependence and context sensitivity, nor between different versions of compositionality for context
dependence, it may well be that both are right in their way and that Pelletier misinterprets". If Pelletier's
analysis turns out to be the correct one I don't think that the analysis that is going to be proposed in this
chapter would have to be changed radically.

associated semantic value is the set of people in the village" (S&S (2000:257)); in other words, since the contextual variable would be implemented in the Q-det there would be no possibility to refer back to the set of people in the village.[26, 27]

S&S (2000a) and Stanley (2000, 2002) generalize the use of contextual implicit variables to all common nouns[28]. Then, the nominal expression in combination with the contextual variable <student, f(i)> of sentence (44a) would be analyzed as in (44b). This expression will then combine with the Q-det to create a generalized quantifier.

(44a) Every student failed the exam.
(44b) $[< \text{student, f(i)} >]_c = [\text{student}] \cap \{x: x \in c(f)(c(i))\}$ (S&S (2000: 253))

Thus, *every student* in (44a) refers to a contextually restricted set of students (not to the set of students in the whole world or in the universe) which results from intersecting the set of *students* with the set that results from applying the value given to *f* to the value given to *i* by the context. This intersection would give as a result the students in, say, Aristotle's class.

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[26] See Stanley (2002: 372) for more arguments (attributed to Delia Graff) against the theory of implementing the contextual variable on the quantifier.

[27] Nothing is said in S&S (2000) about the way in which adverbial quantification should be treated. I guess they believe nominal quantification and adverbial quantification need not be analysed following the same pattern.

[28] The proposal that I am going to be put forward in this dissertation is in conflict with S&S (2000)'s as well as Stanley (2000, 2002)'s idea that all common nouns appear with a contextual implicit variable. As is made clear in section 2.6, Basque strong quantifiers (both lexically strong and strongly interpreted weaks) always appear with the definite determiner (that I claim to be a contextual domain restrictor when inside Q-detPs (in line with Giannakidou (2004)). The definite determiner is excluded from weak-cardinal quantifiers (see Chapter 3). If the current proposal is on the right track, the fact that D (contextual domain restrictor) does not appear with weak quantifiers shows that (i) weak quantifiers are not contextually restricted and by extension that (ii) the idea that all common nouns appears with a contextual implicit variable can not be correct.
See Chapter 3 for more discussion on whether cardinally interpreted weak quantifiers are contextually restricted or not.

In this dissertation, I will argue (following Giannakidou (2004) -see next section-) that both nominal as well as Q-det restriction must be allowed in order to explain crosslinguistic facts (see §2.6 for Basque data in favour of this argument). Furthermore, crosslinguistic data show that the default is to implement the contextual variable (implicitly or explicitly) on the nominal; restriction on the Q-det on the other hand, will only be assumed if there is evidence for it (e.g. the use of a definite, as is the case in Greek *o kathe*, St'át'imcets *i zí7zeg'-a* or Basque lexically strong quantifiers)[29].

2.5. Giannakidou (2004)'s Proposal:

The three basic assumptions made by Giannakidou (2004) are (i) that Quantificational Phrases are contextually restricted, (ii) that the definite article introduces context sets (Westerståhl (1985)) and, (iii) that definite descriptions can undergo predicative shift (Partee (1987)).

2.5.1. Nominal Restriction:

With these three assumptions in mind, Giannakidou claims that instead of altering the type of the NP argument (à la Matthewson), St'át'imcets data (and of those

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[29] Note that the majority of the languages do not compose Q-dets together with Ds. Giannakidou (2004: 14): "the overt option of domain restricting via D is occasionally also available in languages that exploit the implicit (covert) strategy. Crucially, in these languages D-restriction applies at the level of the Q-det, and not at the nominal, since overt nominal restriction is taken care by *of*". Thanks to Anastasia Giannakidou (p.c.) for discussion on this matter.

languages that embed a DP under a Q-det) suggests that in order for a quantifier to combine with an NP argument, this must be first contextually restricted.

Restriction will be done overtly in the nominal via D (à la Stanley (2000, 2002), S&S (2000a)), which will embody saliency and supply the contextual variable C yielding a generalized quantifier with a contextually specified set as its generator set[30], in other words, the combination of the D and the NP creates a contextually salient set[31]. This analysis explains the definite-like interpretation of St'át'imcets DPs without the need to postulate choice functions which are existentially closed at the highest level (contra Matthewson (1999)). This explains the absence of definite/indefinite distinction in St'át'imcets: In this language, every DP will be contextually restricted and will have unique contextually specified generators, hence St'át'imcets DPs will always be referential and have widest scope.

(45)   DP $\langle\langle e, t\rangle, t\rangle$

  D $\langle\langle e, t\rangle, \langle\langle e, t\rangle, t\rangle\rangle$ NP $\langle e, t\rangle$
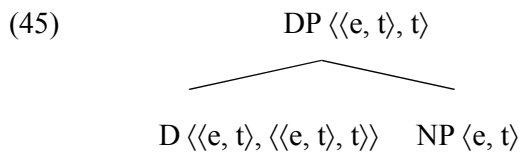
Once we get the combination in (45), Partee (1987)'s type-shifting comes into play and shifts (by means of BE or Id[32]) the GQ of type $\langle\langle e, t\rangle, t\rangle$ (or the individual of

---

[30] See footnote 5.

[31] It might well be the case that St'át'imcets DPs create individuals of type *e*, rather than generalized quantifiers of type $\langle\langle e, t\rangle, t\rangle$. In case this is so, the D would be of type $\langle\langle e, t\rangle, e\rangle$. Nothing relevant for the general analysis changes if we assume that determiners in St'át'imcets create individuals; the DP would be referential and would have widest scope. In fact, this is what I will be assuming for Basque definite determiners (see section 2.6.1.2).

[32] Giannakidou (2004: 10): "Partee (1987) postulates shift to *et* from either a GQ meaning (by applying BE), or a referential meaning (by applying Id). Given that the St'át'imcets DP contains a generator, we might want to identify *X...a* as a definite, as suggested in earlier work by Matthewson, or merely trivialize

type *e*) to an element of predicative type $\langle e, t\rangle$ in order for it to combine with the Q-det (the type the standard theory of generalized quantifiers assumes a Q-det to combine with).

(46a) BE: $\langle\langle e, t\rangle, t\rangle \rightarrow \langle e, t\rangle$: $\lambda P_{et,t}$ $[\lambda x \ [\{x\}\in \ P]]$.

BE is a type shifter functor that is applied to the generalized quantifier meaning of an NP whenever we find the NP is of type $\langle e, t\rangle$. In other words, it applies to a generalized quantifier, finds the singletons that are contained in it and collects their elements in a set.

(46b) Id: $e \rightarrow \langle e, t\rangle$: Id(x) = $\lambda x \ [x{\leq}y]$ or $\lambda x \ [x{=}y]$ in case x is a singularity.

Id takes an individual (singular or plural) and turns it into the set that consists of the single individual identical to that individual. It undoes what ι did via the 'part of' for plurals, and the identity relation for singulars.

Assuming that type-shifters are syntactic elements, in St'át'imcets, the BE (or Id) type-shifter will be covert and its function will be that of a partitive (see ex. (47)). This will allow us to keep the standard GQT while accounting for the St'át'imcets facts: Quantifier Phrases in this language will be partitives.

(47) [tákem i   ∅ smelhmúlhats-a]
      [all   D.pl (of) woman (pl)-D]
      'all of the women'

---

the question of whether it is a definite or an indefinite". In other words, the type shifter can be BE or Id depending on whether the DP is assumed to create a GQ or an *e* type individual (see examples (46a-b) for a description of these type shifters.

Q-detP $\langle\langle e, t\rangle, t\rangle$

Q-det $\langle\langle e, t\rangle, \langle\langle e, t\rangle, t\rangle\rangle$ PP $\langle e, t\rangle$

$\varnothing$ BE

Id[33]

DP $\langle\langle e, t\rangle, t\rangle$

D $\langle\langle e, t\rangle, \langle\langle e, t\rangle, t\rangle\rangle$ NP $\langle e, t\rangle$
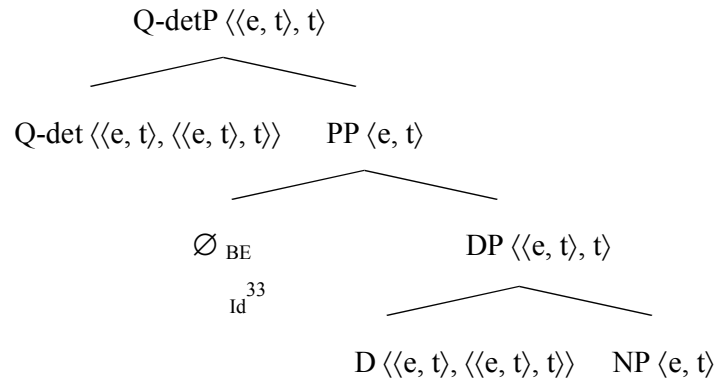
Additional evidence in favour of this analysis comes from the fact that there are no overt partitive forms in St'át'imcets (see Matthewson (2001))[34]. In languages with overt partitive *of* forms, the covert shift (realised by BE or Id as in St'át'imcets) will be blocked and the direct combination of the Q-det and DP will not be possible (Chierchia (1998c)). This assumption is going to be crucial for the proposal that is put forward in this dissertation as will be made explicit in section 2.6 below.

2.5.2. Q-det Restriction:

Apart from the possibility of restricting the nominal, as is the case in St'át'imcets (where restriction happens overtly) or in languages like English, Spanish, Greek or Basque (see section 2.6.1.2), there are also cases where restriction must be postulated to apply to the Q-det itself favouring the analysis put forward in von Fintel

[33] In case the DP is treated as an entity of type *e*. See footnote 31.

[34] Matthewson (2001), in order to apply her quantificational structure crosslinguistically claims that *of* in languages such as English is there just for case reason. However, this has been claimed not to be correct, see section 2.3.3.

(1994, 1998) or Martí (2003) (contra Stanley (2000, 2002), S&S (2000a)). This is, for example, what appears to be happening with Greek *o kathe* or with St'át'imcets *i zí7zeg'-a*. See § 2.6.1.1 for Basque.

(48a) O   kathe fititis   [D Q-det]   (Giannakidou (2004: 12)
       det.sg each students
       Translated as: each student

(48b) o kathe fititis = [kathe (C)] (student)   'each student'

(48c)   Q-detP
                    ╱──────────────╲
              Q-det   NP
           ╱────────╲   fititis
        D   Q-det   student
        o   kathe
        the   every
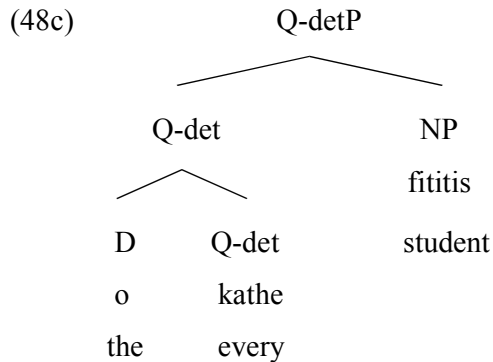
As shown by the structure in (48c)[35], the D attaches to the Q-det to form a new complex Q-det; a complex Q-det that will contain the variable C and will be contextually restricted.

Note that when domain restriction applies to the Q-det, no further definite is allowed. This shows that restriction is already accomplished and that the construction in (49) would yield a type mismatch.

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[35] See section 2.6.1.1, where the Basque data offered provides evidence in favour of the correctness of this analysis.

(49)   * o   kathe o   fititis

       det.sg each det.sg students

    Lit.: 'the each the student'

The example in (49) also shows that the quantificational domain restriction can only happen once, in the quantificational element or in the nominal element.

2.5.3. Subsection Conclusion:

This section has shown that the quantificational domain restriction is needed both in the nominal and in the Q-det (never in the two positions together). The next section presents Basque quantificational data, a language that provides further evidence in favour of Giannakidou's analysis.

2.6. Basque Nominal Quantification

From Chapter 1, we know that the Basque quantifiers are classified in the following way (see also Etxeberria (2002b)):

(50)

Strong Quantifiers: *guzti* (all)*, den* (all)*, gehien* (most)[36]*, bakoitz* (each).[37]

Weak Quantifiers: *batzu(e)k* (some)*, zenbait* (some)*, hainbat* (some)*, asko* (many)*,
gutxi (few)*, ugari* (a lot)*, numerals, *numeral baino gehiago* (more
than numeral)*, numeral baino gutxiago* (less than numeral)*, etc.

One crucial difference between the strong and weak quantifiers is that Basque
strong quantifiers (*guzti* (all)*, den* (all)*, gehien* (most)*, bakoitz* (each)) must necessarily
appear with the article -A/-AK.

(51a) [Ikasle **guzti-ak**]   berandu etorri ziren.
       [student all-D.pl(abs)] late   come aux.past.pl
       'All of the students came late.'

(51b) ∗[Ikasle **guzti**] berandu etorri ziren.

(52a) [Ikasle **gehien-ak**]   berandu etorri ziren.
       [student most-D.pl(abs)] late   come aux.past.pl
       'Most of the students came late.'

(52b) ∗[Ikasle **gehien**] berandu etorri ziren.

---

[36] See section 2.6.2.1.1 where I defend that *gehien* and its crosslinguistic counterparts are not quantifiers
but rather superlative expressions.

[37] There is an element that the Basque linguistics literature has analysed as a universal quantifier: *oro* (cf.
i.e Euskaltzaindia (1993: 110), Artiagoitia (2003)). I treat this element as ambiguous between a real
quantificational interpretation and a reading where it functions as a DP exhaustive modifier (à la Brisson
(1998, 2003)). See section 2.6.2.3.

On the other hand, and in contrast to what happens with strong quantifiers, Basque weak quantifiers (*batzu(e)k* (some), *zenbait* (some), *asko* (many), *gutxi* (few), *ugari* (many), numerals[38], *numeral baino gehiago* (more than numeral N), *numeral baino gutxiago* (less than numeral N)) do not take -A/-AK no matter where the article is placed, as can be observed in the following examples (see Chapter 3).

(53a) [**Zenbait**[39] politikari] berandu iritsi ziren.
       [some   politician] late   arrive aux.pl.past
       'Some politicians arrived late.'

(53b) *[**Zenbait**(-**ak**) politikari(-**ak**)] berandu iritsi ziren.

(54a) [Politikari **asko**] berandu iritsi ziren.
       [politician many] late   arrive aux.pl.past
       'Many politicians arrived late.'

(54b) *[Politikari(-**ak**) **asko**(-**ak**)] berandu iritsi ziren.

Following a crosslinguistic pattern, Basque weak quantifiers can also be interpreted in a strong manner (partitive), in such a case they must appear with the overt (or covert --through context-- see section 2.6.1.2) version of the partitive *of*.

(55) [Ikasle-**etatik**   **gutxi**] berandu iritsi ziren.
      [student-D.pl/of few]   late   arrive aux.pl.past
      'Few of the students arrived late.'

---

[38] Numerals do accept appearing with the definite determiner; in that case, the interpretation is necessarily definite. See Chapter 3, section 3.3.

[39] See Chapter 3, section 3.3, where I try to explain the reason why some weak quantifiers must appear before the noun while others must follow it. See also Artiagoitia (2003).

(56)   [Ikasle-**etatik   asko**] berandu iritsi   ziren.

        [student-D.pl/of many] late   arrive aux.pl.past

        'Many of the students arrived late.'

(57)   [Ikasle-**etatik   batzuk**] berandu iritsi ziren.

        [student-D.pl/of some]   late   arrive aux.pl.past

        'Some of the students arrived late.'

These quantifiers (strongly interpreted weak quantifiers) are necessarily proportional and the partitive *ikasleetatik* (of the students) denotes the set of contextually relevant *students* in (55, 56, 57) (cf. Ladusaw (1982))[40].

2.6.1. Basque Quantifiers and Domain Restriction:

I take the Basque quantificational data presented in the previous section to provide clear evidence for the necessity of both Q-det domain restriction as well as nominal domain restriction. These data supports, I think, the claim that (i) the Q-detP internal D is a domain restrictor[41], (ii) Q-det domain restriction and nominal domain

---

[40] Ladusaw (1982) assumes that *of* plays the role of a 'consist of' function which takes any group-level individual and returns the set of atoms corresponding to the generator set. *Of the students* is then the same type of object as *students*, but instead of denoting the set of all students it denotes the set of all contextually relevant students.

        (i) $[[$of NP$]] = g(a)$ if $[[$NP$]] = I_a$; undefined otherwise

[41] The idea of considering the Q-detP internal Ds domain restrictors can be related to the fact that in many languages determiners have been derived from demonstratives, and demonstratives are very much contextually linked elements. The Spanish determiner for example has been derived from the Latin demonstrative (see Lapesa (1961)). So is also the case in Basque, the definite determiner -A has been historically derived from the distal demonstrative (see Azkarate & Altuna (2001), see also Ch. 4, §4.6.1).

        (i)   hura / (h)a → -a

restriction are needed to explain crosslinguistic facts, and (iii) the standard analysis of GQ can explain quantificational facts crosslinguistically.

2.6.1.1. Basque Lexically Strong Quantifiers:

Unlike in Greek, English or Spanish, all of the Basque inherently strong Q-dets (*guzti* (all)*, den* (all)*, gehien* (most)*, bakoitz* (each)) compose directly with D yielding [NP + Q-det + D] as the only possible grammatical order.

So, in line with Giannakidou's proposal, the composition of a lexically Basque strong quantifier will go as in (58).

(58)

```
                    Q-detP
              ┌────────┴────────┐
             NP               Q-det
           ikasle        ┌──────┴──────┐
                       Q-det          D
                     guzti/den      -a(k)⁴²
                    gehien/bakoitz
```
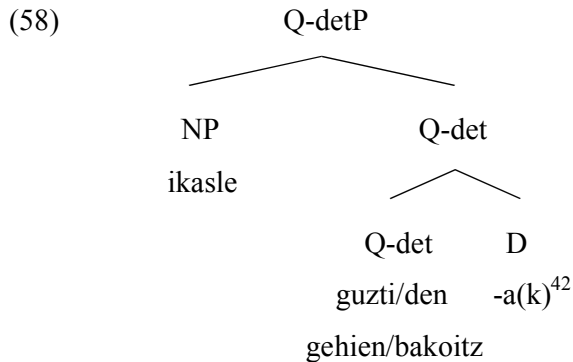
Vangsnes (2001: 271-272): "The demonstrative carries information about the locational orientation of the speaker with respect to the referent of the noun phrase it is contained in. The article, on the other hand, entails something like a default deictic reading: it points to a given referent, but rather than picking out one which is located in certain ways spatially, it merely picks out the most salient one in the discourse."

[42] In Chapter 3 I propose that the base positions of -A and -K are different. Thus, -A will be the definite determiner while -K will be considered the plural marker (contra i.e. Artiagoitia (1998, 2003)); see Chapter 4 for a semantic analysis of the Basque definite determiner -A. The current discussion can be continued without undertaking such an assumption.

The Q-det and D will compose together by means of an adjunction procedure[43]; the domain restriction introduced by the determiner creates a new complex Q-det which will contain the contextual variable C and will be contextually restricted.

Now, an alternative analysis could be to assume that instead of a Quantifier Phrase, what Basque strong quantifiers create are DPs with the structure in (59).

(59)
```
                        DP
                  _____|_____
                QP             D
             ___|___          -ak
           NP       Q
         ikasle    guzti
```
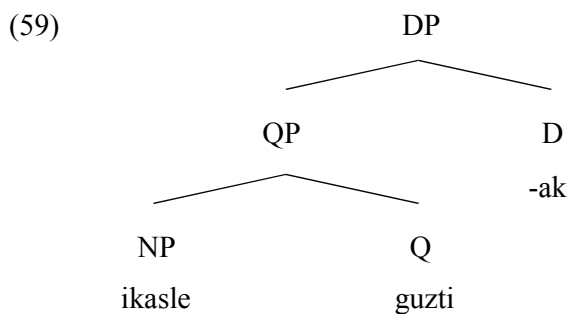
Let us assume, just for the sake of argument, that the structure in (59) is the correct one. If this was so, it should be possible to conjoin two QPs (that is, two [NP+Q] sequences in (59)) under the same single D in the same way that it is possible to conjoin two NPs or two AdjPs under the same D (see also section 2.6.1.3).

NP conjunction
(60a)   [DP [Ikasle] eta [irakasle]-ak]   azterketa garaian   daude.
             [student and teacher]-D.pl(abs) exam   period-(ines.) aux.
         'The students and teachers are in exams period.'

---

[43] Giannakidou (2004: 12) "*o kathe* is a complex determiner and we can view this as incorporation of D to Q-det (perhaps D having moved from a lower NP internal position, or directly adjoining to Q-det)".

AdjP conjunction

(60b) Maiak   [$_{DP}$ [zaldi haundi] eta [elefante txiki]-ak]   ikusi ditu.

Maia-erg   horse big   and elephant small-D.pl(abs) see aux.

'Maia has seen the big horses and small elephants.'

But contrary to what this alternative analysis predicts, the following examples
are completely ungrammatical in Basque.

(61a) *[[Ikasle gehien] eta [irakasle guzti]-ak]   goiz iritsi ziren.

student most and teacher all-D.pl(abs) early arrive aux.pl.past

'All of the students and all of the teachers arrived early (intended).'

(61b) *[[Neska bakoitz] eta [mutil guzti]-ek]   sari bat irabazi zuten.

girl   each and boy all-D.pl(erg) prize one win   aux.pl.

'Each girl and all of the boys won a prize (intended).'

Then, what these sentences come to show is that, as predicted by the analysis put

forward in this chapter, (i) Basque strong quantifiers create Q-detPs and not DPs headed

by the definite determiner, and that (ii) the Basque article --definite determiner-- (at

least in quantificational phrases) is behaving as a contextual variable that composes

together with the Q-det, its function being that of restricting the quantificational

domain.

According to Giannakidou (2004: 8), the D composing with the Q-det should be

correlated to the property of veridicality[44] (a property that requires a non-empty domain)

---

[44] The following definition of *veridicality* is taken from Giannakidou (1998: 132):

and the property of distributivity (a property that would disallow these quantifiers to appear with collective predicates). The fact that D composing with the Q-det should be correlated to both the property of veridicality and the property of distributivity is due to the fact that in Greek and St'át'imcets the quantifiers that show this structure are *o kathe* (each) and *i zí7zeg'a* (each) (but see section 2.3.5 and below). The English quantifier *each* is both veridical and distributive, and Giannakidou believes that these properties also apply to those quantifiers that compose together with D.

This predicts that Basque strong quantifiers should be veridical and distributive. However, Basque strong quantifiers provide evidence that these two properties must not necessarily be obeyed in order for a quantifier to compose directly with D. Furthermore, Matthewson (2001: fn.5) also notes a construction in which St'át'imcets strong quantifiers (not only *i zí7zeg'a* (each)) co-occur with the D "but the order of Q and D is reversed".

(62)   [i   tákem-a smúlhats]   **[D Q-det]** (Matthewson 2001: fn.5)
       [D.pl all-D   woman]
       Translated: all the women

This example would show that not only veridical and distributive quantifiers (it remains to be established whether St'át'imcets *i tákem-a* is veridical but it is clear that it is not necessarily distributive) compose together with the Q-det and that other strong quantifiers can also be composed together with the determiner.

___

(i)   In a context *c*, a determiner is veridical with respect to its NP argument iff the truth of DET NP VP requires that $|NP| \neq \varnothing$ hold in *c*

Basque strong quantifiers behave as predicted when it comes to veridicality and do not license Negative Polarity Items (NPIs).[45]

(63a)   ?∗ Inor   ikusi zuten ikasle guzti-ek   atezaina   abisatu zuten.
              anybody see   aux. student all-D.erg.pl porter-D.abs.sg report   aux.
              'All of the students who saw anyone reported to the porter.'

(63b)   ?∗ Inor   ikusi zuten ikasle den-ek   atezaina   abisatu zuten.
              anybody see   aux. student all-D.erg.pl porter-D.abs.sg report   aux.
              'All of the students who saw anyone reported to the porter.'

(63a)   ?∗ Inor   ikusi zuten ikasle gehien-ek   atezaina   abisatu zuten.
              anybody see   aux. student most-D.erg.pl porter-D.abs.sg report   aux.
              'Most of the students who saw anyone reported to the porter.'

(63a)   ∗ Inor   ikusi zuen ikasle bakoitz-ak   atezaina   abisatu zuten.
              anybody see   aux. student each-D.erg.pl porter-D.abs.sg report   aux.
              'Each student who saw anyone reported to the porter.'

Now, it is also true that all four Basque strong quantifiers are presuppositional in that they presuppose the set denoted by the NP to be a non-empty salient domain. In fact, in the sentences in (64), the set of *akats* (mistakes) is presupposed to be non-empty.

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[45] The vast majority of Basque speakers agree with the data in (63); however, there are some speakers that only judge as ungrammatical the sentence where the Basque inherently distributive *bakoitz* appears (Itziar Laka (p.c.). Even then, as I said before, Basque provides evidence for the fact that both veridicality and distributivity are not necessary conditions for a quantifier to combine together with a determiner since clearly not all Basque strong quantifiers are distributive.

(64a) Akats guzti-ak   aurkitzen badituzu, goxoki bat emango dizut.
       mistake all-D.abs.pl find   if-aux.   candy one give   aux.
       'If you find all the mistakes, I'll give you a candy.'

(64b) Akats den-ak   aurkitzen badituzu, goxoki bat emango dizut.
       mistake all-D.abs.pl find   if-aux.   candy one give   aux.
       'If you find all the mistakes, I'll give you a candy.'

(64c) Akats gehien-ak   aurkitzen badituzu, goxoki bat emango dizut.
       mistake most-D.abs.pl find   if-aux.   candy one give   aux.
       'If you find most of the mistakes, I'll give you a candy.'

(16c) Ikasle bakoitzak   liburu bat irakurtzen badu, goxoki bat emango diot.[46]
       student each-D.erg.sg book a   read   if-aux candy a   give   aux.
       'If each student reads a book, I'll give (each student) a candy.'

However, the prediction is not borne out when it comes to distributivity. I have argued elsewhere (Etxeberria (2002a)) that distributive interpretation is closely related to singularity (cf. Gil (1995)). The single Basque strong quantifier that is inherently distributive is *bakoitz*, crucially, the only strong quantifier that agrees with the verb in singular. The rest of strong quantifiers, those that agree with the verb in plural, can force both distributive as well as collective interpretations.

(65a) Ikasle guzti-ek/den-ek/gehien-ek abesti bat   abestu zuten.
       student all/all/most-D.erg.pl   song one-abs.sg sing   aux
       'All/all/most of the students sang a song.'
                        √ DISTRIBUTIVE
                        √ COLLECTIVE

---

[46] See Chapter 1, footnote 17.

(65a) Ikasle bakoitz-ak   abesti bat   abestu zuten.

 student each-D.erg.sg   song one-abs.sg sing   aux

 'All/all/most of the students sang a song.'

　　　　　　　　√ DISTRIBUTIVE

　　　　　　　　∗ COLLECTIVE

An argument in favour of concluding that distributivity is related to singularity is the following: most Basque weak quantifiers (*asko* -many-, *zenbait* -some-, *gutxi* -few-, etc.) can agree with the verb in plural or in singular (despite their plural interpretation). In singular cases the only possible interpretation is the distributive one as the example in (66) shows.

(66)　　Ikasle askok   abestu **zuen**[47] abesti bat.

 student many   sing   aux.sg   song one-abs.sg

 'Many students sang a song.'

　　　　　　　　√ DISTRIBUTIVE

　　　　　　　　∗ COLLECTIVE

However, the differences that have just been sketched out (between Giannakidou's predictions and Basque data) do not change the basic proposal of this chapter and dissertation: the D that appears in QPs is a contextual domain restrictor. Actually, note that when contextualisation happens at the Q-det level (which is the case with Basque strong quantifiers), the addition of another definite results in

---

[47] The plural form of the auxiliary would be *zuten*; instead of *zuen* as in (66). Note also that these weak quantifiers must usually appear in preverbal position (see Etxepare (2000)). Focused phrases occur immediately to the left of the verb in Basque, see i.e. Ortiz de Urbina (1999). For analyses of focus in Basque, see de Rijk (1978), Ortiz de Urbina (1989a, 1999), Etxepare (1997), Elordieta (2000), Etxepare & Ortiz de Urbina (2003), Arregi (2003), Irurtzun (2004) among many others.

ungrammaticality due to type mismatch, since the Q-det would receive an *e* type

argument rather than an ⟨e, t⟩ type argument, as required.

(67a) ∗ ikasle-**ak**   guzti-**ak**

           student-D.pl all-D.pl

        'The all the students'

(67b) ∗ ikasle-**ak**   den-**ak**

           student-D.pl all-D.pl

        'The all the students'

(67c) ∗ ikasle-**ak**   gehien-**ak**

           student-D.pl most-D.pl

        'The most the students'

(67d) ∗ ikasle-**a**   bakoitz-**a**

           student-D.pl each-D.pl

        'The each the students'

As expected, and since the quantificational domain is already restricted, the

overt partitive form will also be out.

(68a) ∗ ikasle-**etatik**   guzti-**ak**

           student-the.pl/of all-D.pl

        'The all of the students'

(68b) ∗ ikasle-**etatik**   den-**ak**

           student-the.pl/of all-D.pl

        'The all of the students'

(68c) ?? ikasle-**etatik**   gehien-**ak**[48]

   student-the.pl/of most-D.pl

  'The most of the students'

(68d) ∗ ikasle-**etatik**   bakoitz-**a**

   student-the.pl/of each-D.pl

  'The each of the students'

   Observe that the partitive structure of the examples in (68) does not produce any kind of type mismatch. In other words, the partitive *ikasleetatik* (lit.: student the.pl of) would yield the correct argument (an ⟨e, t⟩ type predicative argument) for the quantifier to quantify over; but still, the constructions in (68) are out. Thus, the ungrammaticality of these sentences must be (as correctly predicted by this analysis) due to the fact that domain restriction is already fulfilled by means of the D that appears together with the strong Q-dets. This should be taken as further evidence in favour of the fact that quantificational domain restriction can only happen once, and not twice as in the ungrammatical examples in (68).

   Note that the constructions in (68) become grammatical when *ikasleetatik* (lit.: student the.pl of) and the strong Q-dets *guztiak/denak/gehienak/bakoitza* are pronounced with a pause in between, i.e. separated by a comma. However, the constructions in (69b-c) and the ones in (68) can not be said to be parallel; when pronounced with a pause, apart from being grammatical as the example in (69b) shows, quantifiers are allowed to float, as in (69c), but with no pause, the sentences are completely out as the example in (69a) shows:

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[48] See section 2.6.2.1.1.

(69a) ∗ Ikasleetatik   guztiak   berandu iritsi ziren.
          students-D.pl/of all-D.abs.pl late   arrive aux
          'Lit.: The all of the students arrived late.'

(69b) Ikasleetatik,   guztiak   berandu iritsi ziren.
          students-D.pl/of all-Dabs.pl   late   arrive aux
          'Of the students, all (of them) arrived late.

(69c) Ikasleetatik,   berandu iritsi ziren guztiak.
          students-D.pl/of late   arrive aux   all-D.abs.pl
          'Of the students, all (of them) arrived late.

What the examples in (69) suggest is that in fact we are not talking about the same
construction:

- The ones in (69a) and (68) would be real quantifiers and they behave as such
  in that (as predicted) they do not accept further restriction, since domain
  restriction has already taken place in the Q-det.

- In the examples in (69b) and (69c) on the other hand, there seems to be a left
  dislocation of the partitive and the elements do not form a single constituent.

Basque also possesses another partitive construction (-*etako*) parallel in meaning
to -*etatik*. Unlike the latter (see (69b-69c)), -*etako* forces the whole structure to be
necessarily a constituent and this is why the sentences in (70a-b-c) are out[49].

---

[49] Thanks to Ricardo Etxepare (p.c.) for pointing this out to me.

(70a) ∗ Ikasleetako   guztiak   berandu etorri ziren.
         students-of the all-D.abs.pl late   arrive aux
       'Lit.: The all of the students arrived late.'

(70b) ∗ Ikasleetako,   guztiak   berandu etorri ziren.
         students-of the all-D.abs.pl late   arrive aux
       'Of the students, all (of them) arrived late.'

(70c) ∗ Ikasleetako,   berandu etorri ziren guztiak.
         students-of the late   arrive aux   all-D.abs.pl
       'Of the students, all (of them) arrived late.

The proposal put forward in this dissertation avoids a problem that Matthewson (2001)'s analysis would have to face when applied to Basque nominals. The Basque definite article (-A/-AK) does not only create *e* type elements and can also appear at the quantificational ($\langle\langle e,\ t\rangle,\ t\rangle$) or at the predicative ($\langle e,\ t\rangle$) type, as expected.

(71)   **Quantificational:**
        Irakasle guzti-ak eta ikasle-**a**   goiz iritsi dira.
        professor all-D.pl and student-D.sg early arrive aux.
        'All of the professors and the student have arrived early.'

(72)   **Predicative:**
        Esther bizkaitarr-**a**   da.
        Esther Bizkaian-D.sg is
        'Esther is (a) Bizkaian.'

2.6.1.2. Strongly Interpreted Weak Quantifiers:

In opposition to what happens with Basque lexically strong quantifiers, strongly interpreted weak quantifiers incorporate partitive forms to be interpreted proportionally. As is the case in i.e. English, Greek, Catalan or Spanish, nominal restriction happens overtly (or pragmatically --see below--) with partitive *of+the* (Basque *-etatik*) which consists of the definite determiner plus the preposition *of*.

(73) [Ikasle-etatik **gutxi**] berandu iritsi ziren.   (=(55))
     [student-D.pl/of few]   late   arrive aux.pl.past
     'Few of the students arrived late.'

(74) [Ikasle-etatik **asko**] berandu iritsi ziren.   (=(56))
     [student-D.pl/of many] late   arrive aux.pl.past
     'Many of the students arrived late.'

(75) [Ikasle-etatik **batzuk**] berandu iritsi ziren.   (=(57))
     [student-D.pl/of some]   late   arrive aux.pl.past
     'Some of the students arrived late.'

As just mentioned, apart from the overt partitive version, weak quantifiers can also obtain a proportional interpretation even when the partitive construction is not overt. This dissertation assumes that weak quantifiers can obtain both cardinal/weak (see Chapter 3) interpretations as well as proportional/strong ones.

(76) [Ikasle **gutxi**] iritsi ziren berandu.[50]
[student few] arrive aux.pl.past late
'Few (of the) students arrived late.'

(77) [Ikasle **asko**] berandu iritsi ziren.
[student many] late arrive aux.pl.past
'Many (of the) students arrived late.'

(78) [Ikasle **batzuk**] berandu iritsi ziren.
[student some] late arrive aux.pl.past
'Some (of the) students arrived late.'

It is a standard assumption that the proportional/strong interpretation of weak quantifiers is obtained through an (overt/covert) partitive construction.

- Partee (1988: 16): "These essentially quantificational cases are almost paraphrasable by partitives even when there is no partitive structure."

- de Hoop (1992: 39): "On its existential reading, some is unstressed. On its partitive reading, the meaning of some can be paraphrased as 'some, but not others' and hence, it is next to synonymous with the 'some of the' interpretation."

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[50] See Chapter 1, footnote 22.

However, the present proposal departs from this standard assumption (see Chapter 3) and claims instead, following Büring (1996) (see also Partee (1991a)), that the proportional/strong interpretation in examples such as those in (76-78) (unless there is an overt partitive construction as in (73-75)) is not obtained by means of a covert partitive construction but rather it is obtained pragmatically.

Büring (1996) approaches the covert partitive phenomenon from a pragmatic point of view and proposes that weak quantifiers are not ambiguous; whether they are presuppositional (partitive) or not depends on the Topic/Focus/Brackground Structure (TFBS).[51]

Büring (1996: 20) argues that sentences of the kind in (79) involve two accents, the first of which is not a focus accent, but a contrastive topic accent. Such a sentence triggers the reconstructions of a particular set of potential contexts, the ones obtained by substituting *some* for its contextually relevant alternatives given in (80).

(79)   SOME students drank BEER.

(80a)   What did all of the cowboys drink?
(80b)   What did every cowboy drink?
(80c)   What did most cowboys drink?
(80d)   What did many cowboys drink?
        ….

This way, there is no need to postulate a covert version of the partitive; those apparently weak quantifiers that form overt partitive constructions (as in (73-75)) will

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[51] See Chapter 4, section 4.2 for an extended view of Büring's ideas.

be considered strong quantifiers (as has been already claimed, see also below). The presuppositional reading emerges as a result of the contexts required pragmatically by the sentence.

In Basque, the overt partitive form -*etatik* (which forms necessarily strong quantifier) is divided between the definite determiner -A that is not seen due to assimilation with the plural marker -*eta*[52] (the usual plural marker is -*k*), and finally the ablative marker -*tik*[53]. In Basque, case is marked by means of suffixes; morphologically, it is possible to distinguish between the indeterminate and the determinate paradigms[54].

(81)

	indeterminate	determinate sg.	determinate pl.
Ergative	etxe[55]-k	etxe-ak	etxe-ek
Ablative	etxe-ta-tik	etxe-tik	**etxe-eta-tik**

The fact that the definite determiner is also included in -*etatik* can be noticed from the following: It is known that partitive constructions like the ones we are considering denote the set of all contextually relevant *houses* (in this case) and we are arguing that for such constructions the definite determiner is necessary. Now, in

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[52] See Azkarate & Altuna (2001) for the historical analysis of the plurality marker -*eta*.

[53] See Eguzkitza (1997).

[54] This difference is usually addressed as *indefinite* vs. *definite* (see i.e. Hualde & Ortiz de Urbina (2003)). In this dissertation I use the terms *indeterminate* and *determinate* not to mix them with the terms definite and the indefinite determiners.

[55] The meaning of *etxe* is 'house'.

principle it would seem possible to create a partitive with the indeterminate form of the ablative, but as the example in (82a) shows, it is not.

(82a) ∗ etxe-ta-tik   asko
          house-pl.-abl many
(82b) etxe-eta-tik   asko
          house-D+pl.-abl many

Thus, -*eta* should be taken as a portmanteau morpheme that marks features such as number and definiteness in a single morpheme.

As the structure in (83) shows, the partitives in (73), (74) and (75) are the typical partitive constructions where first, the combination of the NP and the D (the contextual restrictor) creates an individual of type *e*. The Basque partitive suffix -*tik* will be the overt type shifter (equal to the function fulfilled by Id[56]) that takes its complement of type *e* and shifts it back to $\langle e, t \rangle$ so that the quantifier is taking the proper type argument. From this last combination, we get a generalized quantifier of type $\langle \langle e, t \rangle, t \rangle$. Something like *ikasleetatik* (lit.: student the.pl of) will thus be the same type of object as the noun *ikasle* (student), but instead of denoting the set of all students, denotes the set of all contextually relevant students (Ladusaw (1982)).

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[56] See example (46b).

74

(83)　　　　　　　　　　　　　　　　Q-detP ⟨⟨e, t⟩, t⟩

　　　　　　　　　　　　　　　PP ⟨e, t⟩　　　　　Q-det ⟨⟨e, t⟩, ⟨⟨e, t⟩, t⟩⟩

　　　　　　　　　　DP e　　　　　　　　P (-tik)[57]
　　　　　　　　　　　　　　　　　　　　　⟨e, ⟨e, t⟩⟩

　　　　NP ⟨e, t⟩　　　　　D ⟨⟨e, t⟩, e⟩
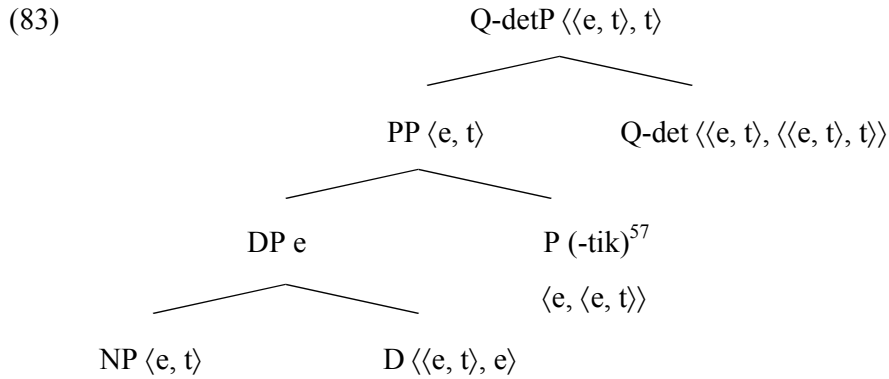
Strongly interpreted weak quantifiers (partitive and proportional), just like lexical strong quantifiers, are also presuppositional and the set denoted by the NP must be non-empty and salient. In the sentences in (84), the set of *aldizkari* (magazine) is presupposed to be non-empty.

(84a)　Aldizkari-etatik　asko　irakurtzen badituzu, 150 euro lortuko dituzu.
　　　　Magazine-Dpl/of many　read　　　if-aux.　　　euro get　　aux.
　　　　'If you read many of the magazines, you'll get 150 euros.'

(84b)　Aldizkari-etatik　　gutxi irakurtzen badituzu, 150 euro lortuko dituzu.
　　　　Magazine-D.pl/of few　read　　　if-aux.　　　euro get　　aux.
　　　　'If you read few of the magazines, you'll get 150 euros.'

---

[57] Following Russell (1905)'s idea (see Neale (1990)), it could also be possible to treat D (definite article) as a kind of universal quantifier with a contextually specified set as its generator. For a sentence like (i), Russell gives the logical form in (ii), according to which a definite description in a sentence involves a claim of existence, a uniqueness claim, and a predicative claim:

　　　(i)　　　The P is Q
　　　(ii)　　　∃x (P(x) &∀y (P(y) → x=y) & G(x))

In such a case, NP+D would create a GQ and the function fulfilled by *-tik* would be that of BE (which applies to a generalized quantifier, finds the singletons that are contained in it and collects their elements in a set, that is, it takes a GQ of type ⟨⟨e, t⟩, t⟩ and returns a set of type ⟨e, t⟩) in order to get a correct type argument for the quantifier to quantify over. See example (46a).
See Strawson (1950) for some problems Russell's analysis has to face. This dissertation assumes that the definite article creates referential (individuals and GQs) as well as predicative readings (à la Strawson).

(84c)   Aldizkari-etatik   batzuk irakurtzen badituzu, 150euro lortuko dituzu.

Magazine-D.pl/of some   read   if-aux.   euro get   aux.

'If you read some of the magazines, you'll get 150 euros.'

As was the case with Basque lexically strong quantifiers, and as predicted by the fact that strongly interpreted weak quantifiers are also contextually restricted (since they are taken to be quantifiers), further definites will not be allowed.

(85a)   ∗ Ikasleetatik   asko-**ak**

student-D.pl/of many-D

'The many of the students'

(85b)   ∗ Ikasleetatik   gutxi-**ak**

student-D.pl/of few-D

'The few of the students'

(85c)   ∗ Ikasleetatik   zenbait-**ak**

student-D.pl/of some-D

'The some of the students'

Note also the difference between the structure offered for the quantifiers of St'át'imcets (see ex. (47)) and the one we are offering for Basque strongly interpreted weak ones. Recall that St'át'imcets does not possess overt partitive forms and a covert type shifter has been proposed in order for the Q-det to get an argument of the correct type. On the contrary, Basque does possess an overt partitive form (-*tik*) and this excludes the possibility of covertly type-shifting the contextually restricted noun as the examples in (86) clearly show.

(86a) * Ikasle-**ak** ∅ asko.

       student-D.pl many

       'Many the students'

(86b) * Ikasle-**ak** ∅ gutxi.

       student-D.pl few

       'Few the students'

(86c) * Ikasle-**ak** ∅ zenbait.

       student-D.pl some

       'Some the students'

Thus, it seems correct to conclude that:

(i)   contextual restriction happens only once,

(ii)   when domain restriction happens in the Q-det partitive forms (that restrict the nominal expression) are not allowed and vice versa and,

(iii)   Giannakidou (2004)'s proposal is correct.

The following subsection addresses the different compositional structures shown by the Basque lexically strong quantifiers and strongly interpreted weak quantifiers respectively. While the former compose the Q-det and the definite determiner (which plays the role of the domain restrictor on the Q-det) together, the latter create partitive constructions where the partitive *-etatik* (lit.: the.pl of) is attached to the nominal element restricting the nominal.

2.6.1.3. Two Ways to Construct Strong Quantifiers:

As has been made explicit, lexically strong quantifiers and strongly interpreted weak quantifiers behave differently in that the former restrict the Q-det while the latter create partitive structures and restrict the nominal. The reason why this is so may be due to the fact that Basque lexically strong quantifiers historically derive from adjectives and adjectives in Basque necessarily appear with -A/-AK[58].

Trask (2001:128) gives the following example: "In traditional Basque society, a farmhouse always has a name, and a resident of a house is commonly addressed, and referred to, by the house name. Thus Yvan Labéguerie of Milafranga is addressed by the men of the village as *Bakoitza* (unique), the name of his family house"[59]. There is no doubt that in this case *bakoitza* behaves as an adjective. *Guzti* has also been used as an adjective, mainly because the suffix *-ti* is used to form adjectives: *beldur* (fear) + *ti* = *beldurti* (coward).

Some authors do still maintain that what I treat as lexically strong quantifiers are not quantifiers but simple adjectives. Following this line of reasoning Trask (2001: 106) claims that "certain words with quantifier-like meanings are strictly adjectives, including *guzti-guzi* 'all', *bakoitz* 'each', *gehien* 'most'…"[60].

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[58] Thanks to Joseba Lakarra for discussion on this point.

[59] See *Orotariko Euskal Hiztegia* for more examples of this kind.

[60] Artiagoitia (2003: 4) takes Trask's argument as valid.

I do agree with the fact that what I described as Basque lexically strong quantifiers have been historically used as adjectives, but I believe that this usage is nowadays lost (see Chapter 1). The implementation of such a claim in terms of type theory would give us something along the following lines.

(87)

$$
\begin{array}{c}
\text{DP e} \\
\diagup \qquad \diagdown \\
\text{NP } \langle e, t \rangle \qquad\qquad \text{-a/-ak } \langle\langle e, t \rangle, e \rangle \\
\diagup \quad \diagdown \\
\text{N } \langle e, t \rangle \qquad \text{AP } \langle\langle e, t \rangle, \langle e, t \rangle\rangle \\
\textit{guzti} \text{ (all) / } \textit{itsusi} \text{ (ugly)}
\end{array}
$$
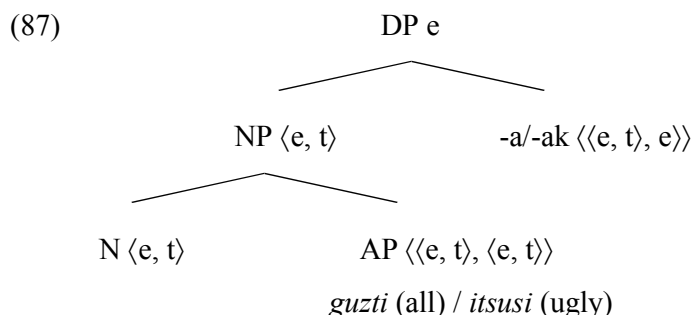
In (87) the common noun of type $\langle e, t \rangle$ combines with the adjective (standardly assumed to be) of type $\langle\langle e, t \rangle, \langle e, t \rangle\rangle$ to create another one place predicate which combined with the article -A/-AK would give as a result an individual of type e[61].

One of the problems for this analysis is that it is already an established fact that Basque quantifiers create GQs (sets of sets of type $\langle\langle e, t \rangle, t \rangle$) (see Chapter 1 as well as Etxeberria (2002b)). If that is the case, and if we continue assuming that the so called Basque strong quantifiers are 'strictly adjectives', the article -A/-AK would have to be the element that forces the whole phrase to be a generalized quantifier and it would thus have to be of type $\langle\langle e, t \rangle, \langle\langle e, t \rangle, t \rangle\rangle$ instead of $\langle\langle e, t \rangle, e \rangle$ as example (88) shows.

---

[61] The reason why I say that -A/-AK creates an individual of type e is because I do assume that a phrase like *mutil lodia/ak* (the fat boy/boys) denotes a (singular or plural) individual. See Link (1983), see also Chapter 4.

(88)

DP ⟨⟨e, t⟩, t⟩

NP ⟨e, t⟩   -a/-ak ⟨⟨e, t⟩, ⟨⟨e, t⟩, t⟩⟩

N ⟨e, t⟩   AP ⟨⟨e, t⟩, ⟨e, t⟩⟩
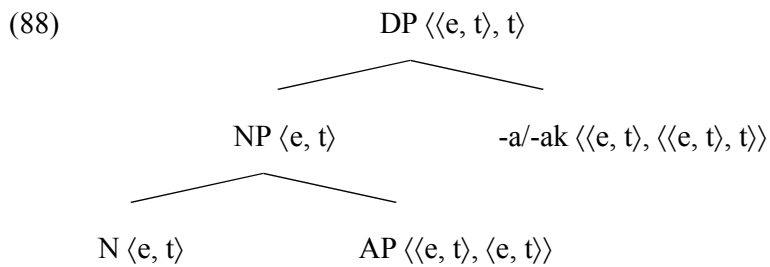
In the compositional structure introduced in (88) the combination of the common noun and the adjective yields a one-place predicate of type ⟨e, t⟩.

However, if we have a model composed of four boys like the one defined in (89), the combination of *mutil* and *gehien* does not denote a single set of type ⟨e, t⟩ (as ex. (88) shows),

(89)   M = {a, b, c, d}

it would denote something similar to what is described in (90) instead.

(90)   *mutil gehien* = {{a, b, c}, {a, b, d}, {a, c, d}, {b, c, d}, {a, b, c, d}}

A second problem that this analysis would have to face is that *guzti* and the like do not behave as simple adjectives. Adjectives can interchange their position while the sentence continues being equally grammatical (example (91) is taken from Euskaltzaindia (1993: 119)[62].

---

[62] Euskaltzaindia (1993:118): "*Zer gertatzen da izen baten ondoan izenondo bat baino gehiago jarri nahi dugularik? Zer ordenatan jartzen dira hauek? Lege zehatzik ez den arren...*" (What happens when we want to put more than one adjective beside a noun? What order do they follow? Even though there is no specific rule…)

(91a) Herri   txiki   polit-a.
       village small   nice
       'A small nice village'
(91b) Herri polit txikia.
       'A nice small village'

A strong quantifier on the other hand cannot change positions with an adjective as example (92) shows.

(92a) Herri   txiki guzti-ak.
       village small all-D.pl
       'Most small villages.'
(92b) ∗ Herri   guzti txiki-ak
         village all   small-D.pl

It could be argued that the so called strong quantifiers are *degree* adjectives (a concept that is quite closed to quantification) since in Basque this kind of adjectives must always appear last in the adjectival string. A simple way to express degree is the process of reduplication.

(93a) Ur   bero zikin-zikina.
       water hot   dirty-dirty
       'Dirty-dirty hot water.'
(93b) ∗ Ur   zikin-zikin beroa
         water dirty-dirty hot

(94a) Ur   zikin bero-beroa.
       water dirty hot-hot
       'Hot-hot dirty water.'

(94b) *Ur   bero-bero zikina.
        water hot-hot   dirty

But if we assume that *guzti*, *den*, *gehien*, and *bakoitz* are degree quantifiers due to the fact that they must always occupy the last position in the adjectival string, what are they degrees of? In a sentence like *ikasle guztiak berandu etorri dira* (all the students came late) *guzti* does not measure the degree of being student. Moreover, (95) is not ungrammatical, contra prediction.

(95)   Ur   zikin-zikin guzti-a
       water dirty-dirty all-D.sg
       'All the dirty-dirty water.'

Further evidence against the claim that things like *guzti*, *den*, etc. are adjectives comes from their impossibility to appear in positions where adjectives are allowed, i.e. predicative positions (see Higgimbotham (1987)).

(96a) Lapurrak azkarrak   ziren.
       thief-D.pl smart-D.pl be
       'The thieves were smart.'

(96b) *Lapurrak **guztiak/denak/bakoitza**   ziren/zen.
         thief-D.pl all-D.pl/all-D.pl/each-D.sg be.pl/be.sg
        'The thieves were all/all/each.'

This section has first introduced and then given some arguments against the possibility of considering Basque strong quantifiers adjectives.

The next section deals with two residual cases: (i) Spanish *la mayoría de los NP* appears to be problematic for the proposal put forward in this Chapter due to the fact that it seems to restrict its quantificational domain twice; the counterparts of English *most* in Spanish, Catalan, Dutch, Basque etc. are treated in section 2.6.2.1, (ii) section 2.6.3 tries to account for the Basque constructions where *denak* (all-D.pl) and *guztiak* (all-D.pl) appear directly combined with a DP formed by a demonstrative (*mutil hauek guztiak* --lit.: boy these all-D.pl--), as well as the Basque constructions where *oro* (all) -- see footnote 37--, an element that can combine directly both with a definite DP or a bare noun.

2.6.2. Some (Crosslinguistic) Residual Cases:

2.6.2.1. *Most* as a Superlative Crosslinguistically:

Crosslinguistically, there seems to be at least one counter argument against the claim that quantifiers can only be restricted once and that the domain restrictor (the definite determiner) can not appear in both the nominal and the quantifier at the same time. The counterpart of English *most* in Spanish, Catalan, Dutch, Basque (see section

2.6.2.1.1) etc. besides being necessarily partitive also needs to appear with a determiner at the beginning of the quantificational expression.

Let us concentrate first on the Spanish counterpart of *most* which happens to be necessarily partitive but quite unexpectedly it also needs a D at the beginning of the construction as can be observed in the following examples.

(97a)   **La**   mayoría **de los**   estudiantes suspendieron el   examen.
      D.sg majority of D.pl students   failed   the exam
      Lit.: 'The(sg) most of the(pl) students failed the exam.'

(97b)   **La**   mayoría de **la**   gente   llega   tarde a las   reuniones.
      D.sg majority of D.sg   people   arrive late   to the.pl meetings
      Lit.: 'The(sg) most of the(sg) people arrives late to the meetings.'

If we follow the reasoning of the argumentation presented in this chapter (and if this argumentation happens to be on the right track) this construction should not be grammatical since contextual domain restriction can only take place once: in the quantificational element, or in the nominal element, but never in both elements at the same time. This property makes *la mayoría de DP* different from the rest of Spanish (as well as other languages i.e. Basque) strong quantifiers (i.e. *cada chico* --each boy--, *todo chico* --every boy--, *muchos de los chicos* --many of the boys--) which strictly follow what the current analysis predicts.

(98a)   * **Los**   muchos **de los**   turistas estaban en la   playa.
       D.pl   many   of D.pl tourists were   in the.sg beach
      Lit.: 'The many of the students were on the beach.'

(98b) * La   policía no detuvo a **el/los**   todo **de los**   traficantes.

  D.sg police neg. arrest to D.sg/pl all   of D.pl drug-dealers

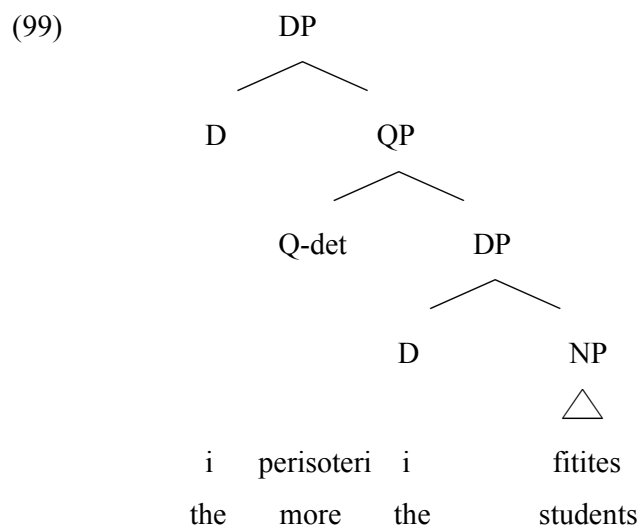 Lit.: 'The police did not arrest the all of the drug-dealers.'

In (98a), the partitive *muchos de los NP* can not appear with an extra D at the beginning of the construction, hence the ungrammaticality. In (98b), on the other hand, the quantifier *todo* can not appear neither with the D at the beginning of the construction nor the partitive form (nor with the two together), which would show that this quantifier restricts its domain covertly (on the nominal element, see footnote 29). Since the domain restrictor has already taken place covertly, no other restrictor is needed, hence the ungrammaticality of (98c) --D at the beginning of the construction-- and (98d)-- partitive-- as well[63].

(98c) * La   policía no detuvo a **el/los**   todo traficantes.

  D.sg police neg. arrest to D.sg/pl all   drug-dealers

  Lit.: 'The police did not arrest the all drug-dealers.'

(98d) * La   policía no detuvo a todo **de los**   traficantes.

  D.sg police neg. arrest to all   of D.pl drug-dealers

  Lit.: 'The police did not arrest all of the drug-dealers.'

Something similar to what happens in Spanish with *la mayoría de los NP* seems also to be happening with Greek *i perissoteri* ('most') (Giannakidou 2004: 13) "which exhibits the D QP order while at the same time optionally allowing a definite argument". Giannakidou solves the problem of Greek *i perissoteri* appealing to definite

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[63] The same explanation applies to English *every*.

reduplication (overwhelming in Greek) and proposes the following structure where *i perissoteri i fitites* is treated as a DP constituent and not a quantifier.

(99)

```
                    DP
                   /  \
                  D    QP
                      /  \
                  Q-det   DP
                         /  \
                        D    NP
                             △
         i   perisoteri  i        fitites
        the    more     the       students
```

This solution might appear initially appropriate for Spanish if we only look at sentences like the one in (97b) where both Ds are equal, singular feminine definite determiner *la*. However, Giannakidou's idea does not seem to be easily applicable to all the cases where *la mayoría de DP* appears. In the example in (97a) i.e., the first D does not depend on the second D (the one inside the partitive) and it might well be the case that they are different. In fact, they look as though they are different, note that *la* is the Spanish singular feminine definite determiner while *los* is the plural masculine form of the Spanish definite determiner[64].

A possible general solution that I consider might be on the right track is the one outlined by Moltmann (to appear: fn. 25): "Perhaps *most* is not an ordinary quantifier at

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[64] Utpal Lahiri (p.c.) suggests that it may be the case that in Spanish *la mayoria de DP* only the definite feature (no number, no gender) of the determiner is reduplicated.

all with a meaning approximating something like *more than half* (Barwise & Cooper (1981)), but rather has the status of a referential expression meaning something like 'the greatest relevant subgroup or subquantity' of the entity in question, just like the comparative superlative *the most*".

Now, if we take this analysis seriously, there seems to be a clear relation between the behaviour shown by the counterparts of *most* crosslinguistically[65]. In fact, it does not seem to be a coincidence that:

(100a) Basque *gehi-en* is the superlative form of the comparative *gehi-ago* (more); in fact, *-en* is the suffix that Basque uses to form superlatives; then, to this superlative the Basque D -a/-ak is added (see next section).

(100b) Greek *i* is attached to the comparative form to get the superlative *i perisoteri i NP*[66].

(100c) Spanish *la mayoria de DP* does not seem to be a case of reduplication (see above), in fact, Spanish does not provide reduplication structures with Ds.

(100d) French *la plupart de(s) NP* seems to be behaving just like the Spanish *la mayoria de DP*.

(100e) Catalan does not make use of definite reduplication and *la majoria dels NP* behaves just like the Spanish and French counterparts.[67]

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[65] Many languages express *most* by means of a partitive. If as I defend these elements crosslinguistically are not quantifiers but superlatives; the example that showed (*most NP*) that the Predicate Logic was unable to express quantificational expressions and that the Generalized Quantifier Theory was necessary does not appear to be so general.
It might well be the case that English *most of the NP* (not *most NP*) does not behave as a superlative and is really a quantifier. Notice that this structure never accepts a definite determiner at the beginning (∗*the most of the students*), and notice also that English does have a superlative *the most*. This is just a suggestion; I do not have an interesting answer at the moment.

[66] Thanks to Anastasia Giannakidou (p.c.) for help with the Greek data.

[67] Note that in both Catalan and French the partitive construction is a single element: *des* and *dels* respectively. These partitive forms have been claimed to be divided into the partitive preposition and the definite determiner.

(100f) Dutch *de meerderheid van de NP* (lit.: the most of the NP)[68] shows the same structure as the Spanish, French and Catalan counterparts.

2.6.2.1.1. A Closer Look at Basque *Gehien*:

Up to this point, Basque *gehien* has been treated as a generalized quantifier. However, this section provides evidence in favour of the idea that this element is not a real quantifier, but rather, a superlative (and hence should be analysed as such).

In Basque, adjectives are compared by means of suffixation; the superlative form takes the suffix *-en* as shown by the example (101b).

(101a) Ikasle   altua Jon da.
        student tall-D Jon is
        'The tall student is Jon.'
(101b) Ikasle   altu-**en**-a   Jon da.
        student tall-sup.-D Jon is
        'The tallest student is Jon.'

Usually, the noun phrase representing the group being compared is uninflected as in the example in (101b). However, it can also bear the partitive case *-rik* as in (101c), take the partitive construction (ablative case) *-etatik* (101d) or the locative suffix (101e).

(101c) Ikasle-**rik**   altu-**en**-a   Jon da.

      student-part. tall-sup.-D Jon is

      'The tallest student is Jon.'

(101d) Ikasle-**etatik** altu-**en**-a   Jon da.

      student-the of tall-sup.-D Jon is

      'The tallest (of the) student is Jon.'

(101e) Ikasle-**etan** altu-**en**-a   Jon da.

      Student-loc. tall-sup.-D Jon is

      'The tallest student is Jon.'

Let us now concentrate on the behaviour shown by Basque *gehien*. *Gehi* means *plus* in Basque and its comparative form is created by means of the comparative suffix: *-ago*. For the superlative form, the suffix *-en* is used, then, to this superlative the Basque D is added to get the final form in (102).

(102a) Diputatu **gehi-en-ak**   berandu iritsi ziren   Legebiltzarrera.

      M.P.   most-sup.-D.pl late   arrive aux.past Parliament

      'Most of the MPs arrived late to the Parliament.'

(102b) Mikelek   ikasle **gehi-en-ak**   goxokiak   jaten   ikusi zituen.

      Mikel-erg student most-sup.-D.pl candy-D.pl eating see   aux.past

      'Mikel saw most of the students eating candies.'

Apart from the use given to *gehien* in examples as the ones above, *gehien* can appear without the article and still create superlative forms[69]. According to Hualde & Ortiz de Urbina (2003b: 609), there is a difference in interpretation between these two

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[69] There are Basque speakers (the author included) who do not accept superlative forms without the presence of the article. For these speakers, the only possible superlative construction needs to appear with the Determiner.

constructions. In an example like (103a), *fama gehien* obtains the superlative interpretation. Now, Hualde & Ortiz de Urbina claim that once you introduce the singular determiner, something like *fama gehiena* in (103b) turns out to be ambiguous between a superlative interpretation and a different one where *gehiena* is interpreted as a quantifier without comparative content.

(103a) Bera da fama **gehien** duena.   (Hualde & Ortiz de Urbina (2003b: 609))
        he   is fame most   has.comp.D
        'It is him that has the most reputation.'
(103b) Bera da fama **gehien-a**   duena.
        he   is fame most.D.sg has.comp.D
        'It is him that has the most reputation.'

What this section is trying to show is that the Hualde & Ortiz de Urbina's so called quantificational interpretation is not really quantificational, but rather, a superlative interpretation. It is true that the previous example does not show in a clear manner the point that I am trying to make since there does not seem to be a real difference between the two interpretations (superlative and quantificational).

However, the following examples can be used to prove that in fact both *gehien* in (104a) and the [*gehien*+D] sequence in (104b) are superlatives (example taken form Hualde & Ortiz de Urbina (2003b: 609)). Note that according to Hualde & Ortiz de Urbina, the difference between the sentences in (104) is similar to the one given for the previous examples; in this particular case, they claim that (104a) is the superlative form, while (104b) is just a regular quantifier, never superlative.

(104a) Liburutegi honek   ditu liburu gehien

      library   this-erg has book   most

      'This library has the most books.'

(104b) Liburutegi honek   ditu liburu gehien-ak

      library   this-erg has book   most-D.pl

      'This library has most (of the) books.'

From my point of view, the sentence in (104a) --without the D-- makes a comparison between libraries according to the quantity of books they have. Imagine a situation where we compare 5 libraries, the first library contains 1132 books, the second library 1101, the third 965, the fourth 951, and the fifth 873. In such a situation, the library that the sentence in (104a) makes reference to is the first one, the one that contains more books when compared to the other four.

I agree with Hualde & Ortiz de Urbina that sentence (104b) could not be correctly used in the context given above. Now, that does not necessarily mean that (104b) does not have comparative content and does not create a superlative interpretation. Let us imagine a situation where we know that the University of the Basque Country has bought 2000 books that are going to be donated to the different libraries on the different campuses of the university. The Araba Campus in Vitoria-Gasteiz is given 1500 out of those 2000 that has been bought, the Bizkaia Campus in Bilbao 275, and the Gipuzkoa Campus in San Sebastian 225. In this context, there seems to be a clear comparison between the three campuses, and the one campus that has been given the most books out of those 2000 is the one that the sentence in (104b) makes reference to, in this case, the library of the Araba Campus.

If we take back the intuition outlined by Moltmann (to appear) ("Perhaps *most* is not an ordinary quantifier at all with a meaning approximating something like *more than half* (Barwise & Cooper (1981)), but rather has the status of a referential expression meaning something like 'the greatest relevant subgroup or subquantity' of the entity in question, just like the comparative superlative *the most*"), it seems plausible to apply this explanation to Basque *gehien* and defend that the interpretation that this element forces is the superlative one, in the example in (104b): the greatest relevant subgroup or subquantity of books.

Let me address a potential objection to the argument that Basque *gehien* is a superlative rather than a simple quantifier. In section 2.6.1.1 I have claimed that Basque strong quantifiers do not allow appearing with the partitive form -*etatik* (of the) due to the fact that quantifiers restrict their quantificational domain just once. Since Basque strong quantifiers restrict their quantificational domain on the quantifier, no further restriction is needed in the nominal.

(105a) ∗ ikasle-**etatik** guzti-**ak**

       student-the/of all-D.pl

(105b) ∗ ikasle-**etatik** den-**ak**

       student-the/of all-D.pl

(105c) ? ikasle-**etatik** gehien-**ak**

       student-the/of most-D.pl

(105d) ∗ ikasle-**etatik** bakoitz-**a**

       student-the/of each-D.sg

Again, if the analysis for Basque nominal quantification presented in this chapter is on the right track, and if Basque superlative forms can appear together with partitive structures (see example (101d)), one of the two ideas presented in this section ((i) that quantificational domain restriction must happen just once or (ii) that *gehien* and its counterparts in other languages are superlatives) would seem to be incorrect.

What this section defends is that none of the two analyses presented here necessarily excludes the other. A thorough revision of the data shows that the examples in (105a-b-d) are completely out, but that most speakers agree on that (105c) --with *gehien*-- is not fully ungrammatical[70] and even some judge the sentence as totally natural and grammatical.

All four constructions in (105) become grammatical when *ikasleetatik* (lit.: student the.pl of) and the strong Q-dets are pronounced with a pause in between, i.e. separated by a comma (see section 2.6.1.1). In such a case, apart from being grammatical (106b), quantifiers are allowed to float, as in (106c), but with no pause, the sentences are completely out as the example in (105) and (106a) shows. (Example (106) is repeated from example (69) for convenience).

(106a) * Ikasleetatik   guztiak/denak/bakoitza   berandu iritsi   ziren/zen.
       students-D.pl/of all-D.pl/all-D.pl/each-D.sg   late   arrive aux.pl/sg
       Lit.: 'The all/all/each of the students arrived late.'
(106b) Ikasleetatik,   guztiak   berandu iritsi   ziren.
       students-D.pl/of all-D.abs   late   arrive aux
       'Of the students, all (of them) arrived late.'

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[70] Those speakers (the author included) that do not judge (105c) completely grammatical, find a clear contrast between the examples (105a-b-d), which are completely ungrammatical, and the example (105c) with *gehien*.

(106c) Ikasleetatik,   berandu iritsi ziren guztiak.

      students-D.pl/of late   arrive aux   all-D.abs.pl

      'Of the students, all (of them) arrived late.'

Note that *gehien* accepts the three word orders presented in (106): it can be pronounced without a pause (107a) --something disallowed to real quantifiers--, with a pause (107b), and can also be separated from the noun by structure in between (107c) (see below).

(107a) ? Ikasleetatik   **gehienak** berandu iritsi dira.

      student-D.pl/of most-D.pl late   arrive aux

      Lit.: 'The most of the students arrived late.'

(107b) Ikasleetatik,   **gehienak** berandu iritsi dira.

      Student- D.pl/of most-D.pl late   arrive aux

      Lit.: 'Of the students, the most arrived late.'

(107c) Ikasleetatik,   berandu iritsi dira **gehienak**.

      Students- D.pl/of late   arrive aux most-D.pl

      Lit.: 'Of the students, arrived late the most.'

Section 2.6.1.1 has shown that all of the sentences in (106) can not be treated alike: The ones in (106a) and (105a-b-d) would be real quantifiers, and they behave as such in that (as predicted) they do not accept further restriction, since quantificational domain restriction has already taken place in the Q-dets. In the examples in (106b) and (106c) on the other hand, the partitive and the Q-dets *guztiak, denak,* and *bakoitza* do not form a constituent.

However, the grammaticality of all the examples in (107) shows that *gehien* does not behave exactly as the Basque lexically strong quantifiers: in opposition to real quantifiers' behaviour, it can appear with both the partitive construction plus the determiner (107a). Of course, it can also be separated from the noun by a pause (107b), or separated from the noun introducing more structure in between (107c).

Some extra evidence in favour of the fact that *gehien* is a superlative (and not a quantifier) comes from the parallel behaviour shown by genuine superlatives and *gehien*. As we have previously said, in superlative constructions, the noun phrase representing the group being compared can be uninflected (108a), it can also bear the partitive case *-rik* as in (108b), take the partitive construction (ablative plural) (108c) or the locative suffix (108d).

(108a) Ikasle altu-**en**-a   Jon da.   (=(101b))
       student tall-sup.-D Jon is
       'The tallest student is Jon.'

(108b) Ikasle-**rik**   altu-**en**-a   Jon da.   (=(101c))
       student-part. tall-sup.-D Jon is
       'The tallest student is Jon.'

(108c) Ikasle-**etatik**   altu-**en**-a   Jon da.   (=(101d))
       student-the.pl/of tall-sup.-D Jon is
       'The tallest (of the) student is Jon.'

(108d) Ikasle-**etan**   altu-**en**-a   Jon da.   (=(101e))
       Student-the.pl/loc. tall-sup.-D Jon is
       'The tallest student is Jon.'

It is already known that *gehien* can appear with the uninflected noun (104b) (repeated here for convenience), with the partitive construction *-etatik* (107); and

although *gehien* can not appear with the locative suffix (109d), it has no problem to appear with the Basque partitive case *-rik* (109c).

(109a) Liburutegi honek   ditu **liburu gehienak**.   (=(104b))
      library   this-erg has book   most-D.pl
      'This library has most (of the) books.'
(109b) Liburutegi honek ditu   **liburu-etatik gehienak**.
      library   this-erg has book-the/of   most-D.pl
      'This library has most (of the) books.'
(109c) Liburutegi honek ditu   **liburu-rik gehienak**.
      library   this-erg has book-part. most-D.pl
      'This library has most (of the) books.'
(109d) ∗ Liburutegi honek ditu   **liburu-etan gehienak**.
       library   this-erg has book-loc   most-D.pl
      'This library has most (of the) books.'

Furthermore, superlatives may also be found separated from the noun (110b), just like *gehien* as the example in (110a) shows; hence, these facts can be explained without necessarily relating *gehien* to the Basque strong Q-dets.

(110a) Ikasleetatik,   berandu iritsi ziren gehienak.   (=(107c))
      students-of the late   arrive aux most.sup.-D.pl
      'Of the students, most (of them) arrived late.'
(110b) Euskal Herriko herrietatik,   hau da ederrena.
      Basque Country village-the/of   this is beautiful.sup.-D.sg
      'Among the villages of the Basque Country, this is the most beautiful one.'

Crucially, note that none of the Basque strong Q-dets are able to create grammatical sentences when combined with the partitive construction *-etatik* or with the partitive form *-rik*, in clear opposition to the behaviour shown Basque *gehien*. Lexically strong quantifiers are only grammatical when the NP is uninflected and the Q-det and the NP form a constituent as in (111a).

(111a) Telebista guztiek/denek/bakoitzak   saio   txarrak dituzte/ditu.
          television all-D.pl/all-D.pl/each-D.sg program bad   aux.pl/aux.sg
          'All/all/each TV(s) have/has bad programs.'
(111b) ∗ Telebista**rik**   guztiek/denek/bakoitzak   saio   txarrak dituzte/ditu.
              television .part all-D.pl/all-D.pl/each-D.sg program bad   aux.pl/aux.sg
(111b) ∗ Telebist**etatik**   guztiek/denek/bakoitzak   saio   txarrak dituzte/ditu.
              Television-the/of all-D.pl/all-D.pl/each-D.sg program bad   aux.pl/aux.sg

2.6.2.2. Summing Up:

Moltmann's idea of treating *most* not as an ordinary quantifier at all with a meaning approximating something like *more than half* (Barwise & Cooper (1981)), but rather as a referential expression meaning something like 'the greatest relevant subgroup or subquantity' of the entity in question, just like the comparative superlative *the most* seems to be on the right track. The adoption of this analysis and its application to crosslinguistic data prevents us from having to apply special properties to elements such as Spanish *la mayoría de los NP*, Greek *i perisoteri i NP*, French *la plupart de(s) NP*, Catalan *la majoria dels NP* or Basque *NP gehien-ak* (which accepts partitive *-etatik*). If we adopted the analysis that these elements are quantifiers, some independent

explanation would be needed in order to explain why these elements (synonyms across different languages) are able to restrict their quantificational domain twice (in the quantifier and in the nominal element), an undesirable conclusion if as we have shown quantifiers only restrict their domain once.

2.6.2.3. Basque [DP + Guztiak/Denak/Oro]:

Another residual case is that of Basque [DP + denak/guztiak] sequence that unexpectedly is allowed to combine directly with a DP (only when the D is a demonstrative). According to the proposal put forward for Basque quantification in this chapter, this construction should not be grammatical since we are defending that the standard Generalized Quantifier Theory is correct. In the standard Generalized Quantifier Theory Q-dets combine with component of predicative type ⟨e, t⟩ (bare NP or partitive *of the NP*) and not with elements of individual type *e* as is the case with this construction.

(112a) Ume hauek guztiak mozorrotu egin ziren   ihauterietan.
        child these all-D.pl dress up   do   aux.past carnivals-in
        'All these children dressed up for the carnivals.'
(112b) Ume hauek denak   mozorrotu egin ziren   ihauterietan.
        child these all-D.pl dress up   do   aux.past carnivals-in
        'All these children dressed up for the carnivals.'[71]

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[71] Although the Basque literary tradition makes use of the structure shown in (112), many Basque speakers (the author included) find these sentences a bit weird. For these speakers, the most natural construction to express something like *all of these students* would be the something like the following.

To explain the unexpected facts of (112) one could argue that the DP argument of the universal quantifiers became of predicative type[72] (the type expected by the quantifier to quantify over) by means of a covert type shifting procedure, hence, the ungrammaticality of the following construction with the partitive *-etatik*.

(113a) * Ume hauetatik   guztiak mozorrotu egin ziren   ihauterietan.
       child these-pl.-of all-D.pl dress up   do   aux.past carnivals-in
       'All of these children dressed up for the carnivals.'

(113b) * Ume hauetatik   denak   mozorrotu egin ziren   ihauterietan.
       child these-pl.-of all-D.pl dress up   do   aux.past carnivals-in
       'All of these children dressed up for the carnivals.'

However, we already defended that covert type shifting is blocked by overt type shifters (see section 2.6.1.1). In order to avoid this residual case, it is possible to argue that both *den* and *guzti* are ambiguous between a real quantificational nature and a DP modifier with the semantics of an exhaustivity operator[73] (à la Brisson (1998, 2003)). In the examples in (112) they will behave as DP modifiers while in (113) they will have to be considered quantifiers. In (113) the partitive structure, which makes the sequence [NP DEM.pl-OF Q-D.pl] to be a constituent[74], renders the sentences ungrammatical due

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    (i)   Ikasle   guzti hauek berandu etorri ziren.
              student all   these late   come aux
              'All these students arrived late.'

[72] Very unlikely considering demonstratives can not be predicates.

[73] English *all* is also ambiguous between these two interpretations. *All* in *all the NP* is not a Q-det but a DP modifier with the semantics of an exhaustivity operator. In *all of the NP* on the other hand *all* behaves as a Q-det and this is why it needs the partitive construction.

[74] Unless a pause is inserted between the partitive *NP-etatik* and the quantifier (see section 2.6.1.1).

to the double domain restriction (as predicted by the proposal put forward in this chapter).

Note also that *bakoitz*, the Basque inherently distributive quantifier does not accept an *e* type argument and the resulting sentence is completely out[75]. This shows that *bakoitz* must necessarily be a quantifier and can not function as a DP modifier with the semantics of an exhaustivity operator (à la Brisson (1998, 2003)).

(114) * Ume hau bakoitzak   goxoki bat jan du.
          child this each-D.sg.erg candy   one eat aux.pres.
        Lit.: 'Each this child has eaten a candy'

There is an element that Basque linguistics literature has analyzed as a universal quantifier and that has not been mentioned until now: *oro* --all-- (cf. i.e Euskaltzaindia (1993: 110), Artiagoitia (2003)). This element[76], just like *den* and *guzti* in (112), combines directly with DP arguments. If *oro* is taken to be a real quantifier, this behaviour is unexpected under the current approach to quantification, since as has already been argued and defended, quantifiers can not combine with argument of individual type *e*.

(115) Gizonak   oro hilkorrak   dira.   (Euskaltzaindia (1993: 113))
        man-D.pl all   mortal-D.pl are
        'All men are mortal.'

---

[75] Basque *gehien* has already been defended not to be a quantifier but a superlative.

[76] Mainly used in the western Basque dialects.

Again, to assume a covert type shifting of the noun from an individual to predicative type is problematic (see above). In order to circumvent this challenging case, and following the logic of the argumentation of this subsection, *oro* will not be treated as a quantifier in constructions such as the ones in (115), but rather as an exhaustive modifier (à la Brisson (1998)).

Now, *oro* can also combine with a bare noun as in (116). In such a case, *oro* appears to be behaving as a common quantifier since it combines with an element of type $\langle e, t \rangle$.

(116a) Gizon oro hilkorra da.
       man   all mortal   is
       'All men are mortal.'
(116b) Gizon orok   badaki.
       man   all.erg know
       'All men know it.'

One of the exceptional properties of this element is that (in opposition to the rest of Basque lexical strong quantifier) the definite determiner never composes together with the quantifier as the following example shows.

(117) ∗ Gizonak oro-**ak** hilkorrak   dira.
       man-D.pl all-D.pl mortal-D.pl are
       'All men are mortal.'

Again, the behaviour of this element is problematic for the proposal put forward for Basque strong quantifiers. However, there is one possible way in which this problem

can be solved: It could be argued that just like English *every* or Spanish *todo*, this quantifier restricts its quantificational domain covertly in the nominal. One crucial argument in favour of this solution is that *oro* does not allow the partitive to appear with the NP.

(118) ∗ Gizon-etatik oro hilkorra da.
      man-D.pl-of all   mortal   is
      'All of the men are mortal.'

Neither does it accept a definite determiner in the quantifier.

(119) ∗ Gizon oro-ak   hilkorra da.[77]
      man   all-D.pl mortal   is
      'All men are mortal.'

If this solution is on the right track, it would prove on the one hand that once the quantificational expression is restricted no more restriction is needed, and on the other that the default is to restrict the quantifier in the nominal[78] and that restriction on the Q-

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[77] The ungrammaticality of this sentence is not due to the contrast between the plural subject and the singular agreement. The following example, with both plural subject and agreement is still ungrammatical.

     (i)   ∗ Gizon oro-ak   hilkorrak dira.
              man   all-D.pl mortal   are
              'All men are mortal.'

[78] Note that English *every* and Spanish *todo* do not accept neither a partitive restricting the noun nor a determiner restricting the quantifier itself

det is only postulated if we have evidence for it (e.g. the use of a definite determiner, or other kind of marking)[79].

2.7. Conclusion to Chapter 2:

(i) Natural language quantification is contextually restricted by overt or covert domain variables (von Fintel (1994, 1998), S&S (2000a), Stanley (2002), Martí (2003)); crosslinguistically we must allow for both nominal restriction (St'át'imcets language) as well as for Q-det restriction, and languages differ with respect to whether they overtly or covertly restrict their quantificational domain (Giannakidou (2004)).

(ii) Basque generalized quantifiers provide clear evidence for the need of both nominal (Stanley (2002), S&S (2000a)) as well as Q-det domain restriction (Westerståhl (1985), von Fintel (1994), Martí (2003)) depending on whether the quantifiers are lexically strong or strongly interpreted weak quantifiers. Lexically strong quantifiers (*guzti* (all), *den* (all), *bakoitz* (each)) show clear evidence for Q-dets composing with D. Strongly interpreted weak quantifiers on the other hand, either incorporate partitive forms, or introduce a restriction by pragmatic means à la Büring (1996).

(iii) Assuming that Q-detP internal definite D is a nominal domain restrictor (Giannakidou (2004)), there is no need to reanalyze the standard generalized quantifier

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[79] Although the proposal seems to correctly follow the ideas put forward in the chapter, more analysis is needed.

theory, since it gets things right crosslinguistically. Basque data provides further support in favour of this conclusion.

(iv) It has been shown that *most NPs* (maybe not *most of the NP* --see fn. 64--) and its crosslinguistic counterparts in languages like Spanish, Greek, Catalan and Dutch do not behave as a Q-det, but rather have the status of a referential expression and behave as a superlative. A closer look at Basque *gehien* has shown that this conclusion is on the right track.

(v) *Guzti*, *den* and *oro* (not *bakoitz* that always behaves as a quantifier) have been treated as ambiguous between a real quantificational interpretation and a reading where they function as a DP exhaustive modifier (à la Brisson (1998, 2003)). *Oro*, in its quantificational interpretation seems to be behaving just like English *every* and Spanish *todo* in that it can not form a partitive construction and does not accept a definite determiner. This would show that Basque also possesses strong quantifiers that restrict their quantificational domain covertly, and as expected, the restriction will have to be done on the nominal (recall that the partitive *ikasleetatik oro* is completely out).
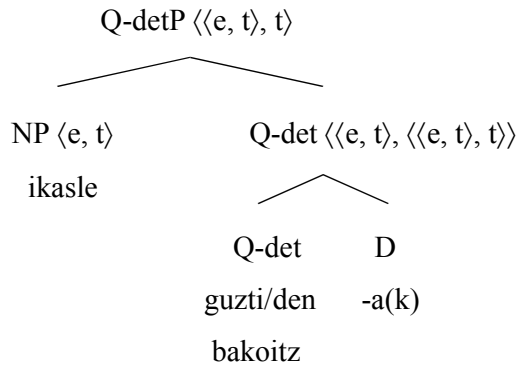
CHAPTER 3

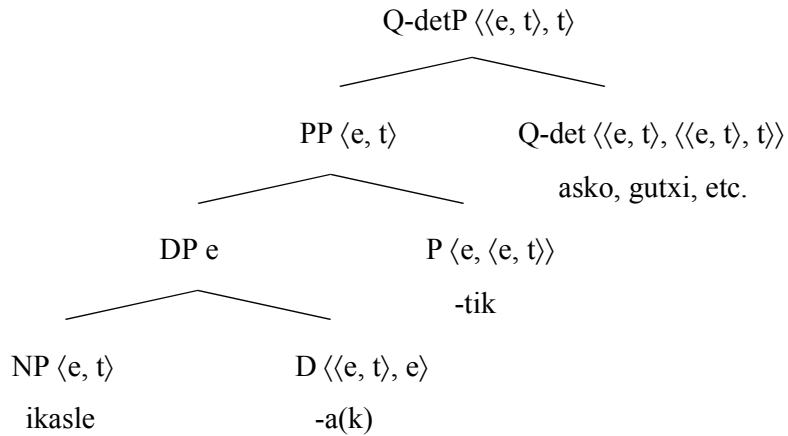## WEAK QUANTIFIERS OR UNRESTRICTED QUANTIFICATION

3.1. Introduction:

Two types of quantifiers have been traditionally identified: strong quantifiers and weak quantifiers. In Chapter 2 I have proposed a compositional analysis of Basque strong quantifiers and offered further support for the conclusion that the standard analysis of Generalized Quantifiers is after all correct. Basque nominal quantification provides decisive evidence for the need of both Q-det domain restriction -with lexically strong quantifiers- (Westerståhl (1985), von Fintel (1994), Martí (2003)) as well as nominal restriction -with strongly (overtly partitive) interpreted weak quantifiers- (Stanley (2002), Stanley & Szabó (S&S) (2000)); as the examples (1) and (2) respectively show. Chapter 2 has shown that Giannakidou (2004)'s analysis as well as Etxeberria (2004)'s intuition for Basque is on the right track.

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(1)   [Ikasle **guzti-ak**]   berandu etorri ziren.
        [student all-D.pl(abs)] late   come aux.past.pl
        'all the students came late.'

Q-detP ⟨⟨e, t⟩, t⟩

NP ⟨e, t⟩   Q-det ⟨⟨e, t⟩, ⟨⟨e, t⟩, t⟩⟩

ikasle

Q-det   D

guzti/den   -a(k)

bakoitz

(2)   [Ikasle-**etatik**   **asko**] berandu iritsi   ziren.

[student-the.D/of many] late   arrive aux.pl.past

'Many of the students arrived late.'

Q-detP ⟨⟨e, t⟩, t⟩

PP ⟨e, t⟩   Q-det ⟨⟨e, t⟩, ⟨⟨e, t⟩, t⟩⟩

asko, gutxi, etc.

DP e   P ⟨e, ⟨e, t⟩⟩

-tik

NP ⟨e, t⟩   D ⟨⟨e, t⟩, e⟩

ikasle   -a(k)

The aim of this Chapter is to propose an analysis for Basque weak quantifiers[1].
Crucially in Basque, the definite determiner (-A) that functions as a domain restrictor
(inside quantificational phrases) only appears with strong-proportional quantifiers
(lexically strong quantifiers and weak quantifiers with overt partitive constructions), but
it is excluded from weak-cardinal quantifiers (except numerals, see section 3.4.1.1.).

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[1] See Chapter 1, footnote 20.

This must be taken as evidence for the fact that the latter are neither quantifiers nor contextually restricted in agreement with what has been standardly defended in the literature (cf. Milsark (1974, 1977), Partee (1988), Cooper (1996), von Fintel (1998)). For situations where there is no overt definite determiner but still the proportional interpretation is available, I assume Büring (1996)'s proposal. In this proposal, the partitive interpretation is explained in terms of the role that the Topic/Focus/Background Structure plays in the interpretation of weak quantifiers. This way we avoid the covert partitive as well as the ambiguity approach to weak quantification. Weak quantifiers are proposed to be base generated in the predicative type, in the functional projection NumP (either in [Spec, NumP] or in [Head, NumP]).

The chapter is organised as follows: Section 3.2 presents the different interpretation that weak quantifiers can get as well as two possible approaches to these readings: semantic (Partee (1988), Diesing (1992), de Hoop (1992)) and pragmatic (Büring (1996)); the latter is argued to be the preferred one. Section 3.3 tries to give evidence in favour of the fact that weak quantifiers, if really weak and cardinal, are contextually unrestricted. In section 3.4, it is argued that weak quantifiers are base-generated below DP and that this is why they can not appear with the definite article in Basque. In this section I also account for the reasons why Basque weak quantifiers can be prenominal/postnominal (normally not both). Section 3.5 notes some differences that appear between Basque weak quantifiers when the common noun accompanying them is elided; in such a situation some are necessarily interpreted proportionally. These facts will be explained along the lines of Büring (1996)'s proposal. Section 3.6 concludes the chapter.

3.2. Weak Quantifiers and Different Interpretations:

3.2.1. Proportional and Cardinal Interpretation:

3.2.1.1. The Semantic Approach (Partee (1988), Diesing (1992), de Hoop (1992)):

The idea that weak quantifiers might have a special category in the domain of quantification is not a novel one. Milsark (1974, 1977) distinguishes two types of quantifiers, strong and weak, and gives a syntactic diagnosis for distinguishing them (see Chapter 1). Weak quantifiers are those that can appear in *there*-insertion contexts (also known as *definiteness effect* contexts), whereas strong quantifiers are excluded and anomalous in this situation.

(3a)   There are some/few/many/three/no superheroes playing in our garden.

(3b)   * There are every/all/most superheroes playing in our garden.

The sentence in (3a) demonstrates that the English quantifiers *some*, *many*, *three*, and *no* are to be considered weak quantifiers. Among the strong quantifiers on the other hand, it is possible to include (among others) *every*, *all*, and *most* which lead to ungrammaticality in *there*-insertion contexts (see Chapter 1).

Weak quantifiers have often been assumed to be ambiguous[2] between a proportional (partitive) and a cardinal (non-partitive) reading as Milsark (1974, 1977)

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[2] cf. among others Milsark (1974, 1977), Partee (1988), Diesing (1992), de Hoop (1992, 1995), Ladusaw (1994), Cohen (2001), Zucchi (1995) and references therein.

pointed out[3]. According to this approach, these two readings of weak quantifiers are fixed from the lexicon. The example in (4) exemplifies the two possible interpretations of *some* (see fn. 3).

(4)   Some superheroes are playing in our neighbour's garden.

On its strong interpretation, the meaning of *some* can be paraphrased as *some, but not others*, and it is said to be synonymous with the partitive *some of the superheroes* as in (5). This interpretation is felicitous only when the set of superheroes is already under discussion, that is, *of the superheroes* denotes the set of all contextually relevant superheroes (Ladusaw (1982)).

(5)   Some of the superheroes are playing in our neighbour's garden.

On its cardinal reading *some superheroes* is not paraphrasable as a partitive. In (6) (a *there*-insertion existential context), the subject *some superheroes* cannot get a partitive

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[3] There is evidence that a two-way distinction between proportional (partitive) and cardinal interpretations of weak quantifiers is insufficient to account for all the possible readings that these quantifiers can force. Herburger (1993, 1997, 2000) realises that weak quantifiers can get a third reading: *focus-affected* reading. This reading only appears with contrastive stress indicating focus on the nominal. The phenomenon of focus-affected reading is illustrated in (i).

    (i)   Few COOKS applied.

The sentence in (i), with a weak quantifier in the subject position of a stage level predicate, should be able to have exactly the two readings: a weak-cardinal one and a strong-proportional one. According to Herburger, on both these readings the focus on *cook* is contrastive (contrasting cooks with non-cooks), but in neither case does the focus have an effect on the truth-conditions of the sentence. The focus-affected reading would be the third reading of a sentence like (i), a reading where focus does have an effect on truth-conditions and where the interpretation can be paraphrased as follows: "few that applied were cooks". The focus-affected reading of (i) means that few (a small proportion) of the individuals that applied were cooks; the reading is proportional, but the restriction of *few* is constituted by those that applied, rather than by cooks, and conversely, the nuclear scope is made up by cooks, rather than by those that applied. Focus-affected readings will not be treated in this dissertation.

reading with the meaning "some of the superheroes exist, as opposed to others". Rather, the interpretation would be something like *some in number*.

(6)   There exist some superheroes.

This behaviour is available to all the weak quantifiers (such as *many*, *few*, *three*, etc.).

Partee (1988) argues that these two interpretations (proportional / cardinal) differ truth-conditionally, and that this difference cannot be attributed to an inherent vagueness of the quantifiers (contra i.e. Bennett (1974), Hoeksema (1983), or Lappin (2000)).

Under the proportional reading weak quantifiers behave as strong quantifiers: They do not obey the symmetry condition or the intersection condition (see Chapter 1, section 1.2.1.1.1.). Two other arguments from Partee (1988) are the following: The first is that when quantifiers like *many* or *few* appear in so-called adjectival position[4] (as in *the many N* or *the few N*) their interpretation is always cardinal. The following example shows both the cardinal and the proportional readings, the first *many* can be interpreted cardinally or proportionally, although the second interpretation is preferred; the second *many* on the other hand must be interpreted cardinally (the example is taken from Partee (1988: 13)).

(7)   Many of the many protestors advocated violence.

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[4] See section 3.4.1.2.2 where it is shown that the Basque counterparts of *many* and *few* do not behave like adjectives and can not combine with the definite article (except *gutxi* 'few' that can but only in some specific contexts).

Another difference between the cardinal and the proportional interpretation is that the cardinal reading of the weak quantifier *few* i.e. in a sentence like (8) allows the possibility of *few* being all (provided they are few in number). In other words, it is possible for *few superheroes* in (8) to amount to all the superheroes there are in our neighbour's garden.[5]

(8)   Few superheroes are playing in our neighbour's garden.

On the other hand, *few* can never mean "all" in the strong(-like) proportional interpretation. Due to the fact that on its strong interpretation the weak quantifier in (8) is synonymous with the partitive *few of the superheroes*, and it would not be truthful to utter *few of the superheroes are playing in our neighbour's garden* in a situation where all the superheroes are playing in the neighbour's garden.[6]

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[5] Partee (1988: 13) attributes this observation to Huettner (1984).

[6] Apart from the existential sentences like the one in (3a), where only the cardinal interpretation of weak quantifiers is permitted; there are other contexts where the cardinal interpretation is optional. The subject position of stage-level predicates is one of those contexts; the reason why it is said to be an "optional definiteness effect context" is because both strong quantifiers and strongly interpreted weak quantifiers can appear in these configurations. Contrary to what occurs in stage-level predicates (which denote *states*), the subject position of individual-level predicates (which denote *properties* of the entities of which they are predicated) can only be occupied by strong quantifiers or weak quantifiers in their strong interpretation; cardinal readings are excluded in these contexts.

Thus, in (8), with a stage-level predicate (*play*) the subject *few superheroes* can be interpreted cardinally as "few in number" or with a strong-proportional reading as the partitive "few of the superheroes" (as already mentioned). When an individual-level predicate is used instead, as in (i), the only possible interpretation is the strong-proportional one: "a small percentage of (some implicit class of) superheroes", in other words, "few of the superheroes".

(i)   Few superheroes love spinaches.

Therefore, *there*-insertion sentences can be said to be obligatory definiteness effect contexts, the subject position of stage-level predicates is a neutral context, and the subject position of individual-level predicates is considered an anti-definiteness effect context.

This dissertation does not adopt the standard assumption that weak quantifiers (when no partitive construction is made explicit) are ambiguous. Instead, following Büring (1996), it will claim that the proportional/strong interpretation is not obtained by means of a covert partitive construction but rather pragmatically, as a product of the relation between intonation and context.[7]

3.2.1.2. The Pragmatic Approach:

Büring (1996)[8] approaches the covert partitive phenomenon from a pragmatic point of view. In contrast to the Semantic (Ambiguity) Approach, he proposes that weak quantifiers are not ambiguous: their proportional (and therefore presuppositional) interpretation depends on the Topic/Focus/Background Structure (TFBS) and therefore there is no need to postulate a covert partitive structure.

In the Hamblin/Kartunnen tradition, the denotation of a question is a set of propositions, which constitutes the set of its possible answers. Following Rooth (1985, 1992), this set is called the *Focus Value* of the sentence. Thus, a question like *what did Aritz drink?* denotes the set of all propositions expressed by sentences like *Aritz drank x*. A declarative sentence can therefore be understood as answering an implicit question, which can also be taken to be part of the context.

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[7] Alonso-Ovalle & Menendez-Benito (2002) argue that both approaches are needed in order to account for the behaviour of two Spanish plurals determiners (*unos* (≈some) and *algunos* (≈some)). See also Gutierrez-Rexach (2001) for an analysis of these elements.

[8] See also Partee (1991a) where she claims "that there is a significant correlation between restrictive clause and focus-frame on the one hand and nuclear scope and focus on the other".

(9a)   Aritz drank BEER.

(9b)   {[[Aritz drank wine]], [[Aritz drank tea]], [[Aritz drank whisky]], etc.}

Now, the sentence in (10), with what Büring calls a contrastive topic accent on the subject and narrow focus on the object is different from the previous sentence in that the subject *Aritz* is substituted for its contextually relevant alternatives (in (11)).

(10)   ARITZ drank BEER.

(11a)   [[What did Mattin drink?]]
        {[[Mattin drank beer]], [[Mattin drank tea]], etc.}
(11b)   [[What did three boys drink?]]
        {[[Three boys drank beer]], [[Three boys drank tea]], etc.}
(11c)   [[What did Maia and Aritz drink?]]
        {[[Maia and Aritz drank beer]], [[Maia and Aritz drank tea]], etc.}
        …

Büring (1996) extends this analysis of alternatives to quantificational expressions (Rooth (1985, 1992)) and argues that sentences of the kind in (12) also involve two accents, the first of which is not a focus accent, but a contrastive topic accent. Such a sentence triggers the reconstruction of a particular set of potential contexts, the ones obtained by substituting *some* for its contextually relevant alternatives given in (13).

(12)   SOME students drank BEER.

(13a)   What did all of the students drink?

(13b)   What did every students drink?

(13c)   What did few students drink?

(13d)   What did many students drink?

        ….

No matter which of the previous contexts might have been the actual Discourse-Topic, all of the alternatives in (13) give rise to elements able to occupy a topic position and as a consequence the existence of a group of students is presupposed. Thus, it is possible to know upon hearing (12) -even in a discourse initial context- that it requires a discourse context that has to do with students. The partitive interpretation of *some students* in (12) results from the fact that the noun, but not the weak quantifier, is part of the background, that is to say, the partitive/presuppositional reading emerges as a result of the contexts required by the sentence.[9]

What we do when we come across such an out of the blue sentence is "to try to construct a context by means of whatever information the pertinent sentence itself provides. And the best source of information we have -apart from lexically based presuppositions- is the TFBS" Büring (1996: 19)[10].

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[9] Büring (1996) generalizes his analysis even to strong quantifiers. According to him, in out-of-the-blue sentences, the Contextual Domain Variable heavily relies on Topic/Focus/Background structure.
I only assume his analysis for those weak quantifiers that are strongly interpreted without the overt version of the partitive form. For strong quantifier (both lexically strong and strongly interpreted (through partitive) weak quantifiers) I defend that the role of the contextual domain restrictor is overtly played by the definite determiner, as a consequence, no pragmatic account is needed for them (see Chapter 2).

[10] Büring's proposal coincides with the so-called *accommodation of presupposition*. See Kartunnen (1973), van der Sandt (1992).

3.2.2. Basque Weak Quantifiers and their Proportional / Cardinal Interpretations:

Basque non overtly partitive weak quantifiers can also get proportional (partitive-like) as well as cardinal (non-partitive) readings when the word order of the clause is Subject-Object-Verb, that is to say, the basic word order in Basque. Thus, a sentence like (14) can be interpreted in two different ways, but as mentioned, these readings depend on the accent pattern.

(14)   Superheroi batzu(e)k garagardoa edan zuten.
        superhero   some   beer-D.sg   drink aux.past
        'Some superheroes drank beer.'

On its strong-proportional reading, the meaning of *batzu(e)k* can be paraphrased as *some, but not others*, and is synonymous with the partitive *some of the superheroes* as in (15). The sentence in (14) is then interpreted as though there was a covert version of the partitive *-etatik*.

(15)   Superheroi-**etatik** batzu(e)k garagardoa edan zuten.
        superhero-D.pl/of some   beer-D.sg   drink aux.past
        'Some of the superheroes drank beer.'

In order to obtain this interpretation (proportional, presuppositional, partitive) the weak quantifier *batzu(e)k* must get what Büring calls the *topic accent* and the object *garagardoa* must get the focus accent. This interpretation is felicitous when the set of superheroes is already under discussion; when the sentence is uttered in an out of the

blue situation, we make use of the TFBS in (16)[11] and a set of potential contexts will be created as in (17).

(16)　Superheroi [BATZU(E)K]$_T$ [GARAGARDOA]$_F$ edan zuten.
　　　superhero　　some　　　　beer-D.sg　　　　drink aux.past
　　　'SOME superheroes drank BEER.'

(17a)　Zer　edan zuten　superheroi guztiek?
　　　What drink aux.past superhero all-D.pl.erg
　　　'What did all the superheroes drink?'

(17b)　Zer　edan zuten　superheroi askok?
　　　What drink aux.past superhero many.erg
　　　'What did many superheroes drink?'

(17c)　Zer　edan zuten　superheroi gutxik?
　　　What drink aux.past superhero few.erg
　　　'What did few superheroes drink?'

There is also a cardinal reading of *superheroi batzu(e)k*, this is in fact the reading we get in *there*-insertion contexts. The cardinal would indeed be the (only) reading we obtain in the following existential sentence.

(18)　Badira　superheroi batzu(e)k gure bizilagunaren lorategian.[12]
　　　yes-be.pl superhero some　　our neighbour.gen garden.loc
　　　'There are some superheroes in our neighbours' garden.'

---

[11] Pitch accent is marked by means of capital letters. Recall again that following Büring (1996), it is assumed that these kinds of sentences involve two accents: Topic accent and Focus accent.
Note also that in Basque, focus phrases occur immediately to the left of the verb. For different analyses of focus in Basque, see de Rijk (1978), Ortiz de Urbina (1989a, 1999), Etxepare (1997), Elordieta (2000), Etxepare & Ortiz de Urbina (2003), Arregi (2003), Irurtzun (2004) among many others

[12] See Chapter 1: footnote 15.

Therefore, and as the example in (14) (repeated here as (19) for convenience) shows, the subject position of stage-level predicates can be described as an optional definiteness effect context (see fn. 6), both the cardinal and the proportional interpretations are possible. Since for both interpretations a different accentual pattern is assumed, no semantic ambiguity is needed and, as mentioned above, it is the pragmatics that makes the partitive-like interpretation possible.

(19)   Superheroi batzu(e)k garagardoa edan zuten.   (=(14))
        superhero   some   beer-D.sg   drink aux.past
        'Some superheroes drank beer.'

As expected, the subject position of individual-level (*maite* -love- in (20a) and *jakin* -know- in (20b-c)) predicates cannot be occupied by weak quantifiers in their cardinal interpretation and only strong quantifiers (20c) --see Chapter 2, section 2.6.1.1.-- and weak quantifiers in their proportional interpretation (20a-b), with a topic accent in the subject, can appear in these contexts.

(20a)   Nerabe   BATZU(E)K musika klasikoa maite dute.   (weak - proportional)
        teenager some   music classical love   aux.pres.pl
        'Some (of the) teenagers love classical music.'
(20b)   Sukaldari ASKOK   batxuri zopa prestatzen dakite[13].   (weak - proportional)
        cook   many-erg garlic soup prepare   know
        'Many (of the) cooks know how to prepare garlic soup.'

---

[13] The verb *jakin* (know) is one of Basque transitive verbs which possesses synthetic verbal forms. The synthetic form in (16b-c) is *dakite*, translated as 'they know'. See Hualde (2003) for a detailed description of Basque synthetic verbs.

(20c) Aktore guztiek   negar egiten dakite.   (strong)

      actor all-D.pl.erg cry   make know

      'All of the actors know how to cry.'

Both the weak subjects in (20a-b), *nerabe batzu(e)k* and *sukaldari askok* respectively, can only be interpreted proportionally, with meanings similar to *some of the teenagers* and *many of the cooks* respectively (again, obtained à la Büring). Proportionally is the only way the strong quantifier in (20c) can be interpreted.

Thus, Büring (1996)'s analysis provides an account for the supposedly ambiguous interpretations of weak quantifiers reducing the adduced ambiguity to pragmatic principles that are needed independently.

The same analysis applies to the rest of Basque weak quantifiers that were presented in Chapter 1 (repeated here for convenience):

(21)

Weak Quantifiers: *batzu(e)k* (some)*, zenbait* (some)*, hainbat* (some), *asko* (many)*, gutxi* (few)*, ugari* (many)*, numerals, numeral baino gehiago* (more than numeral)*, numeral baino gutxiago* (less than numeral), etc.

3.3. Unrestricted Quantification:

3.3.1. Unrestricted Quantification in Basque:

Chapter 2 has shown that Basque strong quantifiers (*guzti* (all)*, den* (all), *bakoitz* (each)[14]) must necessarily appear with the article -A(K), which I claim merges directly with the quantifier and functions as a contextual domain restrictor.

(22a) [Ikasle   **guzti-ak**]   berandu etorri ziren.
       [student   all-D.pl(abs)] late   come aux.past.pl
       'All of the students came late.'

(22b) ∗ [Ikasle **guzti**] berandu etorri ziren.

(23a) [Ikasle   **den-ak**]   berandu etorri ziren.
       [student   all-D.pl(abs)] late   come aux.past.pl
       'All of the student came late.'

(23b) ∗ [Ikasle **den**] berandu etorri ziren.

(24a) [Ikasle   **bakoitz-ak**]   goxoki bat jan zuen.[15]
       [student each-D.pl(abs)] candy one eat aux.past.sg
       'Each student ate a candy.'

(24b) ∗ [Ikasle **bakoitz**] goxoki bat jan zuen.

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[14] Recall from section 2.6.2.1.1 of Chapter 2 that *gehien* has been argued not to be a quantifier, but a superlative. This is the reason why it does not appear in this paradigm.

[15] Due to its inherent distributive properties, *bakoitz* is grammatical only in those situations where there is an element (a distributee which can not the event variable) deeper in the structure over which to distribute (cf. Etxeberria (2002b)). This is the reason why the example in (24a) is different from (22a) and (23a). Would we use *bakoitz* in a sentence like (22), the result would had been ungrammatical

   (i) ∗ Ikasle bakoitz-a   berandu etorri zen
           student each-D.abs.sg late   come aux.sg.past
           'Each student came late.'

Strongly interpreted weak quantifiers, as is the case in i.e. English, Greek, Catalan or Spanish, restrict their nominal expression overtly (or otherwise through pragmatics with no need to postulate covert partitives --as claimed by Büring (1996), see previous section--) with partitive *of+the* (Basque *-etatik*), which consists of the definite determiner (plus a plural marker in Basque) plus the preposition *of*.

(25)   [Ikasle-**etatik   gutxi**] iritsi ziren   berandu.[16]
        [student-D.pl/of few]   arrive aux.pl.past late
        'Few (of the) students arrived late.'

(26)   [Ikasle-**etatik   asko**] berandu iritsi ziren.
        [student-D.pl/of many] late   arrive aux.pl.past
        'Many (of the) students arrived late.'

(27)   [Ikasle-**etatik   batzu(e)k**] berandu iritsi   ziren.
        [student-D.pl/of some]   late   arrive aux.pl.past
        'Some (of the) students arrived late.'

Crucially in Basque, the D domain restrictor (-A(K)) only appears with lexically strong and strongly interpreted weak quantifiers (see Chapter 2), but it is excluded from weak-cardinal quantifiers. I take this as conclusive evidence for the fact that weak quantifiers must be contextually non-restricted (unless the above mentioned specific accentual pattern is used).

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[16] Note that *gutxi* appears before the verb. See Chapter 1, footnote 22.

Some semanticists have argued that natural languages do also have room for non-restricted quantification (i.e. Cooper (1996), von Fintel (1998)). Basque is in this regard a language that overtly shows the difference between those nominal quantificational expressions that are contextually restricted (by means of D) and those that are not. As presented in the following examples (28-30), Basque cardinal weak quantifiers can not appear with the domain restrictor -A(K), no matter where the definite determiner is placed (in the nominal or in the weak quantifier itself).

(28a)   [Politikari **gutxi**] iritsi ziren   berandu.
        [politician few]   arrive aux.pl.past late
        'Few politicians arrived late.'
(28b)   ∗ [Politikari(**-ak**) **gutxi**(**-ak**)] iritsi ziren   berandu.
          [politician(-D.pl) few(-D.pl)] arrive aux.pl.past late

(29a)   [Politikari **asko**] berandu iritsi ziren.
        [politician many] late   arrive aux.pl.past
        'Many politicians arrived late.'
(29b)   ∗ [Politikari(**-ak**) **asko**(**-ak**)]   berandu iritsi ziren.
          [politician(-D.pl) many(-D.pl)] late   arrive aux.pl.past

(30a)   [Politikari **batzu(e)k**] berandu iritsi ziren.
        [politician some]   late   arrive aux.pl.past
        'Some politicians arrived late.'
(30b)   ∗ [Politikari(**-ak**) **batzu(e)k**(**-ak**)] berandu iritsi ziren.
          [politician(-D.pl) some(-D.pl)]   late   arrive aux.pl.past

Taking into consideration that natural language quantifiers must be contextually restricted and that quantification-internal determiners are overt contextual domain

restrictors (as claimed in Chapter 2), these weak quantifiers are proposed not to be base generated at the quantificational type $\langle\langle e, t\rangle, t\rangle$, but rather at the predicative type $\langle e, t\rangle$. As a consequence, they are not to be considered (real) quantifiers (cf. Milsark (1977), Partee (1988), van Geenhoven (1996), Landman (2000)). Note that these indefinite-like weak quantifiers can in fact appear in predicative position (in (31)); strong quantifiers on the other hand, can not appear in this position and render ungrammatical sentences as the examples in (32) and (33) show.

(31a)   Gonbidatuak [neska **asko**] ziren.
        guest.D.pl   [girl   many] be.past
        'The guests were many girls.'

(31b)   Gonbidatuak [neska **batzu(e)k**] ziren.
        guest.D.pl   [girl   some]   be.past
        'The guests were some girls.'

(31c)   Gonbidatuak [neska **gutxi**] ziren.
        guest.D.pl   [girl   few]   be.past
        'The guests were few girls.'

(32)   * Gonbidatuak [neska **guzti-ak**/**den-ak**/**bakoitz-a**] ziren.
           guest.D.pl   [girl   all-D.pl/all-D.pl/each-D.sg]   be.past
        'The guests were all of the girls/all of the girls/each of the girls.'

(33)   * Gonbidatuak [nesk**etatik   asko**/**batzu(e)k**/**gutxi**] ziren.
           guest.D.pl   [girl-D.pl/of many/some/few]   be.past
        'The guests were many of the girls/some of the girls/few of the girls.'

Thus, the combination of a cardinal-weak quantifier like i.e. *asko* with an NP predicate like *neska* (which -following standard assumptions again- is also of type $\langle e, t\rangle$)

will be carried out through intersection (see i.e. Landman (2002)), yielding an element of type ⟨e, t⟩ as a result. When in predicative position, this is the way they will be interpreted and their structure will be the one in (34).

(34)   neska asko ⟨e, t⟩

                    neska ⟨e, t⟩   asko ⟨e, t⟩[17]
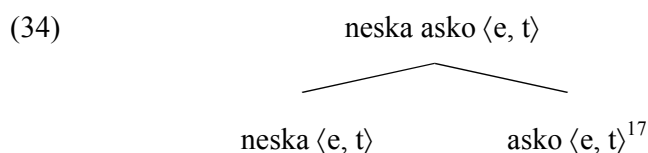
But the predicative interpretation is not the only interpretation that cardinal weak quantifiers may get since they can also appear in argument position, position in which ⟨e, t⟩ type objects are not allowed and either an entity type *e* element or a quantificational type ⟨⟨e, t⟩, t⟩ element is needed. In this situation, depending on the accentual pattern of the sentence (see section 3.2.2.) weak quantifiers can get a cardinal and a proportional (with contrastive topic accent on the subject) interpretation.

(35)   Ikasle askok   goxokiak   jan zituzten.
        student many.erg candy-D.pl eat aux.pl
        'Many students ate candies.'

            ⟹ CARDINAL: many in number
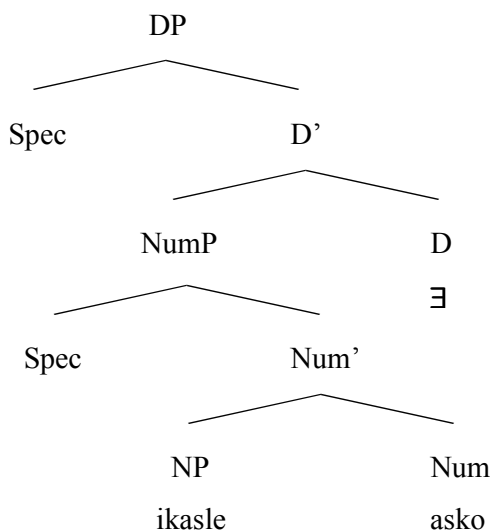   ⟹ PROPORTIONAL: many of the students

In order to get the cardinal interpretation we will make use of existential closure (∃-cl) which allows combining two ⟨e, t⟩ type elements (the weak quantifier *asko* and

_____

[17] To see where exactly these elements are base-generated see section 3.4.

the NP predicate *ikasle* in (35)) binding the free variable associated to the noun and giving it existential force. The ∃ quantifier introduced by the ∃-cl will be of quantificational type ⟨⟨e, t⟩, ⟨e, t⟩, t⟩⟩ and in combination with *ikasle asko* (which is of type ⟨e, t⟩ as already postulated) creates an existential (indefinite) generalized quantifier of type ⟨⟨e, t⟩, t⟩ that can combine with the VP (*goxokiak jan*) to yield a truth value. (See section 3.4.).

(36)   [[∃x [ikasle(x) & asko(x)]] & goxokiak jan(x)]

```
                        DP
                ┌────────┴────────┐
              Spec               D'
                          ┌───────┴───────┐
                        NumP              D
                  ┌──────┴──────┐         ∃
                Spec          Num'
                        ┌───────┴───────┐
                       NP              Num
                      ikasle           asko
```

Therefore, cardinal argument interpretations of indefinite noun phrases are derived from predicative interpretations through a type-lifting process by means of the existential closure (see Landman (2001)). This operation takes a set of individuals x and maps it onto a generalized quantifier, that is, the set of all sets that have a non-empty intersection with x.

For the proportional interpretation (without the overt partitive construction) on the other hand the weak quantifier must bear a specific accentual pattern (see section 3.2.2.). Semantically it will work just as the weak interpretation, the change comes on pragmatic grounds due to the intonational structure, that is to say, the subject weak quantifier will get the contrastive topic accent while the object will get narrow focus accent. Therefore, this partitive-like interpretation will have nothing to do with the weak quantifier being ambiguous, but rather, pragmatics will decide whether the weak quantifier is interpreted in a proportional manner.

We have claimed (not yet proven) that weak quantifiers in their weak-cardinal interpretation are contextually unrestricted. If, as I claim, quantificational contextual restriction in Basque goes hand in hand with the appearance of the definite determiner (see chapter 2), then, it seems natural to argue that the base-position of weak quantifiers must be below the definite determiner, that is to say, below the DP. This is exactly what we show in section 3.4, where it is claimed that weak quantifiers are base generated in the functional projection NumP[18] associated with the morphological category number (see Ritter (1991), Vangsnes (2001) among many others[19]).

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[18] Artiagoitia (2003) also assumes this intermediate position between the NP and the DP. However (as will be made explicit in the following sections as well as in Chapter 4) although similar in the basic idea, my implementation differs from Artiagoitia (2003)'s in various points and there are some differences among the uses we give to this functional projection.

[19] Many authors have proposed and defended the possibility that (i) weak-cardinal quantifier and strong-proportional quantifiers are base generated in different structural position and that (ii) the ambiguity of weak quantifiers is syntactically expressed, see for example: Hudson (1989), Giusti (1991), Muromatsu (1998)).

More evidence supporting the prediction that weak (cardinally interpreted) quantifiers are unrestricted comes from the fact that, in opposition to strong quantifiers, weak-cardinal quantifiers do not presuppose that the set denoted by the NP (*akats* 'mistake' in the following example) is a non-empty domain, salient in the discourse[20]. In the examples in (37), it might well be the case that there are no mistakes to be found.[21]

(37a) Akats asko aurkitzen badituzu, goxoki bat emango dizut.
      mistake many find   if-aux. candy one give   aux.
      'If you find many mistakes, I'll give you a candy.'

(37b) Akats gutxi aurkitzen badituzu, goxoki bat emango dizut.
      mistake few find   if-aux. candy one give   aux.
      'If you find few mistakes, I'll give you a candy.'

(37c) Akats batzu(e)k aurkitzen badituzu, goxoki bat emango dizut.
      mistake some   find   if-aux. candy one give   aux.
      'If you find some mistakes, I'll give you a candy.'

---

[20] For more discussion on presupposition of determiners, see Matthewson (1998).

[21] Vangsnes (2001: 258-259) claims that in opposition to what happens with so-called indefinite-*this* which appears to be presuppositional, "the examples in (i) and (ii) show that these determiners (weak determiners) may occur in the predicate internal argument of both negated and non-negated existential sentences, suggesting that the noun phrases do not presuppose the existence of its referent.

    (i)   a. There was a linguist at the meeting.
              b. There wasn't a linguist at the meeting.

    (ii)   a. There were many linguists at the meeting.
             b. There weren't many linguists at the meeting."

3.3.2. Whether Weak Quantifiers are Really Unrestricted or Not:

Some other authors (i.e. von Fintel (1998), Stanley & Szabó (2000)) have also raised similar questions: Which quantifiers show domain restriction? Are all quantificational expressions domain restricted?

Von Fintel (1994, 1998) assumes that the quantificational covert implicit domain restrictor appears in the quantificational determiner, not in the nominal expression (see Chapter 2, §2.4). According to him, natural language examples show that "contextual domain restriction is a well-rehearsed manoeuvre for definite NPs and for universally quantified NPs (von Fintel (1998: 6))", but at the same time, it is not that clear whether domain restriction also applies to other quantifiers.

Some examples by van Deemter (1992) argue that in fact, other quantifiers can also be restricted (examples taken from von Fintel (1998: 5))[22].

(38)   A herd of elephants was visible in the rear window. **Two sick elephants** were lying somewhere in the middle.

(39)   When we arrived in the village, **several houses** were abandoned.

(40)   My desk is a mess. **Many papers** are covered with cigar-ash.

(41)   I came into the room. **At least three students** were asleep.[23]

---

[22] Note that for von Fintel (1998), all these sentences (38-41) are ambiguous between a contextually restricted and a non-restricted interpretation.

[23] *At least three* in example (41) is an upward monotonic quantifier in its first argument and for these class of quantifiers it is harder to detect whether they are contextually restricted or not. Von Fintel (1998: 6) claims that they can also be shown to be contextually restricted: "If *at least three students in this room are asleep* is true, then *at least three students in Prague* is true as well and so will an entirely unrestricted

In the examples above, the implicit domain restrictor behaves anaphorically in that it is claimed to be bound by the previous discourse: *a herd of elephants*, *the village*, *my desk*, and *the room* respectively. Thus, these examples would show that the phenomenon of implicit contextual domain restriction extends beyond universal quantifiers and definites, and that, contra what is being claimed and defended in this dissertation, not only strong quantifiers but weak quantifiers too can be contextually restricted.

There is no doubt that the quantifiers (in bold) in all of the above sentences have an implicit contextual variable and quantify over a restricted domain. However, what I would like to argue is that the interpretation of the weak quantifier (when interpreted as contextually restricted) is partitive-like. Since there is no overt partitive construction, the only way (as has already been mentioned) that these weak quantifiers can quantify over a restricted domain is by means of the information provided by the TFBS, which creates a set of potential contexts where the existence of the nominal expression is presupposed.

In (39), for example, the most prominent (and probably the only possible interpretation if the conversation is going to be cooperative) reading of *several houses* is one where these houses are understood to be belonging to the houses of the village already under discussion. Hence, the interpretation of the quantifier is equal to the partitive *several of the houses*. If this is so, the apparently cardinally interpreted weak quantifier becomes quantificational and restricted by means of pragmatics (à la Büring

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at least three students (whatsoever) are asleep. […] to show that the quantifier here can be read as contextually restricted, we have to show that someone could object to the second sentence with *That's false. They were all wide awake.* (It seems to me that such a response is quite in order)."

(1996)) since there is no overt partitive (hence no overt definite determiner) to restrict the quantificational expression. The same applies to the rest of the examples

Note that in all four examples the weak quantifier appears in subject position, a position that has been argued to be a topic position; recall that following Büring's hypothesis, the partitive interpretation is obtained by means of an intonation pattern where the weak quantifier bears the topic accent. It is then this topic accent (and not a covert version of the partitive construction) which makes the proportional/strong interpretation of these sentences possible, the contrastive topic accent triggers the reconstruction of a particular set of potential contexts, the ones we obtain substituting the weak quantifiers for its contextually relevant alternatives. All these contexts would presuppose the existence of a group of elephants, houses, papers, and students respectively in case the sentences were uttered out of the blue; however, note that in all these examples the set of elephants, houses, papers, and students is already under discussion in the previous discourse.

Stanley & Szabó (2000) also dispute the standard assumption that weak quantifiers are not contextually restricted. One of the examples they offer is the following.

(42)   In most of John's classes, he fails exactly three Frenchmen.

In (42), the domain of the second quantifier expression (a weak quantifier expression) varies with the values of the quantificational expression in the first sentence. Thus, (42) expresses the proposition that "for most x such that x is a class of

John's, John failed exactly three Frenchmen in x". As a consequence, the weak quantifier expression *three Frenchmen* (apparently in its cardinal interpretation) is claimed to have an implicit contextual variable that restricts its domain and is bound by the upstairs quantifier *most of John's classes*.

The example in (42) is a bit more problematic for the claim that weak quantifiers in its cardinal interpretation are not contextually restricted, but I still believe Stanley & Szabó are using one of the two possible partitive-like interpretations described next: (a) the one where the set of Frenchmen is presupposed to exist and the following partitive-like interpretation is obtained: *three of the Frenchmen in John's class*; (b) a second more likely interpretation is one where the presupposed set is the set of students in John's class. In such a case, the partitive-like interpretation would be *three of the students/men that were French in John's class* (observe the similarity in interpretation with sentence (38)). Observe that in both interpretations the set of Frenchmen as well as the students that are part of John's class are presupposed. For the second partitive interpretation it helps to have stress on *three* (Bill Haddican p.c.). If we assume that (i) this intonational pattern is that of focus, and (ii) an alternative approach to focus (à la Rooth); then, we would be just at the same situation that we have assumed topic accents create: we would have to substitute the focused element by alternatives available in the discourse, which gives the proportional/partitive interpretation.[24]

---

[24] Stanley (p.c.) also suggests that a sentence like (i) must necessarily be contextually restricted, and that there is no situation where the sentence in (i) can be contextually unrestricted.

    (i)   Many students are from Madrid.

I agree with him on that this sentence is necessarily contextually restricted (interpreted proportionally). However, note that the subject position of individual-level predicates cannot be occupied by weak quantifiers in their cardinal interpretation and only strong quantifiers and weak quantifiers in their proportional interpretation can appear in these contexts (see Milsark (1974, 1977)). In Büring's terms (that I assume), this sentence can only have a single accentual pattern, that where *many* bears the so called

Now that it has been shown that weak-cardinal quantifiers are contextually unrestricted and that a pragmatic account of the partitive reading of weak quantifiers is plausible (à la Büring (1996)), the next section tries to prove (in order to prevent weak quantifiers to appear with the definite determiner unless a partitive construction is formed) that these weak-cardinal quantifiers are base generated below DP and function as cardinality predicates.

3.4. Weak Quantifiers are Base Generated below DP:

As has been claimed extensively in Chapter 2 as well as in the previous sections 3.3.1 and 3.3.2, in Basque, (i) contextual restriction goes hand in hand with the appearance of the definite determiner, (ii) the definite determiner only appears with strong quantifiers (restricting the Q-det in lexically strong quantifiers and the noun with strongly interpreted weak partitive quantifiers), (iii) weak quantifiers have been shown (see previous sections) to exclude the definite determiner and as a consequence to be

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contrastive topic accent which allows the weak quantifier to be contextually restricted and interpreted proportionally. Furthermore, an example like one in (ii) with a stage-level predicate can be easily interpreted in a non-restricted way:

(ii)   Many students went to the Radiohead concert.

If we assume a domain of 10 students in the semantics class, the statement in (iii) can be true in a situation where more than half of them came to the concert, say 6. This would be the proportional reading and we would need Büring's intonational pattern. But 6 are not many in absolute terms. The question then is: would we like to utter (ii) in absolute terms at all? The answer, I think, seems to be positive. Thanks to Anastasia Giannakidou for discussion on this matter.

contextually unrestricted (unless there is a special intonational/accentual pattern that allows to interpret the quantifier partitive-like).

In this section, I would like to argue that weak quantifiers are syntactically base generated below the definite determiner, that is to say, below the DP projection, in order to prevent weak-cardinal quantifiers to appear with determiners.

I will show that the base-position of weak quantifiers is the functional projection NumP associated with the morphological category number (see Ritter (1991), Vangsnes (2001) among many others; see Artiagoitia (2003) for Basque[25, 26]).

As has been argued by scholars that have analysed the Basque definite article (i.e. Goenaga (1991), Euskaltzaindia (1993), Ticio (1996), Artiagoitia (1998, 2003), Rodriguez (2003), Trask (2003), among others), this element is realised in two different forms: -A in the singular and -AK in the plural. I also agree with all these authors that the plural form is composed of the determiner -A and the plural marker -K. However, they have (apparently) all assumed that both the -A and the -K are base generated together in the same syntactic position, that is, at the DP head[27], the same position where the singular -A is claimed to be base generated.

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[25] Eguzkitza (1993) and Artiagoitia (1998) applied Abney (1987)'s proposal of the DP Hypothesis to Basque.

[26] See Chapter 4 for an extended analysis of the Basque definite article.

[27] Or, according to Artiagoitia (2003), at NumP head depending on whether it gets a definite or an indefinite interpretation --see Chapter 4, section 4.6.4--.

The proposal that this section wants to put forward is that the definite determiner -A and plural marker -K are base generated in different syntactic position: the plural marker -K will be claimed to be base generated in NumP while the definite determiner -A will be defended to be base generated where it has standardly been assumed to be generated, in the DP[28].

One of the arguments in favour of this proposal is based on coordination; let us take the following pair of nouns, *etxe* (house) and *baserri* (farm)[29], and see what happens when we coordinate them.[30]

(43)   Aldi   berean,   etxe eta baserria   da eraikin hori.
       period same.loc house and farm-D.sg is building that
       'That building is house and farm at the same time.'

In (43), the singular definite determiner takes scope over the whole coordinated structure as expressed in the example (43').

(43')   [[etxe] eta [baserri]] -a

In (44), we introduce the plural marker -K to the previous construction.

---

[28] Artiagoitia (2003) claims that the Basque article can be base generated in two different syntactic positions, NumP and DP (Artiagoitia suggests one is "some kind of Number Phrase"), due to the indefinite (as well as the definite) interpretation that this element can obtain in some particular contexts. See Chapter 4 for discussion on this point.

[29] Note that in Basque nouns are not marked for number and that the determiner has been claimed to be what makes the difference between singular and plural number. Larramendi (1729) claims the following: "el Bascuence tiene al nombre invariable, y solo el articulo haze la diferencia del singular, y plural, v.g. *guizon-á guizon-ac*" [=The noun is invariable in Basque, and only the article makes the difference between the singular and the plural, *guizon-á guizon-ac*] (quotation taken from Azkarate & Altuna (2001: 47))

[30] Thanks to Ricardo Etxepare (p.c.) for extensive discussion on this point.

(44)   Etxe   eta baserriak
        house and farm-D.pl

In this example, the houses, as well as the farms must necessarily be more than one, that
is, they must be plural. Due to the fact that the common noun *etxe* in (44) --as well as in
the previous example-- does not appear with an overt number marker, it seems as
though the plural marker does again take scope over the whole coordinated structure. Of
course, this is not unexpected if we consider that the plural marker -K comes after the
definite determiner -A and that in Basque, being to the right (in case you are a head)
usually means that you take scope over the phrase that appears to your left. Let us
suppose that the construction in (44) has the following structure:

(44')   [[[etxe] eta [baserri] -a] -k]

Let us change the example a little bit and introduce a definite determiner that combines
with the first noun in the coordination.

(45)   Etxea   eta baserriak
        house-D.sg and farm-D.pl

Here too, the plural number marker would apparently take scope over the whole
coordinated construction, that is, over both *etxea* and *baserria*.

(45')   [[[[etxe] -a] eta [[baserri] -a]] -k]

However, as opposed to the example in (44) a problem arises, since in this construction

we can only make reference (unexpectedly) to just a single house (in opposition to the

interpretation in (44)).

On the contrary, if we assume that the number marker is base-generated below

the definite determiner we would obtain the following structure (in an abstract way).

(46)   [[[etxe] Num] -a] eta [[[baserri] Num] -a]

What we have in this example is DP coordination. Each DP will have its own number:

the first common noun will be singular (with an empty number marker ∅) while the

second common noun will be plural (with the plural marker -K); hence, we will be able

to interpret the construction properly, a single house and more than one farm. To get the

final surface word order, the Number head will have to move up adjoining to the D

head.

(47a) Singular: [[[etxe] ∅] -a] ∅   ⇒   etxe-a
                                  └_____↑

(47b) Plural: [[[etxe] -k] -a] -k   ⇒   etxe-a-k
                                  └_____↑

The plural marker -K can be considered a suffix, and as such it is dependent phonologically as well as categorically on another category (in opposition to clitics which are only phonologically dependent (see Zwicky (1977, 1985)), and this category seems to be a Dº head. Therefore, it is possible to postulate that this last movement of the plural marker to the final position of the DP will be due to morphology. The fact that the plural marker is a suffix prevents us from having to assume that weak-cardinal quantifiers, those that I'm proposing base generate in NumP, would also have to move to the DP position; weak quantifiers are not affixes.

Thus, the syntactic structure of a weak-cardinal expression in predicative position will be the one that follows. This structure is of predicative type $\langle e, t \rangle$.

(48)

```
                    NumP[31]
                   /      \
                Spec       Num'
                          /    \
                        NP      ┌──────────────┐
                        △       │     Num      │
                                │ weak quantifiers │
                      ikasle    └──────────────┘
                      student
```

---
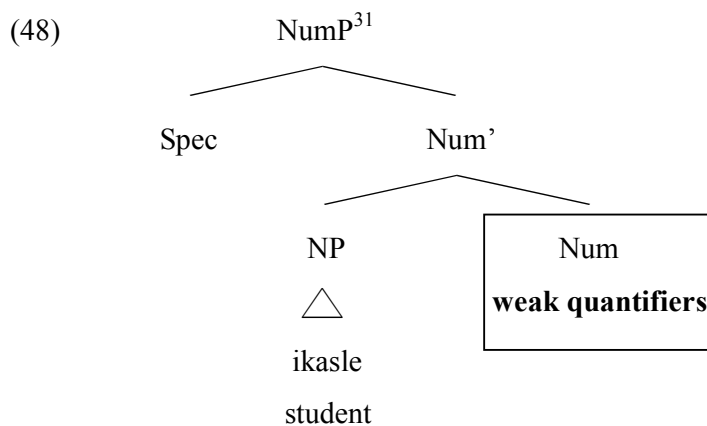
[31] Note that I am assuming a head final structure. The Specifier position will always be to the left. See among others Ortiz de Urbina (1989a), Laka (1990), Elordieta (2001), and Artiagoitia (2000).
Ortiz de Urbina (1989a) and Laka (1990) claim that left periphery projections (focus, negation, wh head, etc.) are head initial; this differentiation creates an asymmetry in Basque syntax.
On the contrary, Haddican (2001, 2004, 2005) suggests, following Kayne (1994), that Basque is a head initial language.

However, weak-cardinal quantifiers can also appear in argument position, a position in which ⟨e, t⟩ type objects are not allowed and either an entity type *e* element or a quantificational type ⟨⟨e, t⟩, t⟩ element is needed. It has already been claimed too (in section 3.3.1) that weak quantifiers, in order to be able to appear in argument position need make use of the existential closure (∃-cl), which allows combining two ⟨e, t⟩ type elements binding the free variable and giving it an existential meaning. The ∃ quantifier introduced by the ∃-cl will be of quantificational type ⟨⟨e, t⟩, ⟨⟨e, t⟩, t⟩⟩ and in combination with a predicate of type ⟨e, t⟩ creates an existential (indefinite) generalized quantifier of type ⟨⟨e, t⟩, t⟩ that can combine with the VP to give a truth value. This implicit existential quantifier will be placed in D[32] and the logical form that we will get for a sentence like the one in (35) is (36) --both examples repeated here as (49) and (50) for the reader's convenience--.

(49)   Ikasle askok   goxokiak   jan zituzten.
        student many.erg candy-D.pl eat aux.pl
        'Many students ate candies.'

(50)   [[∃x [ikasle(x) & asko(x)]] & goxokiak jan(x)]

---

[32] Longobardi (1994) --and subsequent work-- claims that DPs with an empty D node will be given universally an existential interpretation by default. The fact that there is an existential quantifier that fills the empty D head could be related to this idea. However, note that (in opposition to Artiagoitia (2003) who assumes this analysis for simple DPs) I don't assume this to be the case with the Basque definite article which I suggest is always head of DP.

```
                          DP
                    ╱          ╲
               Spec              D'
                            ╱        ╲
                        NumP          Ǝ
                    ╱        ╲
               Spec           Num'
                          ╱        ╲
                       NP          ┌──────────────────┐
                       △           │      Num         │
                                   │ weak quantifiers │
                     ikasle        └──────────────────┘
                     student
```
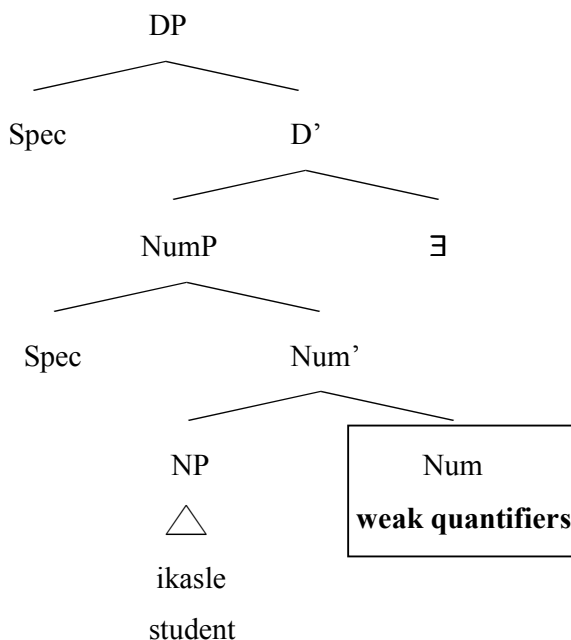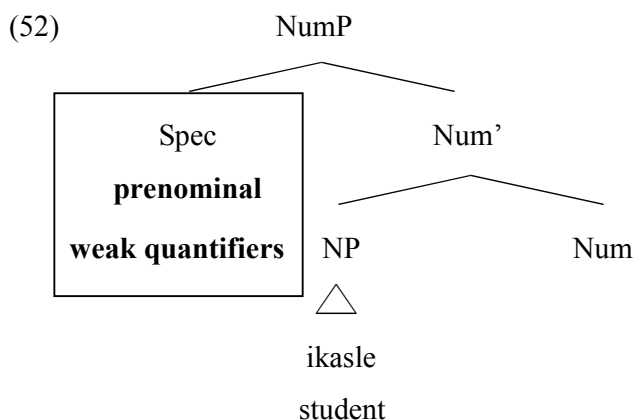
The weak-cardinal quantifiers that have been (mainly) used in the examples up until now have the property of always appearing in postnominal position, i.e. *asko*, *gutxi*, *batzu(e)k*, etc. Yet, there are also other Basque weak quantifiers that appear in prenominal position, preceding the common noun[33] (see also some examples in Chapters 1 and 2).

(51a) **Zenbait** ikaslek   goxokiak   jan zituzten.
       some   student.erg candy-D.pl eat aux.pl
       'Some students ate candies.'

(51b) **Hainbat** ikaslek   goxokiak   jan zituzten.
       some   student.erg candy-D.pl eat aux.pl
       'Some students ate candies.'

---

[33] All of the Basque numerals, except *bat* 'one' and in some dialects *bi* 'two', are prenominal. See fn.39.

These prenominal weak quantifiers (following Artiagoitia (2003)) will be claimed to occupy the specifier position of NumP to the left of the noun as the structure in (52) exemplifies.

(52)

```
                    NumP
              ┌───────────┐
        ┌──────────┐   Num'
        │   Spec   │ ┌──────────┐
        │ prenominal│ NP      Num
        │ weak      │ △
        │ quantifiers│
        └──────────┘ ikasle
                    student
```

The fact that these weak-cardinal quantifiers have a phrase-like flavour is evidence in support of the claim that they fill the specifier position[34]: *zenbait* and *hainbat* both derive from the genitive *∗zeren* (of it) and *∗haren* (of it) (respectively) + the numeral *bat*.[35]

---

[34] More complex weak quantifiers also appear in the prenominal position (only), hence, at the [Spec, NumP] position. *Honenbeste* (as many of this), *horrenbeste* (as many of that), *hainbeste* (as many of that -distal-) can also appear in this position; they are all complex: *honen+beste*, *horren+beste*, *haren+beste*. I do not treat these elements in this dissertation, however, I think that the proposal that is being put forward in this section/chapter can also be applied to them.

[35] Note that *zenbait* is also accepted in postnominal position; in this case, *zenbait* does not behave as a complex expression and it will be taken to be a simple phrase instead.

(ia) **Zenbait** ikaslek   goxokiak   jan zituzten.
       some   student.erg candy-D.pl eat aux.pl
       'Some students ate candies.'
(ib) Ikasle **zenbait**-ek goxokiak   jan zituzten.
       student some.erg   candy-D.pl eat aux.pl
       'Some students ate candies.'

The ergative case marker in (ib) is just -k, the -e- in between makes the combination of two consonants possible; that is, -e- is used to avoid the combination of *t* and *k*, an unavailable combination in Basque. So, -ek in (ib) is not the plural determiner. See i.e. Euskaltzaindia (1993: 191).

3.4.1. Numerals vs. Other Weak Quantifiers in Basque:

Not all Basque prenominal weak quantifiers are of a complex nature since numerals can also appear in this position.

(53)　**Zazpi ikaslek**　　goxokiak　　jan zituzten.
　　　seven student.**erg** candy-D.pl eat aux.pl
　　　'Seven students ate candies.'

There is a further property that makes numerals different from both complex weak quantifiers as *zenbait*, *hainbat*, etc., as well as from postnominal weak quantifiers (*asko*, *gutxi*, *batzu(e)k*, etc.): Numerals can appear with the definite determiner while the others can not as the examples in (54) show (see more on this below).

(54a)　**Zazpi ikasle-ek**　　　goxokiak　　jan zituzten.
　　　　seven student-D.pl.erg candy-D.pl eat aux.pl
　　　　'The seven students ate candies.'

(54b)　∗ **Zenbait ikasle-ek**　　　goxokiak　　jan zituzten.
　　　　　some　　student-D.pl.erg candy-D.pl eat aux.pl
　　　　'The some students ate candies.'

(54c)　∗ **Hainbat ikasle-ek**　　　goxokiak　　jan zituzten.
　　　　　some　　student-D.pl.erg candy-D.pl eat aux.pl
　　　　'The some students ate candies.'

(54d)　∗ **Politikari asko-ak**　 berandu iritsi ziren.
　　　　　politician many-D.pl late　 arrive aux.pl.past
　　　　'The many politicians arrived late.'

(54e) * **Politikari batzu(e)k-ak** berandu iritsi ziren.

     politician   some-D.pl   late   arrive aux.pl.past

    'The some politicians arrived late.'

The question to ask now is: what makes them different? The answer that I would like to propose is that numeral weak quantifiers can be definite and referential, contrary to the rest of Basque weak quantifiers that cannot get these interpretations. All of them (numerals and others) are claimed to be expression of cardinality, the only difference between pure cardinal words (numerals) and the rest of weak quantifiers is that in the latter the exact number is unspecified (as asserted in Milsark (1977).

3.4.1.1. Numerals in Basque:

Assuming that numerals are base generated in the [Spec, NumP] position (just like the rest of prenominal weak quantifiers) and following the argumentation presented in this chapter; the most natural assumption for constructions such as those in (55a) where the numeral appears with the definite article plus the plural marker is that the plural marker -K is base-generated (as already defended) in the head position of NumP. Now, the main assumption that we need to make is that the presence of the plural marker -K makes the presence of the definite article[36] obligatory in the DP projection. Taking into account that the definite article will always be head of DP (see Chapter 4), the presence of the existential quantifier (∃) that allows indefinite interpretations for weak quantifiers --as claimed for (50)-- will be lexically blocked and hence the

---

[36] Recall that the Basque plural marker -K has been claimed to be a suffix that must necessarily be adjoined to a category.

interpretation of the expression *zazpi ikasleak* will obligatorily be definite and referential[37, 38].

---

[37] Contra Barwise & Cooper (1981) and many others that claim that constructions such as *zazpi ikasleak* 'the seven student' are quantificational rather than referential. See also Landman (2001).

[38] There is one numeral that can not be combined with the definite determiner: *bat* 'one'.

     (i)   ∗ Jonek   liburu bata   irakurri zuen.
                 Jon.erg book one-D.sg read   aux.past
                 'Jon read the one book.'

Alternatively, *bat* can be claimed not to be a numeral but an indefinite article, of category D, which is in complementary distribution with the definite article -A. Furthermore, what would be expressed by *liburu bata* is already expressed by the necessarily definite *liburua* in (ii).

     (ii)   Jonek liburua   irakurri zuen.
               Jon.erg book-D.sg read   aux.past
               'Jon read the book.'

It seems as though the ungrammaticality of *liburu bata* is similar to the ungrammaticality of English ∗*the a book* or the Spanish ∗*el un libro*.
In some dialects *bi* 'two' is also postnominal (see fn. 34). This might be problematic for the proposal that this chapter is putting forward since postnominal *bi* does unexpectedly accept to be combined with the definite article and apparently both *bi* and the plural marker -K would be base-generated at the same syntactic slot, that is, [Head, NumP].

     (iii)   Mutil biak   berandu iritsi ziren.
               boy two-D.pl late   come aux.past.
               'The two boys arrived late.'

It could be claimed that (iii) *bat/bi* are not numerals but indefinite articles: *bat* 'one' would be the indefinite article while *bi* 'two' would be the dual article, and that (ii) Basque uses the indefinite articles in order to express the numerals 'one' and 'two'. For more discussion on different number values, see Corbett (2000).
There is only one situation where *bata* 'the one' is grammatical: explicit contrastive contexts. Once you eliminate *bestea* 'the other' (the element that creates the contrast) in the second sentence in (iva), the result is out as the example in (ivb) demonstrates.
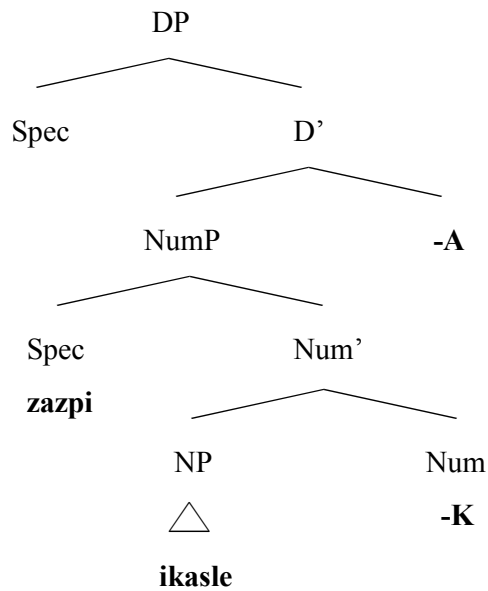
     (iva)   Batak   oilaskoa jan zuen, besteak   patata frijituak.
               one-D.sg chicken eat aux, other-D.sg potato fried
               'The one ate chicken, the other chips.'
     (ivb)   ∗ Batak   oilaskoa jan zuen.
                one-D.sg chicken eat aux.
               'The one ate chicken.'

Note that constructions like (iva) are also grammatical in other languages, i.e. Spanish, French.

     (va)   Spanish: El uno comió pollo,   el otro   patatas fritas.
                  the one ate   chicken the other potatoes fried
     (vb)   French: L'un   mange du poulet, l'autre   des frites.
                  the'one ate   chicken the'other chips

Again, once you make the contrast silent, the sentences become ungrammatical.
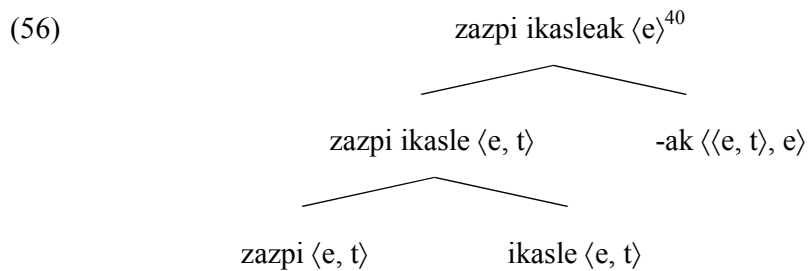
(55)   [zazpi ikasle]-ak

seven student-D.pl

'The seven students.'

```
                        DP
              ┌─────────┴─────────┐
            Spec                  D'
                          ┌───────┴───────┐
                        NumP              -A
                  ┌──────┴──────┐
                Spec          Num'
                zazpi      ┌────┴────┐
                          NP        Num
                          △         -K
                        ikasle
```

What the combination of *zazpi ikasle* and the definite determiner -A(K) yields is a plural individual of type *e*. In other words, the combination of the numeral and the common noun creates an ⟨e, t⟩ type element, a set of seven students. On the other hand, the definite determiner will be of type ⟨⟨e, t⟩, e⟩, that is to say, it takes a set of seven students as an input and returns (in this case) a plural individual of type *e* as expressed

---

(via)   Spanish: ∗ El uno comió pollo.
                    the one ate   chicken
(vib)   French: ∗ L'un   mange du poulet.
                   the'one ate   chicken

in (56) (see chapter 4)[39]. This plural individual will refer to a contextually specified set of seven students, that is, it will be contextually restricted the same way a definite DP is taken to be. For the proportional interpretation the partitive construction is used, where the definite article combines with the noun and the numeral is claimed (together with the rest of weak quantifiers when in partitive constructions) to be of quantificational type. The interpretation of this construction might be specific (see Enç (1991)), but never definite and referential.

(56)   zazpi ikasleak $\langle e \rangle$[40]

                    zazpi ikasle $\langle e, t \rangle$ -ak $\langle \langle e, t \rangle, e \rangle$

          zazpi $\langle e, t \rangle$ ikasle $\langle e, t \rangle$

Muromatsu (1998: 132) claims that "even indefinite noun phrases present meaning differences: differences in reference and difference in specificity". Definite will be exhaustive; indefinites induce the partitive meaning. Thus, I claim that numerals get definite (exhaustive) interpretation in [Numeral+Noun+AK] sequences. Sentence (54a) is interpreted as follows: the students were seven and all of them ate a candy. On the other hand, when the numeral appears in a partitive construction of the form [Noun+D.pl/of+Numeral] as in (57), the interpretation that we get is not one of exhaustivity, but rather something like 'seven students that ate a candy were a subgroup

---

[39] In order to form generalized quantifiers of type $\langle \langle e, t \rangle, t \rangle$, weak quantifiers are assumed to be base-generated in Q-detP and be of quantificational type $\langle \langle e, t \rangle, \langle \langle e, t \rangle, t \rangle \rangle$. In these cases, the partitive construction (-*etatik* 'of the') must be necessarily overt. See Chapter 2.

[40] The syntactic structure has been simplified.

of the students' (see Enç (1991), see Chapter 2 for an analysis of Basque partitives).
Note that the definite interpretation is not allowed for partitives.[41]

(57)   Ikasleetatik   zazpik   goxoki bat jan zuten.
        student-Dpl./of seven.erg candy   one eat aux.past
        'Seven of the students ate a candy.'

However, and in opposition to what seems to be the case when the definite
article appears with numerals, the combination of the Basque definite determiner -A and
the plural marker -K does not always create definite interpretations when merged with a
common noun: It can also yield existential indefinite interpretations in some (not all)
contexts[42].

(58)   Jonek   liburuak   irakurri zituen.
        Jon.erg book-D.pl read   aux.past
                Definite: 'Jon read the books.'
                Existential: 'Jon read books'.

In Chapter 4 it is argued that in order for a [Noun+A(K)] sequence to obtain the existential interpretation (cf. (58)) it must necessarily first go through the Kind denotation (see Carlson (1977), Chierchia (1998), Dayal (2004), Zamparelli (2002a, 2002b) and references therein). Note that [Numeral+Noun] sequences can not denote kinds (see the reply in (59)); they may denote generic interpretations, but crucially no definite determiner is required in this case. (The following example is taken from Büring (1996: 22); translation my own).

(59)   Julen: Nola deitzen zaio **hiru   musikari-k**[43] osatzen duten taldeari?
              how   call   aux three musician.erg form   aux   group.dat
              'What do you call a group of three musicians?'

       Igor: Ez dakit[44]!! **Lau musikari-k**   osatzen dutenari laukotea   deitzen zaio.
              no know   four musician-erg form   aux.to quartet-D.sg call   aux
              'I don't know!! Four musicians you call a quartet.'

---

[43] Note that there is no article in these [numeral+noun] sequence, the -k corresponds to the ergative case marking.

[44] See fn. 13.

3.4.1.2. Other Weak Quantifiers in Basque:

3.4.1.2.1. Prenominal Weak Quantifiers:

We have seen in the examples (54b-c) that prenominal weak quantifiers can not be combined with the Basque definite article (except numerals, for reason that have been explained above).

(60a) ∗ **Zenbait ikasle-ek**   goxokiak   jan zituzten.   (=54b)

     some   student-D.pl.erg candy-D.pl eat aux.pl

     'The some students ate candies.'

(60b) ∗ **Hainbat ikasle-ek**   goxokiak   jan zituzten.   (=54c)

     some   student-D.pl.erg candy-D.pl eat aux.pl

     'The some students ate candies.'

If we just consider syntactic facts, this behaviour is completely unexpected since being these weak quantifiers prenominal as they are, the NumP head position is not occupied, and the plural marker -K should have no problem to be base-generated in that position.

However, the reason of the ungrammaticality of sentence (60) is not related to the base generating position of the plural marker, but rather to the fact that the presence of the Basque plural marker -K makes the presence of the definite article obligatory, and hence, the interpretation of the subjects in (60) would necessarily be definite and referential, an interpretation that these quantifiers can not obtain (see previous section). Such a combination [WeakQ+Noun+AK] would provide a contextually restricted,

definite, specific, and referential interpretation (one similar to a definite DP like *mutil-a*

'the boy'); but due to the fact that the exact number of weak quantifiers (in contrast with

numerals) is unspecified. In other words, numerals, as opposed to the rest of weak

quantifiers, can make reference to a specific set. As I said before, when we utter

something like *zazpi ikasle* 'seven students' we are usually speaking about a set of

seven students (not seventy two) and when we want to refer to them as a plural

specific/referential set we make use of the definite determiner. On the other hand, the

rest of weak quantifiers (both prenominal and postnominal) can not make reference to a

specific set the way numerals can, since their number is clearly unspecified; hence the

impossibility to be combined with the definite determiner.

The only construction where these unspecified weak quantifiers allow the

definite article (excluding numerals again) is the partitive construction where the

definite plays the role of the contextual domain restrictor (Chapter 2). Recall that in

these constructions, the interpretation that weak quantifiers force is the proportional one

and that their behaviour is parallel to that of strong quantifiers. In such a case their base

generating type is not of $\langle e, t \rangle$, but quantificational $\langle \langle e, t \rangle, \langle \langle e, t \rangle, t \rangle \rangle$, yielding as a result

a generalized quantifier of type $\langle \langle e, t \rangle, t \rangle$ when combined with the partitive construction

(common noun plus the partitive) of predicative type $\langle e, t \rangle$ (see chapter 2).

3.4.1.2.2. Postnominal Weak Quantifiers:

The explanation provided in the previous section (3.4.1.2.1) should be applied to

every weak quantifier which is unspecified for number, that is, every weak quantifier

except numerals. Therefore, the weak quantifiers that appear in postnominal position (*asko*, *gutxi*, *batzu(e)k,* etc) are also included in this group.

(61a)   ∗ **Politikari asko-ak**   berandu iritsi ziren.[45]   (=54d)

       politician many-D.pl late   arrive aux.pl.past

       'The many politicians arrived late.'

(61b)   ∗ **Politikari gutxi-ak**[46] berandu iritsi ziren.

---

[45] Note that the ungrammaticality of these constructions shows that in Basque these elements do not seem to behave like adjectives contrary to what have been proposed for other languages; i.e. English: *the many*, *the few*; Spanish: *los muchos*, *los pocos* (see Higgimbotham (1987), Partee (1988), Svenonious (1992) among many others). However, not every speaker accepts these constructions; those speakers that judge them as ungrammatical accept the definite determiner with English *few* or Spanish *pocos* only when they are accompanied by a relative clause. Constructions such as English *the few* and Spanish *los pocos* without the relative clause and English *the many* and Spanish *los muchos* in general (with or without relative clauses) are out according to these speakers.

      (ia)   ∗ The many students arrived late.
      (ib)   ∗ The few students arrived late.
      (ic)   ∗ The some students arrived late.

      (iia)   ∗ The many students that arrived late missed the bus.
      (iib)   The few students that arrived late missed the bus.
      (iic)   ∗ The some students that arrived late missed the bus.

Thanks to Bill Haddican and Brendan Costello for help with the English data.
In this dissertation, weak-cardinal quantifiers are treated as cardinality predicates that are born in NumP. See section 3.5 for some exceptions to this rule.

[46] There is a problematic usage of *gutxi* for the analysis that it is being proposed in this chapter. Following the current proposal, if both *gutxi* and the plural marker -K are base generated at the same syntactic position (head of NumP), the result should not be grammatical, but contra prediction, it is.

      (i)   Helmuga gurutzatu zuten txirrindulari **gutxiak**   leher eginda iritsi ziren.
              finish line cross   aux cyclist   few-D.pl burst do   arrive aux
              'The few cyclists that crossed the finish line did so exhausted.'

One of the specific characteristics of this usage of *gutxi* is that it is (almost) always used inside relative clauses (see fn.46). It does not seem to be a coincidence that i.e. Spanish *los pocos* or English *the few* are completely grammatical when in relative clauses and not that good (or even ungrammatical, just as in Basque) otherwise.
A possible way out of the problem would be to claim that the definite determiner that appears with *gutxi* in sentences like (i) is the definite determiner that is related to the relative clause. However, this does not solve the problem and it's apparently a quite ad hoc solution since if this was the case, the rest of weak quantifiers should also allow the definite determiner in relative clauses, but they do not (this is also the case in English and in Spanish).

      (iia)   ∗ Helmuga   gurutzatu zuten txirrindulari **askoak**   leher eginda iritsi ziren.
             finish line cross   aux   cyclist   asko-D.pl burst do   arrive aux.

politician few-D.pl   late   arrive aux.pl.past

'The many politicians arrived late.'

(61b)   ∗ **Politikari batzu(e)k-ak** berandu iritsi ziren.   (=54e)

politician some-D.pl   late   arrive aux.pl.past

'The some politicians arrived late.'

Again, the reason why the definite article cannot be combined with weak quantifiers is due to the fact that weak quantifiers (by default) do not accept definite interpretations. Furthermore, note that in this case, the base-position of postnominal weak quantifiers is head of NumP, the position where the Basque plural marker -K has been claimed to be base-generated. Of course, these two elements can not be claimed to be generated in the same position and as a result, the construction ends up being ungrammatical.

'The many cyclists that crossed the finish line were exhausted.'
(iia)   ∗ Helmuga gurutzatu zuten txirrindulari **zenbaitak** leher eginda iritsi   ziren
            finish line cross   aux   cyclist   asko-D.pl burst do   arrive aux.
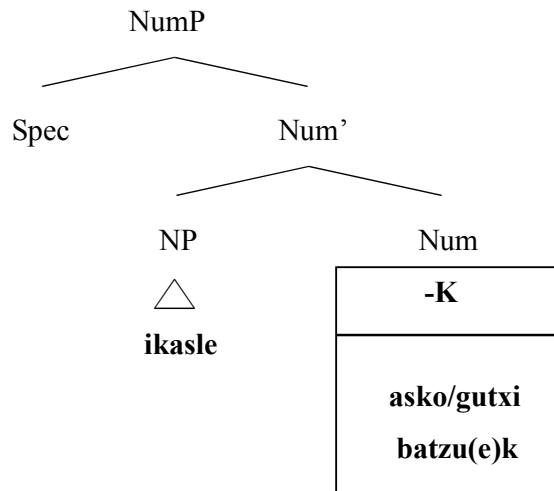   'The some cyclists that crossed the finish line were exhausted.'

Another possible solution would be to argue that *gutxi+ak* is a strong quantifier just like *guztiak*, *denak*, etc. This would solve the problem of base generation since in this case, the complex *gutxi+a* would be base generated at Q-det and only the plural marker would appear at the NumP head; we would neither have to worry about the fact that the rest of weak quantifier do not appear with the definite determiner, we could always argue that they can not be strong quantifier unless a partitive construction is introduced. However, I'm not sure whether the semantic behaviour of *gutxiak* is equal to the one shown by *guztiak* and other real strong quantifiers.
A third possible option could be to claim that *gutxi*, contrary to other weak-cardinal quantifiers, and in accordance with numerals can be definite and referential. This explanation could be on the right track since in fact it seems as though the set denoted by *NP gutxiak*/*the few NP*/*los pocos NP* is indeed referential. However, this explanation would mean that these weak quantifiers can be specified for number, and it does not seem to be the case.
Be that as it may, I don't have a satisfactory solution to the problem at the moment and I will leave it for future research.
Note that Artiagoitia (2003: 55) generalizes the use I've just described for *gutxi* to the rest of weak quantifiers, a generalization that I don't agree with (neither does the vast majority of Basque speakers I've checked with). Note also that some speakers do not accept *gutxi+ak*; for the construction to be judged grammatical these speakers need to change the definite article by a demonstrative (thanks to Ricardo Etxepare for pointing this out to me).

(62)   ∗ Ikasle asko-ak/gutxi-ak/batzuek-ak

```
                    NumP
                  /      \
              Spec        Num'
                        /      \
                      NP        Num
                      △     ┌──────────┐
                    ikasle  │    -K     │
                            ├──────────┤
                            │ asko/gutxi│
                            │ batzu(e)k │
                            └──────────┘
```

Once it has been defended that the syntactic base position of weak quantifiers is NumP; the next section discusses some differences in interpretation that come out when the common noun beside weak-cardinal quantifiers is elided.

3.5. Weak-cardinal Quantifiers and Predicative Interpretations:

Up until now, the chapter has mainly concentrated in three things: (i) it has tried to show that weak-cardinal quantifiers are unrestricted, something that Basque language shows in the overt syntax since weak quantifiers, in opposition to strong ones, do not appear with the definite article which this dissertation has claimed (in line with Giannakidou (2004)) to be a contextual domain restrictor; (ii) it has proven that these weak quantifiers obtain different interpretations; these different interpretations are

however not due to their lexical ambiguity but to the intonational pattern that they follow and TFBS of the sentence (à la Büring (1996)); (iii) it has put forward and defended that so-called weak quantifiers are base-generated in the functional projection NumP (below DP, to avoid their appearance with definites) and that despite some differences between prenominal and postnominal, numerals and non-specific weak quantifiers, their base-generating position is always NumP.

So far, it seems as though all of the Basque weak-cardinal quantifiers have a similar behaviour. They have been grouped together because, in opposition to strong quantifiers, they are all predicative, non-presuppositional, etc. Furthermore, these properties apart from some language internal differences (i.e. Basque weak quantifiers can be prenominal and postnominal --not both normally--, English and Spanish weak quantifiers are always prenominal, etc.), seem to be applicable crosslinguistically (see chapter 1).

Thus, as expected, all [weak quantifiers + noun] sequences yield grammatical sentences when in predicative positions as the examples in (63) clearly demonstrate (some repeated from example (31) for convenience).

(63a)   Gonbidatuak [neska asko] ziren.
        guest-D.pl   girl   many be.past
        'The guests were many girls.'
(63b)   Gonbidatuak [neska gutxi] ziren.
        guest-D.pl   girl   few   be.past
        'The guests were few girls.'
(63c)   Gonbidatuak [bost neska] ziren.
        guest-D.pl   five   girl   be.past
        'The guests were five girls.'

(63d) Gonbidatuak [bost neska baino gehiago] ziren.

  guest-D.pl   five girl   comp. more   be.past

  'The guests were more than five girls.'

(63e) Gonbidatuak [neska batzu(e)k] ziren.

  guest-D.pl   girl   some   be.past

  'The guests were some girls.'

(63f) Gonbidatuak [zenbait neska] ziren.

  guest-D.pl   some   girl   be.past

  'The guests were some girls.'

(63g) Gonbidatuak [hainbat neska] ziren.

  guest-D.pl   some   girl   be.past

  'The guests were some girls.'

As already claimed too, the so-called Basque strong quantifiers are not acceptable in this kind of constructions.[47]

(64a) ∗ Gonbidatuak [neska guzti-ak] ziren.

    guest.D.pl   girl   all-D.pl be.past

  'The guests were all of the students.'

(64b) ∗ Gonbidatuak [neska den-ak] ziren.

    guest.D.pl   girl   all-D.pl   be.past

  'The guests were all of the students.'

(64a) ∗ Gonbidatuak [neska bakoitz-a] zen.

    guest.D.pl   neska each-D.sg. be.past

  'The guests were each students.'

---

[47] Note that weak quantifiers with overt partitive contructions, that is, strongly interpreted weak quantifiers, are also ungrammatical in predicative position.

  (i)   ∗ Gonbidatuak [nesketatik asko] ziren.
      guest-D.pl   girl-D.pl/of many be.past
      'The guests were many of the girls.'

However, a problem arises when instead of the sequence [weak quantifier + noun] what we have is just the weak quantifier by itself, that is, when the common noun is made silent. In such a situation, quite unexpectedly, not all of the (so-called) Basque weak quantifiers behave alike and some differences emerge.

The examples (65a-d) are completely grammatical and the only interpretation they get is the predicative one; the proportional interpretation is, as predicted, completely out.

(65a)   Gonbidatuak [asko] ziren.
        guest.D.pl   [many] be.past
        'The guests were many (in number)'

(65b)   Gonbidatuak [gutxi] ziren.
        guest.D.pl   [few]   be.past
        'The guests were few (in number)'

(65c)   Gonbidatuak [bost] ziren.
        guest.D.pl   [five] be.past
        'The guests were five'

(65d)   Gonbidatuak [bost baino gehiago] ziren.
        guest.D.pl   [five comp. more]   be.past
        'The guests were more than five'

Things change when the weak quantifiers used are *batzu(e)k* (some) and *zenbait* (some). With these quantifiers, you can make the common noun silent and in case you do so, the sentences become automatically ungrammatical.

(66a) * Gonbidatuak [batzu(e)k] ziren.[48]

      guest.D.pl [some]   be.past

      'The guests were some'

(66b) * Gonbidatuak [zenbait] ziren.

      guest.D.pl [some] be.past

      'The guests were some'

Strong quantifiers follow their well established pattern and continue being ungrammatical in these contexts.

(67a) * Gonbidatuak [guzti-ak] ziren.

      guest.D.pl   all-D.pl be.past

      'The guests were all.'

(67b) * Gonbidatuak [den-ak] ziren.

      guest.D.pl   all-D.pl be.past

      'The guests were all.'

(67a) * Gonbidatuak [bakoitz-a] zen.

      guest.D.pl   each-D.sg. be.past

      'The guests were each.'

---

[48] It might seem at first sight that the sentences in (66) are grammatical since sentences with the same word order in the overt syntax can be grammatical.

    (i)   Gonbidatuak, batzu(e)k/zenbait ziren.
            guest-D.pl   some/some   aux.past
            'Some were guests.'

Note however that if the sentence is going to be grammatical a pause after *gonbidatuak* is always necessary (as in the example in (i)), and on the other that in this kind of examples the element that is the predicate is *gonbidatuak*, and not *batzu(e)k*. In fact, *gonbidatuak* in (i) has been moved to the front from sentence final position, and the natural word order is (ii).

    (ii)   Batzu(e)k/Zenbait ziren   gonbidatuak.
           some/some   aux.past guest-D.pl
           'Some were the guests.'

Now, since the possibility of appearing in predicative position is one of the tests used in the literature to separate strong from weak quantifiers (see i.e. Bowers (1975), Higgimbotham (1987), Landman (2001)); what the data in (63) through (67) suggest is that *batzuek* and *zenbait* should be considered proportional/strong, and not cardinal/weak, as we initially thought. In other words, considering that their behaviour is equal to strong quantifiers when it comes to predicative interpretations, why should they be claimed to something else?

This particular behaviour shown by Basque *batzuek* and *zenbait* does not only concern this language and the same behaviour can be observed in languages such as English or Spanish as the following examples show.

English:
(68a)   The guests were many/few students.
(68b)   The guests were many/few.[49]

(69a)   The guests were some students.
(69b)   ∗ The guests were some.

Spanish:
(70a)   Los   invitados eran   muchos/pocos estudiantes.
        the.pl guest.pl   be.past many/few   students
        'The guests were many/few students.'
(70b)   Los   invitados eran   muchos/pocos.
        the.pl guest.pl   be.past many/few
        'The guests were many/few.'

---

[49] The same applies to all the other weak quantifiers except for *some*. See next example.

(71a) Los   invitados eran   algunos/unos estudiantes.[50]

the.pl guest.pl   be.past some/some   students

'The guests were some students.'

(71b) * Los   invitados eran   algunos/unos.

  the.pl guest.pl   be.past some/some

'The guests were some.'

It seems as though the English and Spanish counterparts of Basque *batzuek* and *zenbait* when the nominal expression is made silent also behave as strong quantifiers in that they can not appear in predicative position (see Higgimbotham (1987)).[51]

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[50] Spanish has two plural existential determiners: *unos* 'a-plural', *algunos* 'some-plural'. For more discussion on this see Gutierrez-Rexach (2001) and Alonso-Ovalle & Menendez-Benito (2002).
Note that when *batzuek* and *zenbait* appear with the noun, they are translated as *unos*; when the noun is elided on the other hand, they are translated as *algunos*.

[51] There are also some other situations in which English *some* and Spanish *algunos/unos* differ from the behaviour shown by the rest of weak quantifiers and apparently behave the way strong quantifiers do. For example, they cannot follow the definite article.

> English:
> (i)   The five/many/few students. (but see footnotes 46 & 47)
> (ii)   * The some students.
>
> Spanish:
> (i)   Los cinco/muchos/pocos estudiantes. (but see footnotes 46 & 47)
>   the   five/many/few   students
> (ii)   * Los algunos/unos estudiantes
>   the some/some   students

Note that not every speaker agrees with the claim that English *the many/few* and Spanish *los muchos/pocos* are completely grammatical unless a relative clause is introduced (see fn. 48 for a similar claim in Basque, Basque *asko* 'many' can never appear with the definite article though). In Basque, only numerals allow appearing with the definite article (*bost ikasleak* 'lit.: five student D.pl', and in such situations, the construction can only obtain a definite referential interpretation (see section 3.4.1.1)). Thanks to Bill Haddican and Brendan Costello for help with the English data.
Bowers (1975) called these properties (see also Higgimbotham (1987), Svenonious (1992)) adjectival properties and based on the behaviour shown by the quantifiers in these contexts, he grouped *some* with *the* and *all*.

English:

(72a) ∗ The men are each.

(72b) ∗ The men are every.

Spanish:

(73a) ∗ Los estudiantes eran   cada.
           the students   be.past each
         'The students are each.'

(73b) ∗ Los estudiantes eran   todo.
           the students   be.past every
         'The students are every.'

After we have seen the parallelism between Basque, English, and Spanish data, let us return to Basque. Apart from the property of not being able to appear in predicative position when without the common noun, strong quantifiers as well as *batzuek* and *zenbait* (with the noun made silent) do also share some other properties. For example, these weak quantifiers (just like strong quantifiers, see Chapter 2, sections 2.6.1.1 and 2.6.1.2) are presuppositional in that they presuppose the set denoted by the silent NP to be a non-empty familiar (or salient) domain. Of course, the noun being silent, a noun that is already mentioned in the previous discourse or a contextually relevant noun will be taken as antecedent; i.e. if we are talking about dogs, in the sentences in (74), the set of dogs is presupposed to be non-empty.

(74a) Batzu(e)k harrapatzen badituzu, saria   emango dizut.
         Some.erg   catch   if-aux.   prize-D.sg give   aux.
         'If you find some, I'll give you the prize.'

(74b) Zenbait   harrapatzen badituzu, saria   emango dizut.
      Some.erg catch   if-aux.   prize-D.sg give   aux.
      'If you find some, I'll give you the prize.'

Another interesting property of these weak quantifiers is that when combined with stage level predicates they can only be interpreted proportionally, and no cardinal interpretation is allowed.

(75a) Batzu(e)k afaria prestatu zuten.
      some.erg dinner prepare aux
      'Some cooked dinner.'

(75a) Zenbaitek afaria prestatu zuten.
      some.erg   dinner prepare aux
      'Some cooked dinner.'

Both the sentences in (75) are interpreted as *some of the x cooked dinner, as opposed to others*; x denotes whatever relevant antecedent previous discourse or context provides.

One other property that provides further evidence in favour of the fact that these two hypothetically weak quantifiers behave in a real strong-proportional manner comes from sentences formed with individual level predicates. Subjects of individual level predicates must necessarily be proportional strong quantifiers, and as a consequence, no weak-cardinal quantifiers are allowed.

(76a) Batzu(e)k jazz-a   maite dute.

     some-erg jazz-D.sg love   aux.

     'Some love jazz.'

(76b) Zenbaitek jazz-a   maite dute.

     some-erg jazz-D.sg love   aux.

     'Some love jazz.'

Again, the sentences in (76), like those in (75), are interpreted as *some of the x love jazz, as opposed to others*; and again, the denotation of x is provided by previous discourse or by context.

     Clearly then, all the examples so far show that the behaviour of these two supposedly weak-cardinal quantifiers matches better with the behaviour of strong quantifiers than with that of weak-cardinal quantifiers. However, note that in order to get the quantificational interpretation we would need to postulate a covert partitive construction (see the way sentences (75-76) are interpreted). But recall from sections 3.2.1.2 and 3.2.2 that I have assumed Büring's analysis to account for the partitive proportional interpretation of weak quantifiers when they appear without the overt partitive construction. Significantly, this interpretation is felicitous when there is a special intonational pattern (see below) and the set composed of x-s (in the examples above) is already under discussion, or otherwise, i.e. when the sentence is uttered in an out of the blue situation, we make use of the Topic/Focus/Background Structure (TFBS).

     This assumption helps us keep our initial proposal intact: the one that claims that definite determiners inside quantificational phrases provide a contextual domain restriction. This restriction is done in the overt syntax in Basque (so it is the case in

other languages too, see Chapter 2) and when no definite article is overt, the partitive proportional interpretation is obtained by intonational means, with no need to postulate any covert *the+of* partitive construction.

Therefore, *batzu(e)k* and *zenbait* (as well as their English and Spanish counterparts) will be considered weak-cardinal quantifiers with no quantificational force on themselves (existential closure will be needed for them to be interpreted in argument position) and the proportional partitive interpretation that we obtain when the common noun is made silent (only with these two weak quantifiers[52]) will be due to the accentual pattern that the sentence gets as proposed by Büring.

Crucially, for the correct interpretation of all of the sentences that we have treated in this section, it is necessary to create a contrast. In other words, all these sentences are interpreted with a *as opposed to others* at the end of the sentence. It is exactly this contrast what we obtain through the TFBS. Note that in the examples above the weak-cardinal quantifiers *batzu(e)k* and *zenbait* (and their English and Spanish

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[52] For reasons that I'm not aware of at the moment *asko*, *gutxi* and the rest of weak quantifiers (can but) need not force a partitive interpretation when the noun is made silent. Note that *batzu(e)k/zenbait* do not obey the so called no-linking constraint; in the following example *hizkuntzalaritzako batzu(e)k/zenbait* 'some of linguistics' is necessarily related to a set of books already present in the discourse. See Gutierrez-Rexach (2001:119).

(i)   Matematikako   liburuak   kaxan   daude, fisikakoak   ohe gainean daude,
            Mathematics.about book-D.pl box.loc be   physics.about-D.pl bed over.loc be
        eta hizkuntzalaritzako batzuk/zenbait mahai azpian.
        and linguistics.about   some/some   table under.loc
            'The books about mathematics are in the box, those about physics over the bed, and
            some about linguistics under the table.'

(ii)   Matematikako   liburuak   kaxan daude, fisikakoak   ohe gainean daude,
            Mathematics.about book-D.pl box   be   physics.about-D.pl bed over.loc be
        eta hizkuntzalaritzako ??asko/??gutxi/??zazpi mahai azpian.
        and linguistics.about   many/few/seven   table under.loc
            'The books about mathematics are in the box, those about physics over the bed, and
            many/few/seven about linguistics under the table.'

More analysis is needed on this topic and I leave it for future research.

counterparts) appear in subject position, a position that is standardly assumed to be a topic position; if this is so, it is possible to relate the subject position with a contrastive topic accent that will trigger the reconstruction of a particular set of potential contexts (those contexts that we obtain substituting *batzu(e)k* and *zenbait* for its contextually relevant alternatives), and what all these contexts have in common is that they presuppose the existence of the set denoted by the NP. Since the common noun has been made silent in these examples, the previous discourse or the context will necessarily provide the denotation of the common noun we are making reference to. Thus, the subjects (*batzu(e)k* and *zenbait*) will be claimed to bear a contrastive topic accent in the sentences in (75-76) while the objects (in preverbal position --see footnote 11--) will bear the focus accent.

(77) [BATZU(E)K/ZENBAITEK]$_T$ [AFARI-A]$_F$ prestatu zuten.   (=75a-b)
        some.erg/some.erg   dinner   prepare aux
        'Some cooked dinner.'

(78) [BATZU(E)K/ZENBAITEK]$_T$ [JAZZ-A]$_F$ maite dute.[53]   (=76a-b)
        some.erg/some.erg   jazz-D.sg   love aux.
        'Some love jazz.'

Although no example has been built with these weak-cardinal quantifiers in object position thus far, they can also perfectly fill this position as the following example shows.

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[53] T stands for Topic, F stands for Focus.

(79) Izarok   batzu(e)k/zenbait irakurri zituen.
     Izaro.erg some/some   read   aux.past
     'Izaro read some.'

Just as in the examples where *batzu(e)k* and *zenbait* appeared in subject position, the only possible interpretation of this sentence is one where "Izaro read some of the books, as opposed to others" (in case the elided noun is *books*). That is, the interpretation is necessarily partitive and proportional and a contrast is necessary if the sentence is going to be grammatical. So it seems possible to propose that this contrast, even when in object position, is due to some accentual pattern à la Büring (1996).

(80) Izarok   [BATZU(E)K/ZENBAIT] irakurri zituen.
     Izaro.erg some/some   read   aux.past
     'Izaro read some.'

Considering that in Basque focused phrases appear in preverbal position (see footnote 11) it is unlikely that *batzuek/zenbait* in (80) will bear a contrastive topic accent, and it is much more likely that these two weak quantifiers bear focal accent. Since focus also triggers the construction of an alternative set of potential contexts, it is possible to postulate that it is due to these alternative possibilities that we get the proportional partitive interpretation in the example (80). Hence, the only possible interpretation of these two weak quantifiers in (80) will be discourse-linked and

partitive, and the set denoted by the elided noun (let us say *books* in this case) will be presupposed.[54]

3.5.1. Subsection Conclusion:

This section has shown that when the common noun that combines with weak-cardinal quantifiers is made silent some differences arise, at least in languages such as Basque (the language I concentrated on), English or Spanish. In such an environment, some Basque weak quantifiers, specifically *batzu(e)k* and *zenbait*, quite unexpectedly behave like strong quantifiers in that (i) they can not appear in predicative position, (ii) they are presuppositional, (iii) they can only be interpreted proportionally when combined with stage-level predicates, (iv) they can combine with individual level predicates that only accept strong-proportional subjects (Milsark (1977)).

The behaviour of these weak quantifiers has been explained in terms of Büring (1996). However, there are some unanswered questions: Why is it that the rest of weak quantifiers without nouns can appear in predicative situations? If *batzu(e)k/zenbait*

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[54] According to some speakers (the author excluded) *batzu(e)k* and *zenbait* can appear in existential sentences. Note that this is quite unexpected if the only possible interpretation that these weak quantifiers (when without common nouns) is the partitive proportional one.

    (i)   Badira BATZU(E)K/ZENBAIT liburutegian.
               yes-are some/some   library.loc
               'There are some in the library.'

Since some speakers (the author included) can only use these weak quantifiers (without noun) in locative constructions, one could be tempted to claim that the interpretation of the sentence in (i) is not existential, but rather, locative. This would solve the problem but the solution seems to be quite problematic too because if (i) was locative strong quantifiers like *guztiak*, *denak* or *bakoitza* should not create ungrammatical existential as they do.
Another possibility would be to claim that since the real nature of *batzu(e)k/zenbait* is weak, they can be interpreted cardinally (not partitively) in some particular contexts, i.e. such as existential sentences. The problem of this proposal is that these two weak quantifiers are not able to appear in predicative position (see example (69)), a position that just like existential only accept weak-cardinal quantifiers.
I have nothing interesting to add and will leave this problem for the future.

always force partitive interpretations, and this is the reason why they do not appear in predicative position, why are they happy in existential sentences? See footnote 56 for a possible answer.

3.6. Conclusions to Chapter 3:

(i) Weak quantifiers are not ambiguous between a cardinal and a proportional interpretation. When no overt partitive is used to create proportional strong quantifiers weak quantifiers are not quantificational, but rather, they behave as cardinality predicates of type ⟨e, t⟩ that are base-generated in NumP (specifier or head, normally not both).

(ii) The propositional partitive interpretation of weak-cardinal quantifiers when there is no overt partitive 'of the', is not due to the presence of a covert partitive construction as claimed by Partee (1988) and others; rather, this interpretation is explained in pragmatics terms (by means of the TFBS when in out of the blue sentences (Büring (1996)). With overt partitives, the weak quantifier will not be cardinal anymore and is claimed to be base-generated in Q-detP, together with the rest of strong quantifiers and will be of quantificational type.

(iii) In opposition to what has been claimed in the literature about the Basque definite determiner (-A/-AK), where it is assumed that both the -A and the plural marker -K are base generated together in the same syntactic position, in the DP head (or in

"some kind of Number Phrase" --see Artiagoitia (2003)--); this chapter has suggested that the definite determiner -A and plural marker -K are base generated in different syntactic positions: The base position of the plural marker -K is NumP, while the base generating position of the Basque definite determiner -A (as standardly assumed for definite determiners crosslinguistically) is head of DP.

(iv) Weak-cardinal quantifiers cannot appear with the definite determiner (except numerals) due to the fact that they are unspecified for number. This unspecificity makes them unable to obtain a definite and referential interpretation. The only construction that allows the definite article to appear with these unspecified weak quantifiers is the partitive construction where the definite plays the role of the contextual domain restrictor. Numerals on the other hand, can appear with the definite determiner [Numeral+Noun+AK] and as a consequence are able to get definite as well as referential interpretations; of course, they can also form partitive constructions where as predicted they are interpreted as quantifiers.

(v) When the common noun that combines with weak-cardinal quantifiers is made silent, *batzu(e)k* and *zenbait* and their counterparts in English (*some*) and Spanish (*algunos*) can only obtain proportional, partitive-like interpretations. I claim that this interpretation (extending Büring's analysis to these cases) is the result of the Topic/Focus/Background Structure.

CHAPTER 4

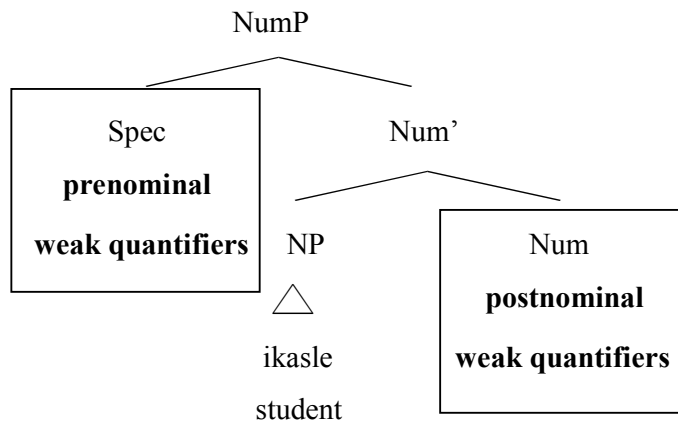## THE BASQUE DEFINITE ARTICLE

4.1. Introduction:

Chapter 3 has concentrated on the behaviour of weak-cardinal quantifiers in Basque (and in natural languages in general). Having observed that the Basque definite determiner -A (that functions as a domain restrictor inside quantificational phrases -see chapter 2-) only appears with strong-proportional quantifiers and is excluded from weak-cardinal quantifiers (except numerals), it has been claimed that the latter are neither quantifiers nor contextually restricted and that they are base generated in the predicative type ⟨e, t⟩, either in the specifier or head position of the functional projection NumP (below DP).

Prenominal Weak Quantifiers:
(1a) **Zenbait** ikaslek   goxokiak   jan zituzten.
       some   student.erg candy-D.pl eat aux.pl
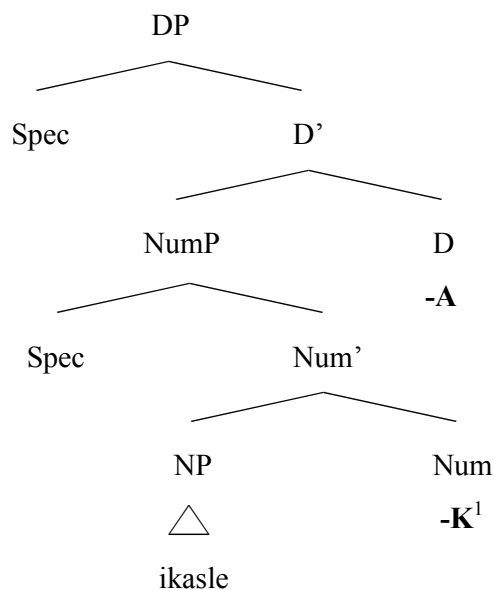   'Some students ate candies.'

Postnominal Weak Quantifiers:

(1b)   Ikasle **asko**k   goxokiak   jan zituzten.
        student many.erg candy-D.pl eat aux.pl
        'Many students ate candies.'

```
                          NumP
                    ┌───────────┴───────────┐
            ┌───────────────┐          Num'
            │     Spec      │     ┌──────┴──────────┐
            │  prenominal   │    NP          ┌──────────────┐
            │weak quantifiers│    △          │     Num      │
            └───────────────┘  ikasle        │  postnominal │
                               student       │weak quantifiers│
                                             └──────────────┘
```

   In opposition to what has been assumed by other scholars (i.e. Goenaga (1980,

1991), Euskaltzaindia (1993), Ticio (1996), Artiagoitia (1997, 1998, 2002), Rodriguez

(2003), Trask (2003), among others), the definite determiner -A and plural marker -K

are claimed to be base generated in different syntactic position: the base position of the

plural marker -K will be [Head, NumP] while the base position of the Basque definite

determiner -A is defended to be [Head, DP], which will be placed above NumP as

shown in the structure offered in example (2).

(2)   Ikasleak   berandu etorri ziren.
        student-D.pl late   come aux.past
        'The students came late.'

```
                         DP
              ┌──────────┴──────────┐
            Spec                    D'
                          ┌──────────┴──────────┐
                        NumP                     D
                 ┌────────┴────────┐            -A
               Spec              Num'
                          ┌────────┴────────┐
                         NP               Num
                         △                -K¹
                       ikasle
```

In line with the so-called Neocarlsonian view (see Chierchia (1998c), Dayal (2004), Zamparelli (2002a, 2002b) and references therein), this chapter proposes that the Basque definite article -A, is just that, a definite article and as such must always be base generated in the DP head; in short, -A will be argued to be a definite determiner everywhere, but very flexible in its ability to type-shift (note that bare nouns are not allowed in Basque). The chapter first concentrates on the different interpretations bare nouns can obtain and on the possible different analyses postulated for these interpretations (Ambiguity analysis and Neocarlsonian analysis). Then, it will be shown that the Neocarlsonian approach is preferable by presenting some problems that the Ambiguity approach is unable to solve, and once this is done, the chapter will focus on the different interpretations that definites can get in Basque and conclude that existential indefinite readings of definites (that can only be obtained in some contexts) are

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[1] The reason why the plural marker -K follows the DP head in the overt syntax is because this element is a suffix, and as such, phonologically as well as categorically dependent on the DP head. See Chapter 3, section 3.4.

dependent on the kind-level interpretation. For that, it is claimed that Basque is typologically in between English and French: the former makes use of bare plurals to get existential interpretations while the latter needs the definite plus the partitive preposition *de* (*du* for mass terms, *des* for plural count term) to express the same meaning; in Basque, the article is there while the preposition is not. Basque data is also claimed to provide further support for the conclusion that the position originally advocated by Carlson (1977) and extended crosslinguistically by Chierchia (1998c) must be on the right track, contra the so-called ambiguity theory defended by Wilkinson (1991), Diesing (1992), Gerstner & Krifka (1993) and Kratzer (1995). Finally, the Basque singular definite generic is also claimed to be analysable in Neocarlsonian terms. What will be claimed (following Dayal (2004) and Zamparelli (2002a)) is that common nouns can denote in the object domain (yielding the normal specific reading) as well as in the taxonomic domain (yielding taxonomic readings); the kind reading of the singular DP comes from the combination of the taxonomic common noun and the normal definite determiner, that is, the normal *iota*. However, there are also some exceptions to the rule since in some contexts, singular DPs obtain an existential interpretation. What will be argued is that the apparently existential interpretation is the normal taxonomic interpretation showing some special properties in given contexts.

The organization of this chapter is as follows: Section 4.2 presents the different interpretations (generic and existential) that English bare nouns can get. In Section 4.3 some tests to distinguish between noun phrases that refer to ordinary objects and noun phrases that refer to kinds are presented. In section 4.4 both the ambiguity approach (Wilkinson (1991), Diesing (1992), Gerstner & Krifka (1993)) as well as the so-called Neocarlsonian approach (Chierchia (1998c), Dayal (2004), Zamparelli (2002a)) are

presented; the latter is argued to be the preferred one to explain the behaviour of bare nouns (section 4.5). Section 4.6 concentrates on Basque data; first, the historical origin of the Basque article will be presented which should be taken as evidence for the fact that the Basque article -A is always definite (in opposition to what has been claimed by some scholars). Then, the range of possible interpretations of -A will be provided; after that, some previous analysis of the Basque NPs/DPs will be discussed not to be able to account correctly for the facts (Artiagoitia (2002)). Finally in section 4.6.5, Basque data will be reinterpreted in Neocarlsonian terms. Section 4.7 concludes the chapter.

4.2. English Bare Nouns and their Interpretations:

4.2.1. Generic Interpretation:

English as well as other Germanic languages can use determinerless plural count noun phrases and mass noun phrases (hereafter *bare nouns*) in order to communicate *generic* meanings.

(3a)   Dogs have many different breeds.

(3b)   Chihuahuas are unpopular in the Basque Country.

(3c)   Dinosaurs are extinct.

(3d)   Nitrogen is abundant in our universe.

(3e)   Athletic shoes were invented by Bill Bowerman and Phil Knight.

(3f)   Doctors investigate diseases.

(3g)   Fishes appeared 390 million years ago.

4.2.2. Existential Interpretation:

However, the generic interpretation is not the only possible reading English (and Germanic languages in general) bare nouns can get, since they can also have a quite distinct use.

(4a)   Amaia has eaten candies.
(4b)   Aritz has drunk wine.
(4c)   Mattin met Basque friends in Moscow.
(4d)   Potatoes rolled out of the bag.

In all four sentences in (4), the use of the bare plurals lacks the flavour of the generic interpretation and seems to be interpreted by means of an existential quantifier having the meaning of *some*. Thus, *cats* in (4a), *wine* in (4b), *Basque friends* in (4c), and *potatoes* in (4d) roughly correspond to *some cats*, *some wine*, *some Basque friends*, and *some potatoes*. This interpretation appears when the sentence has an 'eventive' character.

4.3. Genericity Tests:

There is a variety of tests that have been provided in order to differentiate noun phrases that denote kinds from those that denote ordinary objects (see Lawler (1973), Krifka et al. (1995) and references therein). For these initial examples I will only concentrate on English examples. See section 4.6.2 for Basque.

4.3.1. Kind Predicates:

By this test, it is possible to determine the noun phrases that are going to be able to be used as kind-referring elements. There are some predicates that can not usually be applied to ordinary objects and can only appear with kind-referring terms. The predicates in sentences (3c), (3e) and (3f) above are kind-level predicates and the noun phrases that appear with them must get a kind interpretation. These so called kind-predicates can not usually apply to ordinary objects.

(5a)   # Tweety evolved from reptiles.[2]
(5b)   # Tweety becomes smaller and smaller as you go south.
(5c)   # Tweety appeared 390 million years ago.
(5d)   # Tweety will become extinct.

4.3.2. Taxonomic Properties:

Only kind terms have the property of being divisible into sub-kinds as well as of creating taxonomic hierarchies: rats > mammals > animals, and so and so forth. (3a) would show that in fact, bare plurals do have taxonomic properties; predicates like *have different breeds*, *come in many sizes*, *have diverse subkinds* etc. help in getting this taxonomic interpretation. However, note that this property is not available to ordinary objects.

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[2] As Zamparelli (2002a: 309) notes, the sentences in (5) are "hash-marked assuming a biologically normal world".

(6a)   * Tweety has many different breeds.

(6b)   * Tweety comes in many sizes.

(6c)   * Tweety has diverse subkinds.

4.3.3. Quantificational Properties:

In opposition to what happens with bare nouns, quantificational expressions can not get kind interpretations. This is the reason why the sentences in (7) are grammatical (see also example (3d)) while those in (8) are not (excluding the subkind interpretations).

(7a)   Ducks are common in this region.

(7b)   Birds are abundant in this country.

(7c)   Dogs are widespread in here.

(8a)   * Every duck is common in this region.

(8b)   * Many birds are abundant in this region.

(8c)   * All of the dogs are widespread in this region.

4.3.4. Characterizing Sentences:

These sentences express or attribute a property to their subject, that is, they express regularity and do not report specific or isolated facts (see also (3b) and (3f)).

(9a)   Dogs bark at the moon.

(9b)   Dogs have four legs.

(9c)   Potatoes contain vitamin C.

4.3.5. Upward-Entailing Contexts:

In upward entailing contexts noun phrases can be replaced by other noun phrases whose denotation is the superset of the denotation of the previous one without making the sentence false. When bare nouns are interpreted existentially (indefinite-like) show the typical monotonicity effects (see Lawler (1973), Laca (1990)), as observed in (10).

(10)   African chimpanzees opened the door and escaped from the cage.
        ---->   Chimpanzees opened the door and escaped from the cage.

However, generic bare nouns in their generic interpretation do not show these effects and the usual monotonicity effects do no hold as the following examples shows.

(11)   African chimpanzees are widespread.
        --/-->   Chimpanzees are widespread.

The following section introduces the two main proposals that have discussed the different interpretations that bare nouns can get (kind interpretation or existential interpretation): the Ambiguity Approach and the so called Neocarlsonian approach.

Once these two proposals are introduced, some evidence will be given in favour of the Neocarlsonian analysis.

4.4. Different Analysis of Bare Nouns' Interpretations:

4.4.1. The Ambiguity Analysis:

In the ambiguity approach to bare nouns, kinds do not play a big role. As proposed by Wilkinson (1991), Diesing (1992) or Gerstner & Krifka (1993), bare nouns are defended to be systematically ambiguous: in some contexts, they refer to a kind, in others, they behave like weak indefinites. The former denotation will be the one used in sentences where the predicates are kind-level, taxonomic or quantitative.

(12a)   extinct (dinosaurs$_k$)
(12b)   different-breeds (birds$_k$)
(12c)   widespread (dogs$_k$)

For characterizing sentences on the other hand, bare nouns behave like indefinites and are bound by an unselective generic operator (GEN) that binds the free variable provided by the indefinite.

(13a)   Potatoes contain vitamin C.
(13b)   GENx [potatoes(x)] [contain vitamin C(x)]
          Paraphrase: 'For each appropriate situation, if x is a potato then x contains
                          vitamin C'

In this approach, the existential reading also comes from the possible indefinite interpretation that the bare noun might get. In such a case, the free variable provided by the indefinite is bound by the default existential quantifier introduced by the existential closure (∃-cl).

(14a)   Birds are ruining my parents' vegetable garden.[3]

(14b)   ∃x [birds(x) & ruining my parents' vegetable garden(x)]

Paraphrase: 'For some x, x is a bird and x is ruining my parents' vegetable garden (at some point in time)'

Assuming a tripartite structure (Q [Restriction] [Scope]) for quantification (Lewis (1975), Kamp (1981), Heim (1982)) and following Diesing (1992) and Kratzer (1995), *birds* in (14a), which is existentially interpreted, will be claimed to appear in the nuclear scope of the quantifier and be bound by an existential quantifier (the ∃-cl applies in VP (nuclear scope of the quantifier)). On the other hand, the generically interpreted *potatoes* in (13a) will be introduced in the restrictive clause and be bound by the GEN operator (which applies in IP (the restrictive clause)). Diesing (1992) claims that all subjects appear in [Spec, IP] position at S-structure but that not all of them are base generated in that position. Subjects of stage-level predicates (*firemen are available*) are base-generated within VP and then move to their S-structure position. This implies that bare plural (bare noun) subjects of stage-level predicates can appear in the nuclear scope or in the restrictive clause, hence their possible ambiguous

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[3] Basque subject definites with predicates such as those in (14) can not obtain an existential interpretation and only a specific interpretation is allowed. See section 4.6.5.1 for an explanation of these facts.

interpretation. On the other hand, subjects of individual-level predicates (*firemen are altruistic*) are base-generated directly in [Spec, IP] and can not get an existential interpretation since the existential quantifier in the VP can not bind the free variable, and only the GEN operator will be able to do so. Consequently, these subject only get the kind interpretation.[4]

4.4.2. The Neocarlsonian Analysis:

Carlson (1977) observed that the readings of sentences with bare nouns are established by the predicate that is used. He claimed that English bare nouns, despite their different possible interpretations, should be treated as a unified phenomenon. Bare nouns will behave as kind terms (not as indefinites) and therefore no ambiguity is needed to explain the facts.

Based on Carlson's original idea, Chierchia (1998c) holds that bare nouns are always non-quantificational and should be considered proper names of kinds of things in kind-level contexts as those in (15a-b). Mass terms (which Chierchia describes as kind denoting elements of type *e*) combine directly with the predicate. Bare plurals on the other hand are assumed to start life as type $\langle e, t \rangle$ and in order to become arguments of predicates need to be turned into type *e* (kinds), via a nominalization operation as described in (17) (expressed as $^{\cap}$ in (16b)).

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[4] Diesing (1992) assumes Discourse Representation Theory (DRT) and links the syntactic representation and the semantic one by means of a mapping procedure that splits the syntactic structure into two parts that are mapped into the two major parts of the logical representation: Restriction and Nuclear Scope. Her basic proposal is the Mapping Hypothesis: "Material from VP is mapped into the nuclear scope; material from the IP is mapped into a restrictive clause".

(15a)   Nitrogen is abundant in our universe.

(15b)   abundant in our universe (nitrogen)

(16a)   Dinosaurs are extinct.

(16b)   extinct ($\cap$dinosaurs)

(17)   Nom ($\cap$): $\langle e, t \rangle \rightarrow e$: $\lambda P_{\langle e, t \rangle} \lambda s \, \iota x \, [P_s (x)]$

Nom is a type shifter functor that applies to the predicate meaning of an NP of type $\langle e, t \rangle$. It maps properties onto their entity correlates if these exist, that is, it is a function that takes properties and returns the maximal entity that satisfies that property.

Now, in object level contexts such as those in (18)[5], predicates do not apply to kinds, but rather to non-kind objects. Example repeated from (4a).

(18)   Cats are rummaging in our garbage.

Chierchia argues that further operations are needed to repair the type mismatch. This repair involves the introduction of a (local) existential quantification over the instantiations of the kind. Thus, the bare nouns are turned into indefinites (by means of

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[5] Chierchia (1998: 363) uses the following example.

    (i)   That kind of animal is rummaging our garbage.

In this example, "the subject *that kind of animal* seems to be a definite referring to a kind. […] Yet, clearly *rummage our garbage* is a predicate that applies in the first place to objects. […] The sentence in (i) is grammatical and seem to be about instances of the kind". Chierchia claims that in this case adjustment is necessary, and this adjustment is obtained by introducing a local existential quantifier.

Pred[6], the inverse of *nom*,) providing a free variable by a type shifting operation that applies anytime the predicate requires an object-level argument. At the same time, this type shifting operation inserts the existential quantifier. The general mechanism is called 'Derived Kind Denotation' (DKP), a mechanism that is not "a lexical operation on predicates but a type shifter that applies on demand" (Chierchia (1998c: 365).

(19)   *Derived Kind Predication* (Chierchia (1998c: 364):
        If P applies to objects and k denotes a kind, then

$$P(k) \Leftrightarrow \exists x \ [^{\cup}k(x) \wedge P(x)]$$

        where '$^{\cup}$' is a type shifter operator from kinds to the corresponding properties (Pred).

(18')   Cats are rummaging in our garbage.

        Rumming in our garbage ($^{\cap}$cats)

        $\Leftrightarrow$ (via DKP) $\exists x \ [^{\cup\cap}$cats(x) $\wedge$ rummaging in our garbage(x)]

In characterizing sentences, there is again a type mismatch since the predicate does not accept kinds (i.e. *investigate*) and the bare noun denotes one. Again, the application of '$^{\cup}$' is needed in order to create an indefinite with a free variable that will be bound by the GEN operator introduced in this kind of sentences.

(20a)   Cats meow.
(20b)   GENx [$^{\cup\cap}$cats(x)] [meow(x)]

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[6] Pred: *e* (kind) $\rightarrow$ $\langle$e, t$\rangle$: $\lambda k_{\langle e \rangle} \ \lambda x \ [x \leq k]$: It is a function that applies to those entities (kinds) which are entity correlates of properties, and returns the corresponding property.

4.5. Arguments for the Neocarlsonian Approach:

Carlson (1977) proposed some arguments to claim that bare plurals and indefinites (in English) are not to be considered the same semantic objects. While both approaches (Ambiguity and Neocarlsonian) are able to deal with some of these differences equally well, there are some contrasts that tip the scale in favour of the Neocarlsonian analysis.

Chierchia (1998c) realises that according to the ambiguity approach, there is no relationship between the kind interpretation and the existential interpretation that bare nouns are able to obtain; apparently then, it should be possible to block one of the interpretations without blocking the other. A way to block the kind reading is the following: Kinds are assumed to have (in opposition to indefinites) an 'intensional' component that relates the kind with the intension of that same noun, the set of dogs in all possible worlds; then, this intensional component can be blocked by means of a rigid designator in the bare noun (i.e. *magazine parts* can be kind, but *parts of the "RollingStone" magazine* can not).

Now, bare nouns in their existential interpretation do not behave like usual indefinites; they always take narrow scope with respect to opacity inducing operators or predicates (21a), negation (21b), temporal adverbials (21c), and anaphoricity (21d).

(21a)   Kepa is looking for magazine parts.
    (cannot mean: there are some specific parts of the magazine such that Kepa is looking for them)

(21b) Kepa didn't see magazine parts.

   (cannot mean: there are "RollingStone" magazine parts such that Kepa didn't see

   them. NEG > parts)

(21c) Kepa killed lions repeatedly/for three hours.

   (cannot mean: Kepa has killed the same people again and again -no resurrection

   reading-)

(21d) Kepa is looking for magazines parts and Adam is too.

   (cannot mean: Kepa and Adam are looking for the same parts of the magazine)

As we just said, when a rigid designator is added to a bare noun, the kind interpretation is suddenly blocked and the existential interpretation loses the narrow scope requirement (wide scope interpretation will be allowed and sometimes needed) as the examples in (22) show.

(22a) Kepa is looking for parts of the "RollingStone" magazine.

   (meaning: there are some specific parts of the magazine such that Kepa is

   looking for them)

(22b) Kepa didn't see parts of the "RollingStone" magazine.

   (meaning: there are "Rollingstone" magazine parts such that Kepa didn't see

   them. Parts > NEG)

(22c) Kepa killed people sitting here repeatedly/for three hours.

   (meaning: Kepa has killed the same people again and again -resurrection

   reading-)

(22d) Kepa is looking for parts of the "RollingStone" magazine and Adam is too.

   (meaning: Kepa and Adam are looking for the same parts of the "Rollingstone"

   magazine)

The loss of the existential reading with narrowest scope is expected under the Neocarlsonian analysis since once the rigid designator blocks the kind reading, there is

no possible way to get the narrow scope existential interpretation. Recall that the Neocarlsonian approach claims that in order to get narrow scope existential interpretation a necessary step in the derivation is one where the noun becomes kind first; if kind interpretation is blocked, that necessary step in the derivation is missing. In the ambiguity analysis on the other hand, there is no connection between the two readings (kind and narrow scope existential), then, the elimination of one (kind) should not block the other (narrow scope existential), but it does and the differences in interpretation between the sentences above are not expected.[7]

Another problem for the ambiguity approach is explained next: as has just been mentioned, when bare plurals interact with adverbials, there is a reading that in opposition to bare plurals, indefinites can not get.

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[7] However, this argument is not that strong. Note that the sentences in (22) are completely grammatical and the interpretation the bare nouns (*parts of the "RollingStone" magazine*, *people sitting here*) obtain is clearly existential. However, these bare nouns (as we mentioned) are not able to get a kind interpretation and are quite marginal in sentences with kind-predicates.

        (ia)   ?? Parts of the "RollingStone" magazine are common/widespread.
        (ib)   ?? People sitting here come in different sizes.

Since the application of the operator '∩' is not possible in the cases above, the only possible way to make these bare nouns arguments is by means of ∃, the regular existential generalized quantifier.
Chierchia also claims that every existential meaning of bare nouns having obligatory narrow scope must be derived from kinds. However, and according to Zamparelli (2002), this analysis can not be applied to Italian bare nouns. In Italian, bare nouns, although they can be interpreted existentially and behave as English bare nouns when it comes to scopal properties, cannot denote kinds (there is some disagreement with the data in this point). Zamparelli (2002: 318) claims that "the correlation between the impossibility of the kind reading and the availability of wide scope must be due to some other property. Let's test the idea that the relevant property is, informally, 'lack of referentiality' ". Zamparelli links the possibility of referential interpretation to the presence of some lexical element in D at LF. Taking all this into consideration, he concludes that it is not necessary to assume that the narrow scope existential reading of bare nouns (neither in Romance languages nor in English) is always derived from the kind interpretation via the DKP operation.
Now, if this is so, is DKP still needed? Zamparelli claims that the only way in which Italian definites are able to get the existential interpretation is by means of DKP. In section 4.6.5.1 it is proposed an analysis of the Basque definite determiners (plurals and mass terms) on Neocarlsonian terms, as well as of their existential interpretation (in some contexts), which is defended to be obtained via DKP.

(23a) # My father killed two moles in his vegetable garden for two hours.

(23b) My father killed moles in his vegetable garden for two hours.

The sentence in (23a) can only be interpreted with the indefinite *a mole* having wide scope over the adverbial element [two moles > adv.] and asserts that the same moles have been killed again and again in the vegetable garden; a rather strange state of affairs, hence the hash marking. In (23b) on the other hand, we find no such strange assertion and the sentence is completely grammatical. The reading we get is one where my father has killed different moles and the bare plural must necessarily take scope below the adverbial [adv. > moles].

In the Neocarlsonian approach bare plurals and indefinites are supposed to take different scope positions. The bare plural, contrary to what happens with the indefinite, can be assumed to be a direct argument (kind) of the verb and then, in order to get the existential interpretation, the DKP must take place; this is exactly the interpretation that we in fact get in a sentence like (23b).

These cases are problematic for the ambiguity analysis of bare plurals. This approach assumes that bare plurals when in object-level contexts are a subtype of indefinites (see section 4.4.1 above); as a consequence, it is not possible to block a weak reading (the reading needed to get narrow scope) for constructions such as *two moles* while deriving it for bare plurals. It will be possible to get the correct reading for the indefinite if existential closure is applied above the adverbial as in (24a), but of course, in this situation we can not get the correct (narrow scope) reading for the bare plural. The other possibility would be to postulate the existential closure below the adverbial as shown in (24b), situation where we would have exactly the opposite problem. The

narrow scope reading interpretation of the bare plural would be correctly derived while we would be unable to get the wide scope interpretation of the indefinite *two moles*. (The logical forms in (24) are taken from Dayal (2004: 401)).

(24a) $\exists x$ [twenty five moles/moles(x) $\land \forall t$ [within-2-hours(t) $\rightarrow$ killed at t (f, x)]]

(24b) $\forall t$ [within-2-hours(t) $\rightarrow \exists x$ [twenty five moles/moles(x) $\land$ killed at t (f, x)]]

An additional argument for the Neocarlsonian analysis was brought forward by Dayal (2004). In languages that allow bare singular count nouns (i.e. Russian, Hindi, Chinese) bare nominals only allow weak indefinite interpretations. I only give Hindi examples but the judgements also apply to Russian and Chinese.

Hindi (Dayal (2004: 404):

(25a)   kamre meN cuhee nahiiN haiN

room   in   mice   not   are

'There are not any mice in the room.'

√   Neg > $\exists$

∗ $\exists$ > Neg

(25b)   main samjhtii huuN ki kamre meN suhaa hai

I   think   that   room in   mouse is

'I think a mouse is in the room.'

√   think > $\exists$

∗ $\exists$ > think

So far, the behaviour of bare nominals in these languages patterns with the behaviour of English bare plurals and both the Neocarlsonian as well as the Ambiguity

approach can account for the data. However, there are some differences between singular and plural bare nouns. (Examples taken from (Dayal 2004: 403))

(26a) # caroN taraf bacca khel rahaa thaa.
          four   way child was-playing
       'The same child was playing everywhere.'

(26b) caroN taraf bacce khel rahe the.
       four   way child were-playing
       'Children (different ones) were playing everywhere.'

Neither the Neocarlsonian nor the Ambiguity approach can handle the facts shown by the sentences in (26a-b) that only differ in number marking on the bare nouns, unless some modification is incorporated. According to Dayal this difference can be easily captured in the kinds approach if it is assumed that bare singulars refer to kinds that only permit making reference to single instantiations of the kind. Although kinds are conceptually plural, number morphology plays a role and constrains the instantiation set of the kind.

(27a) For all situations s such that $^{\cup}K_S \neq \varnothing$, $|^{\cup}K_S| = 1$ if K is a singular term and $|^{\cup}K_S| \geq 1$ if K is a plural term.

(27b) $\forall x$ [place(x) $\rightarrow \exists y$ [$^{\cup\cap}$child$_s$ (y) / $^{\cup\cap}$children$_s$ (y) $\wedge$ play-in-x(y)]]

Dayal (2004: 404)

Thus, the plural bare noun has no problem to get the existential narrow scope interpretation due to its plurality, that is to say, the different subgroups of the plural can scope below the universal and still obtain a plausible interpretation. The singular

expression on the other hand will not be able to get narrow scope since the instantiation set of the kind is a singleton, hence the oddness of the sentence in (26a) --see section 4.6.5.2.--.

Now that some arguments that convincingly argue in favour of the kinds (Neocarlsonian) approach have been provided, the next section will concentrate on Basque data. First, the historical origin of the Basque article will be presented which I take as evidence for the fact that the Basque article -A is always definite (in opposition to what has been claimed by some scholars). Then, the range of possible interpretations of -A will be provided; after that, some previous analysis of the Basque NPs/DPs will be discussed not to be able to account correctly for the facts. Finally, Basque data will be reinterpreted in Neocarlsonian terms (as explained above).

4.6. The Basque Article:

4.6.1. Historical Origin of the Basque Article:[8]

It is possible to divide languages among those that possess an article (such as Greek, Spanish, French, etc.), and those that do not (Hindi, Russian, etc.). Basque has been historically claimed not to possess articles; nowadays however, Basque does have

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[8] This subsection is based on Azkarate & Altuna (2001). See this book for a much more extended analysis of these facts in Basque.

an article whose creation, as in many other languages (i.e. Romance languages), has derived from the distal demonstrative.

The standard use of the actual Basque demonstrative system is the following:

(28a)   **singular**   **plural**

Proximal: (h)au(r)   hauek

              'this'   'these'

Mesial: (h)ori   horiek

              'that' (just there)   'those' (just there)

Distal: (h)ura   haiek

              'that' (over there)   'those' (over there)

(28b) Proximal:

Mutil hau berandu etorri zen.

boy   this late   come aux.past

'This boy came late.'

(28c) Mesial:

Neska gazte   hori   ez dut   ezagutzen.

girl   young that (just there) no aux.pres. know

'I don't know that young girl.'

(28d) Distal:

Emakume hura   Errusiara bidali zuten   bigarren mundu gerran.

woman   that (over there) Russia-to send   aux.past second   world   war-in

'They sent that woman to Russia during the 2nd WW.'

In general, the proximal demonstrative demonstrates proximity to the speaker, the mesial demonstrative illustrates proximity to the addressee, and the distal demonstrative shows remoteness from both the speaker and the addressee. Sometimes, both the mesial and the distal demonstratives can be used to indicate differing degrees

of remoteness from the speaker. The three demonstratives make use of stem-suppletion for the oblique cases.

(29a) Oblique cases:

	singular	**plural**
Proximal:	(h)on-	(h)aue-
Mesial:	(h)or-	(h)orie-
Distal:	(h)ar-	(h)haie-

(29b) Proximal:

Lagun honekin   joan nintzen   hondartzara.

friend   this-with   go   aux.past beach.D-to

'I went to the beach with this friend.'

(29c) Mesial:

Hegazkin zahar horretara ez naiz   igoko.

airplane   old   that-to   no aux.pres. get on

'I won't get on that old airplane.'

(29d) Distal:

Urte hartan gauza guztiak gaizki   atera   ziren.

year that-in thing   all-D.pl wrong go out   aux.past

'That year, everything went wrong.'

Note that excluding the absolutive case (examples (28a-c)), the rest of the cases take *hon-*, *hor-*, and *har-* as stem (examples (29a-c)).

Although the current Basque demonstrative system makes use of three degrees (proximal, mesial, distal), the scholars that have analysed the old Basque demonstrative system (Azkue (1905), Mitxelena (1979), and Irigoien (1981), among others) do not agree on whether historically Basque differentiated these three degrees or there were

just two different degrees (the proximal and the distal) from where the actual demonstrative system is derived[9]. Mitxelena argues for the former possibility while Azkue and Irigoien argue for the latter.

(30a)   Azkue (1905) & Irigoien (1981):

                          haur   /   *ha(r)-

                  hau(r)   *haur-i > hori
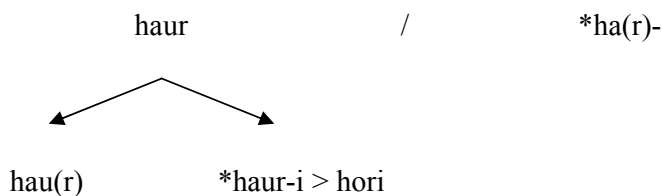
(30b)   Mitxelena (1979):

            hau(r)   hori   hura / (h)a

However, they all share the same opinion about how the Basque article was created: once the demonstratives lost morphological independence and began to be used as affixes, from each demonstrative form a different article arose (in two steps (31a) and (31b)).

(31a)   Monopthongization of the dypthongs:

            hau(r)   >   *-or*

(31b)   Aspiration lost:

            haur   *hori*   *hura / (h)a*

            ↓   ↓   ↓

            -au, -or   -ori   -a

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[9] See Azkarate & Altuna for an extensive discussion of these facts.

Out of the three articles, the one created from the distal demonstrative is the one used today.

Dialectal variation points toward the same conclusion: In some varieties of Biscayan, the distal demonstrative is not *(h)ura*, but *(h)a*. In fact, this form has been claimed to be the oldest distal form; an argument in favour of this claim is that the oblique cases are created by means of the *(h)ar* stem (see chart (29a) as well as example (29d)), parallel to the proximal *(h)aur* form. *(H)ura*, on the other hand, is analysed as the strengthened version of the distal demonstrative.

In Biscayan, the demonstrative (in opposition to what happens in the other Basque dialects) appears to the left of the noun as the following example clearly shows. (Example taken from Azkarate & Altuna (2001: 18)).

(32)   Oneec amar Mandamientu-oc (from a Christian doctrine of the XVIIth century)
        these ten commandment-pl.article
        'These ten commandment'

In the rest of the dialects the distal demonstrative is strengthened in order to differentiate it from the new-born article.

(33)   *seme (h)a(r) > seme hura   (= that son)

In Biscayan, this change was unnecessary since the form that they used was already different from the newborn article as the example in (34) shows.

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(34a) A   gizon-a

　　　this man

　　　'This man'

(34b) Gizon-a

　　　man-D

　　　'The man'

This is the reason why the strengthened demonstrative *(h)ura* is not used in Biscayan. This usage is still nowadays productive in Biscayan.[10]

(35a) A   mutil-e (absolutive)

　　　this boy

　　　'This boy'

(35b) **Hó**nek **mú**til-ek (absolutive) [11]

　　　these   boy

　　　'These boys'

(35c) Ho**nék** mutil-**ék** (ergative)

　　　these   boy

　　　'These boys'

---

[10] Itziar San Martin (p.c.)

[11] Note that both the absolutive as well as the ergative form show exactly the same structure. It is the accentuation pattern that marks the difference between the two forms (expressed by means of written accent); when the accent falls on the first syllable of both the demonstrative and the noun, the DP will get absolutive case while when the accent falls on the second syllable of both the demonstrative and the noun, the DP gets ergative case.

4.6.2. The Basque Article and its Interpretations:

One very interesting property of the Basque DP is that bare nouns can not appear as arguments (no matter whether the DP is singular or plural, fills the subject or the object position) and the overt presence of the definite Basque article is obligatory for the sentences to be grammatical as the examples in (36) show (see Laka (1993), Artiagoitia (1997, 1998, 2002), among others).

Subject Position:

(36a)   Mutila   berandu etorri zen.
        boy-D.sg(abs) late   come aux.sg
        'The boy came late.'

(36a') Mutilak   berandu etorri ziren.
        boy-D.pl(abs) late   come aux.pl
        'The boys came late.'

(36b)   ∗ Mutil berandu etorri ziren.
          boy   late   come aux.
        'Boy came late.'

Object Position:

(36c)   Anttonek   goxokia   jan zuen.
        Antton.erg candy-D.sg(abs) eat aux.sg
        'Antton ate (the) candies.'

(36c') Anttonek   goxokiak   jan zituen.
        Antton.erg candy-D.pl(abs) eat aux.pl
        'Antton ate (the) candies.'

(36d)   ∗ Anttonek   goxoki jan zuen.
          Antton.erg candy eat aux.
        'Antton ate candy.'

Having a look at the sentences in (36), it seems as though DPs formed with the Basque article -A/-AK function as definites. In (36a-36a'), where the DP appears in subject position, we are talking about a specific boy (if singular) or a specific group of boys (if plural). The DPs *goxokia/goxokiak* in (36c-36c') fill the object slot, when the singular form of the article is used the sentence can only be interpreted as making reference to a single specific candy[12], but when the DP is plural, two possible interpretations arise: definite or existential (as the brackets in the example (36') illustrate) --see section 4.6.5.1--.

Let us take back the English examples we introduced at the beginning of the chapter. As already noted, English (as well as other Germanic languages) can use determinerless plural count noun phrases and mass noun phrases (hereafter *bare nouns*) in order to communicate *generic* meanings. Examples repeated here as (37).

(37a) Dogs have many different breeds.   (=(3a))
(37b) Chihuahuas are unpopular in the Basque Country.   (=(3b))
(37c) Dinosaurs are extinct.   (=(3c))
(37d) Nitrogen is abundant in our universe.   (=(3d))
(37e) Athletic shoes were invented by Bill Bowerman and Phil Knight. (=(3e))
(37f) Doctors investigate diseases.   (=(3f))
(37g) Fishes appeared 390 million years ago.   (=(3g))

---

[12] There are exceptions where the singular DP can be interpreted existentially, but they are not the typical case. See section 4.6.5.2.

Then, in order to communicate the meanings expressed by the English sentences in (37) Basque must necessarily use noun phrases combined with the definite article: the plural definite[13] with count nouns and the singular definite with mass terms[14].

(38a)   Txakurrek   arraza desberdin asko dituzte.
        dog-D.pl(erg) breed different   many have
        'Dogs have many different breeds.'

(38b)   Chihuahuak   ez dira ospetsuak Euskal Herrian.
        chihuahua-D.pl(abs) no are famous   Basque Country-in
        'Chihuahuas are unpopular in the Basque Country.'

(38c)   Dinosauroak   aspaldi   desagertu   ziren.
        dinosaur-D.pl(abs) long time ago become extinct aux.
        'Dinosaurs became extinct a long time ago.'

(38d)   Nitrogenoa   ugaria   da gure unibertsoan.
        nitrogen-D.sg(abs) abundant is our   universe
        'Nitrogen is abundant in our universe.'

(38e)   Kirol oinetakoak   Bill Bowerman eta Phil Knightek asmatu zituzten.
        sport shoe-D.pl(abs)   invent aux.
        'Athletic shoes were invented by B. B. and P. K.'

(38f)   Medikuek   gaixotasunak   ikertzen   dituzte.
        doctor-D.pl(erg) disease-D.pl(abs) investigate aux.
        'Doctors investigate diseases.'

---

[13] Recall from chapter 3 that the plural form of the Basque definite article (-AK) is not formed by a single element which is base-generated in the same position. Rather, I have assumed the existence of a functional head (NumP) situated in between the DP and the NP, and it is just in this functional position where the singularity (∅) or plurality (-K) of the Basque definite article is marked (see section 4.6.4.1 as well as chapter 3). However, for ease of exposition I shall refer to them as singular and plural definite article.

[14] In section 4.6.4.1 it is claimed that although mass terms trigger singular verb agreement just like singular count terms, they differ from singulars in being number neutral (see Delfitto & Schrotten (1991), Doetjes (1997), Dayal (2001), Krifka (2004) among others). This is the reason why they pattern with plural count nouns when in object-level contexts. See also section 4.6.5.1, where Basque mass terms and plurals are given the same analysis.

(38g) Arrainak   orain duela 390 milioi   urte agertu ziren.

fish-D.pl(abs) now   million year appear aux.

'Fishes appeared 390 million years ago.'

Recall from the beginning of the chapter again that in English (and in Germanic languages in general) bare nouns can also have an existential reading when in episodic contexts such as those in the examples in (39). Some of the examples are repeated from (4).

(39a) Amaia has eaten candies.

(39b) Aritz has drunk wine.

(39c) Mattin met Basque friends in Moscow.

(39d) Potatoes rolled out of the bag.

Now again, Basque must make use of the definite determiner to express these existential meanings and in case the definite determiner is missing the sentences become suddenly ungrammatical.[15]

(40a) Amaiak goxokiak jan ditu.

Amaia.erg candy-D.pl(abs) eat aux

'Amaia has eaten candies

(40b) Aritzek   ardoa   edan du.

Aritz.erg wine-D.sg(abs) drink aux

'Aritz has drunk wine.'

---

[15] Note that all of the sentences in (40) can also receive a specific interpretation; where we would make reference to a specific set of candies, friends, and potatoes; or to a specific (quantity of) wine, i.e. the one we drank in that restaurant.

(40c) Mattinek   lagun   euskaldunak   topatu zituen Moskun.

Mattin.erg friend Basque-D.pl(abs) meet   aux   Moscow-in

'Mattin met Basque friends in Moscow.'

(40d) Patatak   poltsatik   erori ziren.

potato-D.pl(abs) bag-from fall   aux

'Potatoes rolled out of the bag.'

In all the examples in (40), the use of the Basque definite determiner lacks the flavour of the generic interpretation and gets an existential reading similar to the existential quantifier *some*[16].

The following subsection is dedicated to present some crosslinguistic data in order to see the behaviour of the Basque definite determiner in a comparative light.

4.6.3. Some Cross-Linguistic Data:

The aim of this subsection is to present how Spanish, Italian, and French get generic as well as existential interpretations. As we will see, these Romance languages make use of different strategies for the existential interpretations.

Thus, all these three Romance languages standardly use noun phrases with a definite determiner in order to express the generic meaning. The plural definite will appear with count nouns while it will be the singular definite[17] that appears with mass

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[16] See section 4.6.5.1 for an explanation of the existential interpretation of the Basque definite determiner in Neocarlsonian terms.

[17] See section 4.6.4.2, where I claim that mass terms are number neutral. This property should apply crosslinguistically, so, the definite determiner that appears with mass terms will not mark singularity.

terms. For the generic interpretation I only give Spanish examples, but note that the same behaviour applies to Italian and French[18].

Spanish:

(41a) [Los perros] tienen muchas razas   diferentes.

        [the dogs]   have   many   breeds differents

(41b) [Los chihuahuas] no son populares en el País   Vasco.

        [the chihuahuas] no are populars   in the country Basque

(41c) [Los pájaros] han   evolucionado de los reptiles

        [the birds]   have evolved   of [the reptiles]

(41d) [El nitrógeno] es abundante en este universo.

        [the nitrogen] is abundant in this universe

(41e) [Los médicos] investigan [las enfermedades].

        [the doctors]   investigate [the diseases]

(41f)   Bill Bowerman y Phil Knight inventaron [las zapatillas de deporte].

                                    invented   [the shoes   of sport]

(41g) [Los peces] aparecieron hace 390 millones de años.

        [the fishes] appeared   ago 390 millions of years

        Now, things are not so similar when it comes to existential object-level contexts. The data show that Romance languages make use of different strategies to obtain the existential interpretation. Both Italian and Spanish (just like English -see section 4.2.2.-) are able to use bare nouns[19] in existential constructions.

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[18] See i.e. Chierchia (1998b), Zamparelli (2000, 2002a, 2002b) for Italian examples and i.e. Kleiber (1990), Heyd (2003) for French examples.

[19] See Bosque (1996a) for an extensive presentation and possible analysis of the different uses of Spanish bare nouns. This section will only present Spanish bare nouns in existential interpretation.

Spanish:

(42a)   Mikel ha bebido café.

Mikel has drunk coffee

(cannot mean: 'Mikel has drunk some specific coffee')

(42b)   Juan ha visto leones.

Juan has seen lions

(cannot mean: 'Juan has seen some specific lions')

(42c)   Pedro ha conocido turistas Italianos en el viaje.

Pedro has met   tourists Italians   en the trip

(cannot mean: 'Pedro has met some specific Italian tourists during the trip')

(42d)   Llegaron estudiantes.

came   students

(cannot mean: 'Some specific students came')

Italian (Zamparelli (2002a, 2002b), Chierchia (1998c)):[20]

(43a)   Non ho   visto ragazzi.

not   I-have seen boys

(cannot mean: 'There are some specific boys and I have not seen them')

(43b)   Gianni stà cercando   parti di nave

Gianni is   looking for parts of ship

(cannot mean: 'There are ship parts such that Gianni is looking for them')

(43c)   Leo ha mangiato patate

Leo has eaten   potatoes

(cannot mean: 'There are some specific potatoes and Leo has eaten them'

On the other hand, French does not accept bare nouns; this is why it is

impossible to express the meanings of the previous examples making use of bare nouns.

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[20] For some Italian speakers bare nouns can make reference to kinds (see i.e. Chierchia (1998b)) while for others the only possible interpretation an Italian bare noun can get is the indefinite like one, that is, the existential interpretation; these speakers clearly reject the kind interpretation of the bare noun (see Zamparelli (2002b)).

For that, French makes use of the so called partitive determiner *des* (for plural common nouns) or *du* and its variant *de la* and *de l'*[21] (for mass common nouns). A complex determiner composed of the partitive preposition plus the definite determiner in its different uses.

French:

(44a) Pierre a mangé [des sucreries].
Pierre has eaten [of-the sweets]
'Pierre has eaten (some) sweets.'

(44b) Elle a goûté [du vin].
she has tasted [of-the wine]
'She has tasted (some) wine.'

(44c) Michel a rencontré [des amis] ce matin.
Michel has met [of-the friends] this morning
'Michel has met (some) friends this morning.'

(44d) Elle a bu [de la bière].
she has drunk [of the beer]
'She has drunk (some) beer.'

Note that Italian also possesses a partitive determiner which has also been discussed to be a complex morpheme composed of the partitive preposition *di* 'of' incorporated to the regular form of the definite determiner (singular *il/lo/la* and plural

---

[21] It depends on the gender and the initial letter of the noun whether we choose one form or the other. When the first letter of the noun is a vowel or a mute *-h*, *de l'* is used; when the mass term is masculine, we use *du*; when the mass term is feminine, *de la* will be used. See Bosveld-de Smet (1998) for an extensive analysis of these partitive constructions.

i/gli/le)[22]. The usage of this partitive determiner is parallel to the French one. (Examples taken from Storto (2003: 315)).

Italian:

(45a) Ho   incontrato [degli studenti].

I-have met   [of the students]

'I have met some students.'

(45b) Ho   bevuto [della birra].

I-have drunk   [of the beer]

'I have drunk some beer.'

Note also that these constructions are completely out in Spanish.

Spanish:

(46a) ∗ Pedro ha conocido [de los turistas Italianos] en el viaje.

Pedro has met   [of the tourists Italians] in the trip

'Pedro has met some Italian tourists during the trip.' (intended)

---

[22] Storto (2000, 2003) claims that "NPs of this type do not display interpretive properties that one would expect to correlate with the interpretation of the partitive preposition and of the definite article. This, I suggest, is an argument for doubting that the partitive determiner is the morphological composition of the partitive preposition and the definite article. […] I thus propose to maintain the hypothesis that the partitive determiner is a lexical indefinite determiner.' Roy (2001) makes the same claim for French *des*.
On the other hand, Chierchia (1998) and Zamparelli (2002b), argue that the nominal constructions created by French and Italian partitive determiners must be analysed as partitives. Zamparelli (2002b)'s contribution to the discussion is that both French *des* and Italian *dei* "are compositionally derived via a complex structure akin to that of partitives, but that the partitive semantics applies not to a normal definite nominal, but to a kind-denoting definite of the type studied in Zamparelli (2002a)".
In section 4.6.5.1, I relate the Basque definite article in existential interpretation to the French/Italian partitive, the difference is that Basque the determiner is there (overt) while the partitive preposition is not.

(46b)   * Pedro ha bebido [de la cerveza][23]

      Pedro has drunk [of the beer]

    'Pedro has drunk some beer.' (intended)

Before we move on to expose the assumptions that are going to be made in this chapter and the details of the proposal that is going to be put forward, the next subsection is dedicated to present the analysis provided by Artiagoitia (2002) together with some problems that this analysis would have to face.

4.6.4. Artiagoitia (2002) and the Basque Noun Phrase:

Artiagoitia's proposal is based on Longobardi (1994), whose basic hypothesis is that proper names, bare nouns, pronouns and definite descriptions must be DPs when in argument position. According to Longobardi (1994), bare nouns (despite their determinerless appearance) are true DPs with an empty D head, and as a consequence, (i) are assigned a default existential interpretation and (ii) must be lexically governed at LF. That is, an empty determiner is only possible in internal argument position and disallowed in subject -truly external position-. Thus, the behaviour of determinerless singular mass nouns as well as plural count nouns (presented in the previous section) follows what this proposal predicts. The generic interpretation appears problematic

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[23] This sentence can be grammatical, but the reading we get is not the one we are interested in at the moment. The grammatical interpretation would be something like: "Pedro has drunk beer from the (specific) bottle". In this case, *de la cerveza* does make reference to the liquid 'beer', that is, the content, but it necessarily implies the container; this is not so in French or in Italian. See Castillo (2001) for an analysis of container/content and similar facts.

since English generic DPs, in opposition to what happens in Romance languages, are (i) systematically determinerless (as already seen) and (ii) appear in positions that are not lexically governed (external argument positions).

(47a)   Spanish: ∗(Los) peces aparecieron hace 390 millones de años.
(47b)   English: (∗The) fishes appeared 390 million years ago.

Longobardi, to derive this English/Romance contrast, assumes that although Ds play no role in generic interpretations, these constructions are real DPs that refer to the entire kind. He also assumes that the noun can appear in the D position or else (when no movement is possible) form a chain with an expletive determiner in D. The contrast in (47) is then explicable: In Italian or in Spanish, a determinerless DP will always be existentially interpreted at surface structure (SS) and as a consequence the noun will be unable to move to D. In order to get generic interpretations, an expletive determiner that will eliminate the existential interpretation is needed in D position. In English, the noun can covertly move to D position at LF, and this movement will be what makes the default existential interpretation impossible.

Artiagoitia (2002) applies Longobardi's analysis to Basque. Recall from section 4.6.2 that Basque DPs must necessarily appear with the definite Basque article as the examples in (36) show (repeated here as (48) for convenience).

(48a)   Mutil*(a/ak)   berandu etorri ziren.
        boy-D.sg/pl(abs) late   come aux.
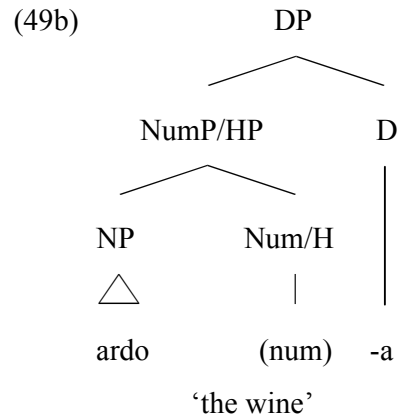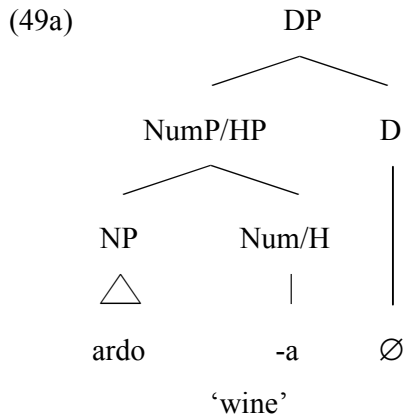   'The boy/boys came late.'

(48b) Anttonek goxoki*(a/ak)   jan zuen.

       Antton.erg candy-D.sg/pl(abs) eat aux.

       'Antton ate the candy/(the) candies.'

As is possible to note from the glosses, Basque plural DPs are allowed to get existential interpretation, but only when the DP is lexically governed by the verb. While *goxokiak* 'the candies' in (48b) can get both a definite and an existential interpretation, *mutila/ak* 'the boy/boys' is only able to get a specific definite interpretation. Hence, despite the overt presence of the Basque definite article, the interpretations that we get appear to be parallel to those determinerless DPs in English or in Romance languages.

Taking this observation seriously, together with the fact that Basque does not mark number on nouns and that the only possible way to mark number in Basque is by means of the article (-A will mark singular, -AK will mark plural)[24], Artiagoitia (2002) concludes that Basque existentially interpreted DPs are structurally similar to the determinerless DPs in English and Romance languages. The empty D makes the DP be interpreted existentially by default. Therefore, Basque DPs will have two possible structures depending on the interpretation that they will be getting. When the DP is interpreted existentially (indefinite-like), the article will just be filling number specification of DPs; with that aim, the article will have to fill a functional projection between the D and the N, "some kind of Number-Phrase, i.e. the noun plus number inflection or the head that Longobardi (2000) simply calls 'H'", as in the examples (49a) and (50a). When the DP is interpreted specifically on the other hand, the article must appear in D position as shown by the examples (49b) and (50b).

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[24] See below for arguments against this claim. See also chapter 3.
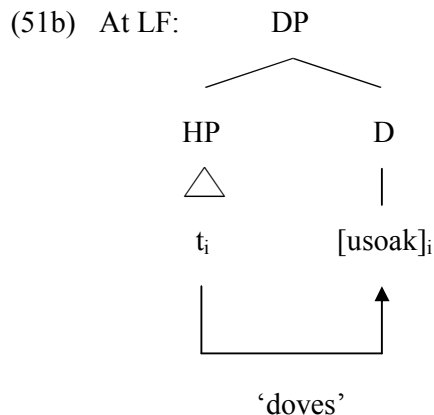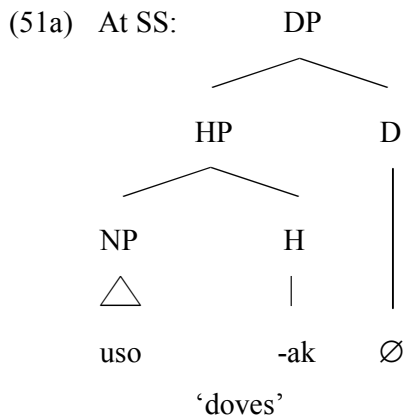
Singular (Artiagoitia (2002: 84)):

(49a)
```
              DP
          ┌───┴───┐
      NumP/HP       D
      ┌──┴──┐       │
    NP     Num/H    │
    △        │      │
   ardo      -a     ∅
          'wine'
```

(49b)
```
              DP
          ┌───┴───┐
      NumP/HP       D
      ┌──┴──┐       │
    NP     Num/H    │
    △        │      │
   ardo    (num)   -a
          'the wine'
```

Plural (Artiagoitia (2002: 84)):

(50a)
```
              DP
          ┌───┴───┐
      NumP/HP       D
      ┌──┴──┐       │
    NP     Num/H    │
    △        │      │
   tren     -ak     ∅
         'trains'
```

(50b)
```
              DP
          ┌───┴───┐
      NumP/HP       D
      ┌──┴──┐       │
    NP     Num/H    │
    △        │      │
   tren    (num)   -ak
         'the trains'
```
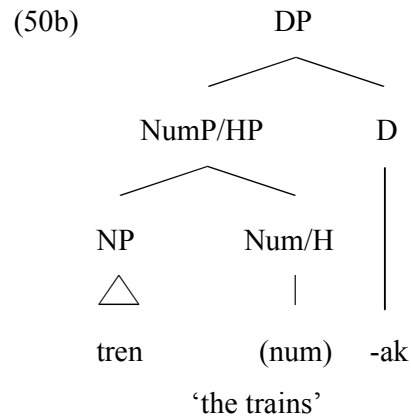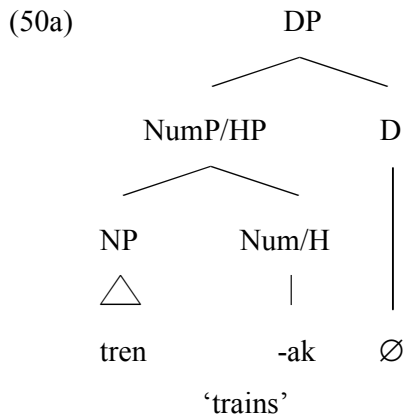
For the generic interpretation (in line with Longobardi (2000)'s proposal) Artiagoitia (2002) considers more economical the possibility of having the D position empty at SS and moving the N (covertly) to D position at LF (as proposed for English). To propose an expletive article at SS (as proposed for Italian) is a more costly operation and only available when there is no other accessible derivation. Then, the Basque article in generic DPs characterises the head of Number as expressed in the following structure, and not the head of D.

Generic Interpretation:

(51a) At SS:

```
                DP
              /    \
            HP      D
          /    \    |
        NP      H   |
         △      |   |
        uso    -ak  ∅
           'doves'
```

(51b) At LF:

```
                DP
              /    \
            HP      D
            △       |
            t_i   [usoak]_i
            |_____↑
              'doves'
```

4.6.4.1. Problems for Artiagoitia (2002):

Artiagoitia (2002: 74) claims the following: "some Basque DPs headed by the article must have their D position empty; given that Basque nouns and NPs lack number inflection all together (Artiagoitia (1997)), the sequence of [N+article] with an empty D node must contain some functional projection. In other words, the Basque article does not always fill the D position; it may occupy some intermediate head position between N and D".

In order to account for the possible interpretations Basque DPs can get, the apparently definite article is argued to be able to fill two different syntactic slots inside the DP structure depending on whether the DP is going to be interpreted specifically (definite) or existentially (indefinite). These two syntactic slots correspond to two functional projections: DP and NumP/HP.

When the article appears in [Head, NumP], the DP will obtain an existential interpretation by default (just like determinerless DPs in Romance languages); when, on

the other hand, the article appears at DP, the DP will necessarily be interpreted specifically.

However, this analysis is problematic: Let us build an example with a mass term like *ardoa* 'wine+D' in object position of an object level predicate. In this situation, the DP *ardoa* can obtain two interpretations, one definite and specific, the other indefinite and unspecific (which forces the existential interpretation).

(52) Izarok   ardoa   edan du.
      Izaro.erg wine-D.sg[25] drink has

      $\Rightarrow$ Specific: 'Izaro has drunk the wine'
      $\Rightarrow$ Existential: 'Izaro has drunk wine'

In the existential interpretation, Artiagoitia does not treat the article as a determiner, rather, the article is placed in [Head, NumP] position and functions as a number marker, in this particular case, it would be functioning as a singular marker (in Artiagoitia's terms the Basque plural marker would be -AK). But, do we really want to claim that mass terms denote singulars? Do we really want to say that *ardoa* 'wine+D' (in its existential interpretation) in (52) and *mutila* 'boy+D' in the example in (53) are just the same?

---

[25] For ease of exposition, here and elsewhere, 'D.sg' is used in the glosses with mass terms. However, as will be made explicit below, mass terms are claimed to be number neutral and singular agreement with the verb and with other elements must be taken as a result of the default status of the singular.

(53) Jonek   mutila   ikusi du.
       Jon.erg boy-D.sg see   has
       'Jon has seen the boy.'

To begin with, note that *mutila* in (53) can not get an existential interpretation[26] and can only be interpreted in a specific way as the glosses perfectly show. It follows from here that there can only be a single boy that Jon has seen in (53), while no such restriction is expressed by the sentence in (52) where (in the existential interpretation) no quantity of wine is specified at all. I guess Artiagoitia could find a way out of the problem saying that the determiner in the object DP could fill different syntactic positions in (52) and (53). As we said, (always according to Artiagoitia) in (52) -A would only play the role of the number marker (placed in NumP) while in (53) -A would function both as a number marker and a definite determiner in D (sited in DP).

But let us have a look at another example which I think shows more clearly the point that I'm trying to make. There are some (not all) contexts where Basque count terms seem to be behaving as real indefinites in that they can get existential-like interpretation.

(54) Julenek   kotxea   erosi du.
       Julen.erg car-D.sg buy   has

       ⇒ Specific: 'Julen has bought the car'
       ⇒ Existential: 'Julen has bought (a) car'

---

[26] In Basque, the singular definite article does not usually force existential interpretations. However, there are some contexts where this reading is available, see below as well as section 4.6.5.2.

Before we proceed, let me briefly note that contexts in which singular count nouns in object position (*kotxea* in (54)) can get an existential-like interpretation are not the typical case, that is to say, singular count nouns can not obtain existential-like interpretation as easily as plurals or mass terms can since the latter (in opposition to the former) need not specific contexts to be interpreted existentially. Singular count nouns have been claimed to obtain this reading only in so-called stereotypical contexts, usually related to verbs of possession: buying a car, having a wife, having a husband, having a baby, wearing a hat, etc[27]. Usually then, a singular count noun in the object position of

---

[27] In Spanish, all the Basque examples that allow the singular count noun to obtain an existential interpretation are expressed by means of a bare singular, *coche* 'car' in (i).

(i)   Juan se ha comprado coche
        Juan se has buy   car
        'Juan has bought a car.'

Bosque (1996b) explains the behaviour of Spanish object bare singulars by means of incorporation to the verb (head to head movement) and creation of a complex predicate. However, the fact that *coche* in the example in (i) is a bare singular might be just an 'illusion'. Note that there is a clear difference between bare plurals and bare singulars: so-called bare plurals do not accept appearing with SE predicates as the example in (ii) shows.

(ii)   ?? Juan se ha   comprado coches
          Juan se has buy   cars
        'Juan has bought cars.' (intended)

In order to appear with SE predicates objects must be affected and for that, the presence of a determiner is obligatory.

(iii)   Juan se ha comprado unos   coches
          Juan se has buy   some cars
        'Juan has bought some cars.'

What this suggests is that the bare singular *coche* in (i) must have a more complex structure and that maybe, it has a covert determiner, just like in Basque. Note that the sentence in (i) without SE is ungrammatical.

(iv)   ∗ Juan ha   comprado coche.
           Juan has buy   car
        'Juan has bought a car.' (intended)

Of course, in order to see the contrast between bare plurals and bare singulars the predicate must be a SE predicate. This is why it is not possible to observe any contrast in the following sentences.

an object-level predicate is interpreted specifically: *liburua erosi* always means 'to buy the book', *mutila ikusi* always means 'to see the boy', *aldizkaria irakurri* always means 'to read the magazine', and similarly for the majority of these constructions.

Anyhow, *kotxea* can have an existential-like interpretation[28] in (54); but again, even in the existential interpretation, there is a clear difference between this sentence and the one in (52). Although both DP objects are claimed to get existential interpretation and the Basque article -A should accordingly be in NumP in both DPs, there is no way in which the sentence in (54) can be interpreted as Jon having bought more than one car, that is, the number is strictly specified to 'one'; this is not the case in (52), where as we said, we don't care about the quantity of wine Izaro has drunk.

Why should there be such a difference among the behaviour of the singular (if singular) DPs in the examples in (52) and (54)? And what makes them different? The difference comes from the fact that Number does in fact play a role; when singular, the interpretation is just singular and this is what the example in (54) shows. However, with mass terms, the Basque article does not appear to be imposing any kind of number on the nominal (mass) expression. One possibility is to claim (as I shall do) that mass terms

(va)   Juan lleva sombrero.
       Juan wear hat
       'Juan wears a hat.'
(vb)   Juan tiene esposa.
       Juan have wife
       'Juan has a wife.'

More research is needed to reach a conclusion. Thanks to Ricardo Etxepare (p.c.) for discussion on this point.

Rodriguez (2003) assumes Bosque's incorporation analysis and suggests that Basque facts in (54) could be explained in similar terms. The only difference is that in Basque the incorporation process would have to take place at LF since the presence of the article blocks the (needed head to head) movement at SS. However, I do not see the way to avoid the SS blockage at LF, since at LF the article will still be present (unless the Basque article is taken to be an expletive).

[28] In section 4.6.5.2, the existential interpretation of the object of the sentence in (54) is suggested to be explained assuming that the singular definite generic determiner combines with taxonomic (sub-kind) sets.

are not number marked, and although they share the property of triggering singular verb agreement with singular count terms, they differ in being number neutral (see Delfitto & Schroten (1991), Doetjes (1997), Dayal (2004), Krifka (2004), among many others). Furthermore, from what we have seen so far (see section 4.6.2) masses pattern together with plurals in the interpretations they obtain (see Link (1983), Pelletier & Schubert (2002), Gillon (1992), Higgimbotham (1994), Chierchia (1998b, 1998c), Bosveld-de Smet (1998) and references therein), in other words, semantically, mass terms share more properties with plurals than with real singulars. So despite agreement facts with verbs, masses are closer in behaviour to plurals than to singulars.

Hence, for this particular issue I propose that in fact mass terms are number neutral. Thus, count terms will be referred as (morphologically) singular or plural while mass terms will be claimed not to bear number morphology at all. Of course, if what it's being claimed in here is on the right track, Artiagoitia's analysis seems unable to explain the existential interpretation that mass terms obtain in object-level contexts because if mass terms do not bear number morphology, there is no need to postulate the NumP in mass terms (position where the Basque article is placed in order to force existential interpretation for plurals and mass terms).

The problem of existential interpretations can be solved if we assume that the Basque article is always definite, and always base-generated in [Head, DP], but it is very flexible in its ability to type-shift (see section 4.6.5.1). In chapter 4 I claimed that the definite determiner -A and plural marker -K (in opposition to the scholars that have analysed the Basque DP) are base generated in different syntactic positions[29]. The plural marker -K has been claimed to be base generated in NumP while the definite determiner

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[29] See chapter 3, section 3.4, for arguments in favour of this claim.

-A has been defended to be base generated where it has standardly been assumed to be generated, in the DP; the singularity of singular count terms is not marked in the overt syntax, but I assume there is an empty number marker (∅), hence the difference with mass terms. The proposed structure will be the one in (55).

Count Terms:

(55)

```
                        DP
                   ╱          ╲
              Spec              D'
                           ╱        ╲
                       NumP           D
                     ╱      ╲         -A
                 Spec        Num'
                          ╱        ╲
                       NP           Num
                       mutil         -K (when plural)[30]
                       'boy'         -∅ (when singular)[31]
```

---
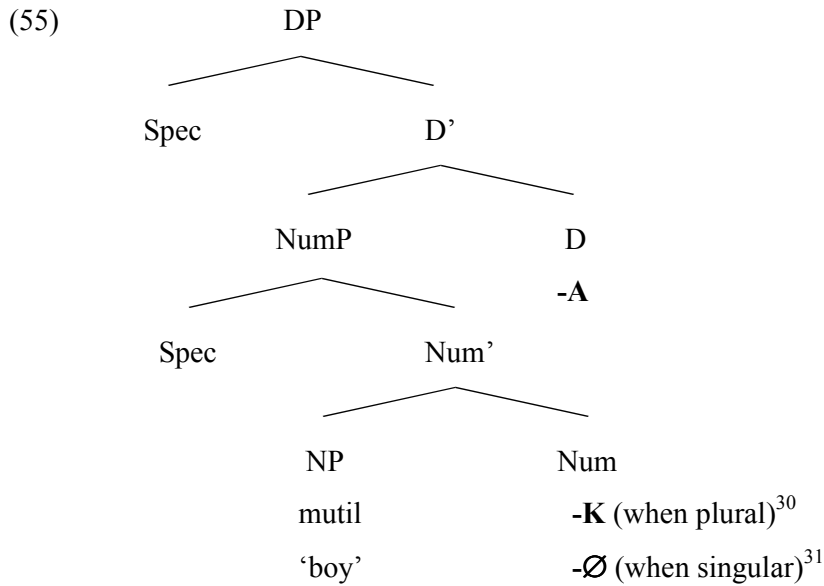
[30] In order to get the final surface word order (noun-A-K/∅), the Number head will have to move up adjoining the D head. Note that the plural marker is a -K, and as such it is dependent phonologically as well as categorically on another category (DP). Therefore, it is possible to postulate that this last movement of the plural marker to the final position of the DP will be due to morphology (see Zwicky (1977, 1985))

[31] This is actually the case in verbal inflectional agreement in Basque. Plural number is marked by suffixation while singular number is unmarked.

Singular		Plural	
doa	'it/she/he is going'	*doa-z*	'they are going'
noa	'I am going'	*goa-z*	'we are going'
daukagu	'we have it'	*dau-z-kagu*	'we have them'
dakigu	'we know it'	*daki-zki-gu*	'we know them'
dabil	'it/she/he is walking'	*dabil-tza*	'they are walking'
nau	'it/she/he has me'	*ga-it-u*	'it/she/he has us'

For more discussion on this, see Hualde (2003).

Now, considering that mass terms are number neutral, the NumP will not be needed. The one in (56) is the structure I assume for masses.

Mass Terms:

(56)

```
              DP
          /        \
       Spec          D'
                  /      \
               NP          D
              ardo        -A
             'wine'
```
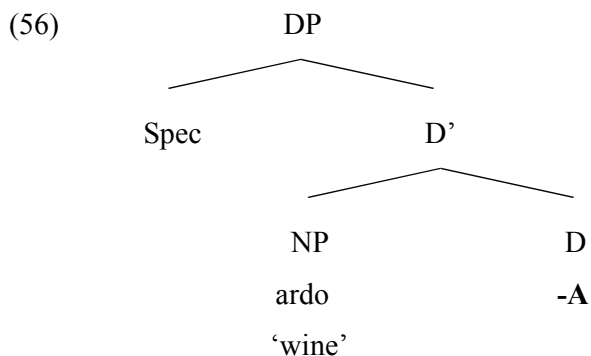
Note that in case the structure of a mass term DP like *ardoa* were like the one in (55), with the NumP functional head, -A should not be able to appear with mass terms for the same reason that -AK is not: the functional projection NumP should make reference to types or sizes of wine. But this is not the case since something like *ardoa* in (52 *Izarok ardoa edan du*) does not refer to types or sizes of wines; it just makes reference to wine. Hence, the structure in (56) adds further argumentation for the claim that (i) when -A appears with mass terms is not there for number reasons and, (ii) -A in Basque is a real definite and as such must fill the [Head, DP] position, not the [Head, NumP] position (contra Artiagoitia (2002)).[32]

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[32] The implication of this structure is that weak quantifiers that I claimed to be base-generated in [Head, NumP] or [Spec, NumP], could not be combined with mass terms and should only be able to combine with count terms. This is true for most of the weak quantifiers that have been analysed in chapter 3. See (ia-ib) for an example; the same applies to *batzu(e)k* (some), *hiru* (three -numerals-), *hainbat* (some), etc. See Etxepare (2000).

<div align="center">

(ia)   ∗ Zenbait ardo edan dut.   (ib)   √ Zenbait ardo edan ditut.
                some   wine drink aux.sg   some   wine drink aux.pl
                'I have drunk some wine' (intended)   'I have drunk some wines.'

</div>

Doetjes (1997), based on the behaviour of adnominal quantifiers in different languages[33], also reaches the conclusion that mass terms do not bear Number morphology. She realises that there are some adnominal quantifiers that uniquely combine with singular count nouns and that the quantifiers that show this property are incompatible with mass terms, which suggests that mass terms are not to be considered singular. Delfitto & Schroten (1991) make the same claim based on different arguments; according to these authors, contrary to what would be expected if mass terms were singulars, mass terms pattern with bare plurals. They support their conclusion by the observation that in several Romance dialects the suffix used with count singulars is different from the suffix used with mass terms: i.e. in Norcia (Umbria) the suffix *-u* is attached to singulars (*lu pietu* 'the chest') while the suffix *-o* is the one used with mass terms (*lo fero* 'the iron').

Now that has been shown that mass terms are number neutral and that Artiagoitia's analysis leaves some problems unexplained, the next section focuses on the different interpretations of Basque definite DPs and proposes a new analysis for the Basque article following the Neocarlsonian approach (Chierchia (1998c), Dayal (2004), Zamparelli (2002a, 2002b)) already presented in section 4.4.2. The advantage of this

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However, there are some weak quantifiers that as well as being able to combine with counts can also appear with mass terms: *asko*, *ugari*, *gutxi*, etc. Note that there are some differences between the weak quantifiers that can combine with mass terms and those that cannot; the former can also be used as degree adverbials, the latter can not. Thus, if the structure proposed for mass terms is correct, these weak quantifiers would have to be claimed to be base-generated in some other position when combined with mass terms. One possibility is to claim that their base position is a Degree Head. More analysis is needed on these facts and I leave it for future research.

[33] Doetjes (1997) assumes that weak quantifiers are real quantifiers. Recall from chapter 3 that weak quantifiers have been claimed not to be neither restricted nor quantificational. However her assumption does not change the argument that I want to make here.

analysis is that the Basque article is treated as a definite[34] everywhere. First, in subsection 4.6.5.1 we will provide an account for the interpretations that Basque plural definites can get (see section 4.6.2); finally, subsection 4.6.5.2 will concentrate on the so called singular definite generic.

4.6.5. The Basque Article is a Definite Determiner:

4.6.5.1. Kind and Existential Interpretations (Plurals and Mass terms):

As mentioned in section 4.6.2, one very interesting property that the Basque DP shows is that bare nouns can never function as arguments and the definite article is always needed if those DPs are going to be interpreted in the argumental type.

This section will concentrate on both plural and mass terms and will give a unitary account for them. As we said, Basque must necessarily use noun phrases combined with the definite article in order to express generic interpretations that in English are expressed by means of bare plurals: the plural definite[35] with count nouns, the singular definite with mass terms[36]. In this, Basque seems to be behaving just like Romance languages (see section 4.6.3). Examples copied from (38).

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[34] As will be shown later on, the term *definite* includes both the definite specific interpretation as well as the definite generic (kind) interpretation.

[35] See section 4.6.5.2 for definite generic singulars.

[36] Recall from section 4.6.4.1 that the definite that combines with mass terms is only apparently singular, since mass terms have been claimed to be number neutral. This is why they pattern with plural count nouns when in object-level contexts rather than with singulars. See examples (55) and (56).

(58a) Txakurrek   arraza desberdin asko dituzte.

dog-D.pl(erg) breed different many have

'Dogs have many different breeds.'

(58b) Chihuahuak   ez dira ospetsuak Euskal Herrian.

chihuahua-D.pl(abs) no are famous   Basque Country-in

'Chihuahuas are unpopular in the Basque Country.'

(58c) Nitrogenoa   ugaria   da gure unibertsoan.

nitrogen-D.sg(abs) abundant is our universe

'Nitrogen is abundant in our universe.'

(58g) Arrainak   orain duela 390 milioi urte agertu ziren.

fish-D.pl(abs) now   million year appear aux.

'Fishes appeared 390 million years ago.'

Thus, when Basque definite DPs are combined with kind-level predicates, their usual specific interpretation disappears and they adopt a generic interpretation.

In non-generic contexts the Basque definite article behaves just like the definite determiner of languages like English or the Romance languages, that is, it gets the normal specific interpretation.[37]

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[37] In English, sentences like (i), where the bare noun fills in the subject slot of an episodic object-level predicate can get existential interpretation by means of the DKP (no kind reading is allowed for the bare plural).

    (i)   Cats are rummaging our garbage.

Basque definites when subject of episodic sentences on the other hand, do not permit an existential interpretation and must necessarily be interpreted specifically, that is, they make reference to a specific set of *dogs* in the case at hand.

    (ii)   Txakurrak zaunkaka ari   dira kalean.   (-*ka* is a manner adverb means 'in a
               dog-D.pl bark-*ka* prog. aux street.in   repeated way' and can be used to create
               'The dogs are barking in the street.'   progressive verbal forms)

However, as I would show later, this does not block Basque definites from being interpreted existentially by means of the DKP mechanism.

(59)   Lapurrek   banketxean ahaztu zuten   lapurtu zuten dirua
        thief-D.pl bank-in   forget aux.pl steal   aux.pl money-D.sg
        'The thieves forgot the money they had stolen in the bank.'

The referential/specific reading of the definite article is explained by means of the maximalization operator (see Link (1983), Chierchia (1998b)) that returns the largest possible element in a set. In (59) it makes reference to the largest plural individual formed by the contextually relevant thieves, in this particular case, those that forgot the money that they had stolen in the bank. In the singular case, the maximalization operator will be defined in case there is a singleton set that can be taken as an input.

(60)   Lapurrak banketxean ahaztu zuen   lapurtu zuen   dirua.
        thief-D.sg bank-in   forget aux.sg steal   aux.sg money-D.sg
        'The thief forgot the money he had stolen in the bank.'

When the Basque definite DPs (plurals and masses) fill the object slot, the definite DP can but need not make reference to a specific set and can obtain the so called existential interpretation. Note that in all the examples in (61), the DP lacks the generic/kind interpretation and gets an existential reading similar to the existential quantifier *some*.

(61a)   Aritzek **garagardoa**   edan du.
        Aritz.erg beer-D.sg(abs) drink aux
        'Aritz has drunk (the) wine.'

(61b) Mattinek **lagun euskaldunak** topatu zituen Moskun.

Mattin.erg friend Basque-D.pl(abs) meet aux Moscow-in

'Mattin met (the) Basque friends in Moscow.'

(61c) Amaiak **goxokiak** jan ditu.

Amaia.erg candy-D.pl(abs) eat aux

'Amaia has eaten (the) candies

Recall from section 4.6.2 that existential interpretations are expressed by means of bare plurals in English, Italian and Spanish but not in French, where the partitive preposition *de* plus the definite article is necessary (this construction also works for Italian, not for Spanish, either for English) --see section 4.6.3--.

I propose that the Basque definite determiner -A is ambiguous between the kind and the normal (specific/referential) definite interpretation (just like in Romance languages, see i.e. Kleiber (1990), Zamparelli (2001)). So, the Basque definite article will take an ⟨e, t⟩ element[38] and will return an individual element of type *e*, that is, it plays the role of the type-shifter *nom* when a generic interpretation is needed (62) and the role of *iota* when a definite specific is needed (63).

---

[38] Chierchia (1998a, 1998b) assumes that mass terms, being able to appear in argument position without any kind of modification, are of type *e*. Chierchia (1998a: 95) proposes the following parameter:

(i)	N → [+arg, −pred]	Nouns can be of type *e*, cannot be of type ⟨e, t⟩ (Chinese)
	N → [+arg, +pred]	Nouns can be of type *e*, can be of type ⟨e, t⟩ (English)
	N → [−arg, +pred]	Nouns cannot be of type *e*, can be of type ⟨e, t⟩ (French)

Since in Basque nouns cannot be arguments (of type *e*) by themselves, it seems to pattern with French in that nouns are of type ⟨e, t⟩. As Chierchia (1998a: 95) claims: "This does not mean that the mass/count distinction is not attested. Such a distinction concerns primarily the extension of a predicate […]. In such a language mass nouns will have the ten properties discussed in 1.2. But no noun (count or mass, singular or plural) will be able to occur by itself as a bare argument, for predicates are of the wrong logical type for that."

(62)   Nom ($^\cap$): $\langle e, t \rangle \rightarrow e$: $\lambda P_{\langle e, t \rangle}\ \lambda s\ \iota x\ [P_s\ (x)]$

Nom is a type shifter functor that applies to the predicate meaning of an NP of type $\langle e, t \rangle$. It maps properties onto their entity correlates if these exist, that is, it is a function that takes properties and returns the maximal entity that satisfies that property.

(63)   Iota (ι): $\langle e, t \rangle \rightarrow e$: $\lambda P_{\langle e, t \rangle}\ \iota x\ [P\ (x)]$

Nom is a type shifter functor that applies to the predicate meaning of an NP of type $\langle e, t \rangle$. It maps any singleton set onto its member; that is to say, it takes the set of individuals just in case it is a singleton set and returns that singleton.

The type-shifter *nom* is taken to be the intensional version of *iota*; while *nom* is a function whose extension varies from situation to situation, *iota* is a constant function to a contextually anchored entity.

Following the Neocarlsonian approach, I also defend that in order to obtain the existential interpretation the definite noun phrase must also be able to have a kind-level meaning. That is, a necessary step in the way to the existential interpretation is the kind denotation. Chierchia (1998c) claims that in contexts (object level contexts) where the predicate cannot apply to kinds, further operations are needed to repair the type mismatch. In such situations, bare nouns are turned into indefinites providing a free variable by a type shifting operation that at the same time inserts an existential quantifier that binds the variable: Derived Kind Denotation (see section 4.4.2.).

This dissertation claims that a similar operation is needed for Basque with the difference that some parts of the derivation will be argued to be overt while some others are kept covert. Recall from section 4.6.3 that French (just like Basque) does not accept

bare nouns in argument position and that in order to create existential interpretations it makes use of the so called partitive determiner *des* for plural common nouns or *du* and its variant *de la* and *de l'* for mass common nouns. This construction has been described as a complex determiner composed of the partitive preposition plus the definite determiner (this construction is also productive in Italian).

Zamparelli (2002b) claims (based on Chierchia (1998a), and against Storto (2003) and Roy (2001)) that the nature of the preposition (*di* in Italian, *de* in French) of the so-called partitive determiner is completely parallel to the one used in partitive constructions created with strongly interpreted weak quantifiers (i.e. *many of the students*). The only particularity of the former is that the preposition+determiner complex is a raising structure built on a kind-denoting definite. He argues that the preposition is an operator (called *residue*) of two arguments, one in complement position the other in the specifier position that returns the denotation of its specifier minus the denotation of its complement. At spell-out, one of the copies (the one in the specifier or the one in the complement position) will not be pronounced (usually the upper one).

(64a) $[_{RP} [_{NP} \text{boys}]_i [_{R'} \text{of} [_{DP} \text{the} [_{NP} \text{boys}]_i]]]$ (Zamparelli (2002b: 12))

(64b) $\| [\text{boys of the boys}] \| = \| [_{NP} \text{boys}]_i \| - \{ \| [_{DP} \text{the} [_{NP} \text{boys}]_i \| \}$

As Zamparelli claims "the NP *boys* denotes a set of plural boys (a join semi-lattice, containing all the possible pluralitites that can be assembled with some number of boys in the domain, including the singularities but excluding the empty plurality). The definite *the boys* denotes the maximal element of the semi-lattice (i.e. the largest

plurality of boys in the domain). The result of the subtraction is the set of all pluralities minus the largest one".

Before we move on to make our analysis explicit, note that the behaviour of French *des/du* is quite similar to the existentially interpreted Basque -AK and -A (for plurals and mass terms respectively) in that they are much more typical in object position that in subject position[39]. When in subject position, there are some differences between French and Basque since the majority of sentences with *des/du* are sentences reporting events, situations in which Basque DPs are interpreted in a definite specific way as the interpretations of the examples in (66) show.

French:

(65a) Des   ouvriers réparent   la voie.
         of-the workers are repairing the road

(65b) De la boue éclaboussait la voiture.
         of-the mud spattered   the car

Basque:

(66a) Arrantzaleek   txalupa   konpondu zuten.
         fisherman-D.pl(erg) ship-D.sg repair   aux
         'The (specific) fishermen repaired the ship.'

(66b) Ardoak   alkandora zikindu dit.
         wine-D.sg(erg) shirt-D.sg get dirty aux.
         'The (specific) wine spoiled the shirt.'

In most of the situation in which French *des/du* are ungrammatical in subject position, Basque definite determiner is interpreted specifically and no existential

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[39] All of the French examples are taken from Bosveld-de Smet (1998).

interpretation is allowed. There are some contexts where French *des/du* are interpreted generically, for that, *des/du* NPs must be left dislocated (in the normal word order they don't accept generic interpretations); Basque definites on the other hand accept generic interpretations.[40]

French:

(67a) Des   enfants, ça s'ennuie le   dimanche.
       of-the children that feel bored the Sunday
              ∗ Existential interpretation
              √ Generic interpretation

(67b) Du   citron, ça   agace   les dents.
       of-the lemon that irritates the teeth
              ∗ Existential interpretation
              √ Generic interpretation

Basque:

(68a) Umeak   igandeetan aspertu egiten dira.
       child-D.pl(abs) Sunday-on bore   do   aux
       'Children get bored on Sundays.'
              ∗ Existential interpretation
              √ Generic interpretation

---

[40] Note that aspectual properties play a very important role for the generic interpretation. For example, if aspect is changed from imperfective (*-tzen*) to perfective (*-tu*) in a sentence like (68b), the resulting interpretation can only be definite as the following sentence clearly shows. No generic interpretation is allowed in (i).

    (i)   Limoiak hortzak horitu dizkit.
             lemon-D.sg(erg) tooth-D.pl yellow-make aux
             'The (specific) lemon has made (my) teeth yellow.'

Chierchia (1998: 366) claims that the GEN operator he assumes for this kind of sentences is part of the verbal aspect.

(68b) Limoiak   hortzak   horitzen   ditu.

lemon-D.sg(erg) tooth-D.pl yellow-make aux

'Lemon makes teeth yellow.'

∗ Existential interpretation

√ Generic interpretation

This difference in subject position is kind of expected if we assume that the Basque article can obtain three different interpretations, it can denote a definite, a kind or an existential. *Des/du* NPs on the other hand are most typically used to express existential interpretations.

In object position on the other hand, their behaviour is parallel in that they are interpreted existentially in the same situations and contexts; the difference being that the Basque -AK/-A can also obtain a definite interpretation. So, in the existential interpretation, they are rejected as objects of generic sentences (69)-(70); perfectly acceptable as objects of stage-level predicates (71)-(72); grammatical also when combined with (*pendant* 'during/for') adverbials (73-74), etc.

Generic Sentences:

French

(69a) ∗ Max adores des   sucreries

Max adores of-the sweets

(69b) ∗ Cet enfant déteste du   lait

this child hates   of-the milk

Basque:

(70a)   Nik goxokiak   maite ditut.

I.erg candy-D.pl love   aux.

'I love candies.'

∗ Existential interpretation

√ Generic interpretation

(70b)   Ume honek   esnea   gorroto du

child this.erg milk-D.sg hate   aux

'This child hates milk.'

∗ Existential interpretation

√ Generic interpretation

Stage-Level Sentences:

French:

(71a)   J'ai   rencontré des   amis   ce   matin.

I have met   of-the friends this morning

(71b)   Cette promenade m'a donné   de l'appétit.

this   walk   has given me of the appetite

Basque:

(72a)   Italiar lagunak   topatu ditut gaur   goizean.

Italian friend-D.pl(abs) meet   aux   today morning-in

'I met (the) Italian friends this morning.'

(72b)   Ibilaldi honek jateko gogoa   eman dit.

walk   this   eat-for desire-D.sg(abs) give   aux

'This walk has given me (the) appetite.'

Adverbials:

French:

(73a)   Marie a   cueilli des   fraises   pendant des   heures.

Marie has picked of-the strawberries for   of-the hours

(73b) Marie a   cueilli des   fraises   en une heure.
       Marie has picked of-the strawberries in one hour

Basque:

(74a) Mirenek   marrubiak   jaso ditu ordubetez.
       Miren.erg strawberry-D.pl(abs) pick aux hour-for
       'Miren has picked (the) strawberries for an hour.'
               √ Existential interpretation
               √ Definite interpretation

 (74b) Mirenek   marrubiak   jaso ditu ordubete batean.
       Miren.erg strawberry-D.pl(abs) pick aux hour   one-in
       'Miren has picked the strawberries in an hour.'
               ∗ Existential interpretation
               √ Definite interpretation

Given this set of facts, the proposal that I want to put forward is partly based on Zamparelli's analysis. What I claim is that Basque is midway between English and French in that the definite generic determiner is overt while the partitive preposition is not[41].

Here it is how it works: First, the Basque definite generic determiner creates an individual of type *e* with a kind denotation. Although in Basque we only see the determiner, I assume that there is a covert version of the partitive preposition (similar to French *de*) that gives us the predicative ⟨e, t⟩ type back. The role of this covert partitive preposition will be halfway the Derived Kind Predication (DKP), that is to say, it yields an ⟨e, t⟩ type element but no existential closure. This local existential closure will be provided by the DKP which introduces an existential quantification over instances of

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[41] Thanks to Ora Matushansky (p.c.) for extensive discussion on this matter.

the kind in episodic sentences (an adjustment triggered by the type mismatch). The final

type of the existential DP will be quantificational $\langle\langle e, t\rangle, t\rangle$. Note that in Basque (as we

will see below) this mechanism not only applies to plural terms but also to mass terms.

In opposition to other languages like English, Spanish or Italian that can use them bare,

Basque mass terms must necessarily appear with the definite article.

As an example:

Basque:

(75a)   Jonek   liburuak   irakurri ditu.

Jon.erg book-D.pl(abs) read   aux

'Jon has read (the) books.'

Existential interpretation[42]:

irakurri (j, liburuak$_k$) $\Leftrightarrow$ $\exists$x[$^\cap$liburuak$_k$(x) $\wedge$ irakurri(x)] (via DKP)

French:

(75b)   Jean a   lu   des   livres.

Jean has read of-the books

'Jean has read books.'

Existential Interpretation[43]:

lire (j, les livres$_k$) $\Leftrightarrow$ $\exists$x[de les livres$_k$(x) $\wedge$ lire(x)] (via DKP)

Let us provide some evidence as support for the proposal put forward in this

chapter by means of some examples. In all of the examples in (76), the definite object

DP is ambiguous between two interpretations; apart from the typical specific reading

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[42] As already claimed -ak, the generic definite, plays the role of the *nom* operator and creates a kind, this is why the small 'k' is introduced.

[43] The definite generic creates a kind, and the partitive preposition plays the role of the *pred* operator, taking a kind and returning an instantiation of it.

(the normal definite reading), it is also possible to obtain an existential interpretation where the definite DP gets a reading similar to that of the existential quantifier *some*[44].

(76a) Maia aldizkari zatiak   bilatzen ari da.
      Maia magazine piece-D.pl look for prog aux.
      'Maia is looking for (the) magazine pieces.'

(76b) Kepak   satorrak   hil ditu.
      Kepa.erg mole-D.pl kill aux
      'Kepa has killed (the) moles.'

(76c) Idoiak   oilaskoa   jan du bazkaltzeko.
      Idoia.erg chicken-D.sg eat aux lunch.for
      'Idoia has eaten (the) chicken for lunch.'

(76d) Etxea   nazkagarri zegoen, zoruan saguak   ikus zitezkeen eta harraska
      house-D.sg filthy   was   floor-in mouse-D.pl see aux   and sink
      azpian   labezomorroak.
      Below-in cockroach-D.pl
      'The house was filthy; you could see (the) mice in the floor and (the) cockroaches under the sink.'

(76e) Angel zurbil-zurbil dago mamuak   ikusi dituelako.
      Angel pale-pale   is   ghost-D.pl see aux.
      'Angel is so pale because he has seen (the) ghosts.'

(76f) Imanolek wiskia   edan du.
      Imanol.erg whisky-D.sg drink has
      'Imanol has drunk (the) whisky.'

(76g) Jonek   liburuak   irakurri ditu.
      Jon.erg book-D.pl(abs) read   aux
      'Jon has read (the) books.'

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[44] As expected, when existentially interpreted, the DPs do not behave like usual indefinites and must always take narrow scope, just like bare nouns in English. See section 4.5.

If, as claimed, the existential interpretation comes through kind interpretation, blocking the kind interpretation should lead to the impossibility of interpreting the DP existentially. As mentioned above, kinds are assumed to have an 'intensional' component that relates the kind with the intension of that same noun; it is possible to block this intensional component by means of a rigid designator in the DP as it was possible to block the intensional component of the bare nouns in English (i.e. *magazine parts* can be kind, but *parts of the "RollingStones" magazine* can not).

Thus, when a rigid designator or a definite possessive is added to the DP, the kind interpretation is suddenly blocked and the existential interpretation is also lost[45].

(77a) Maia [*RollingStones* aldizkariaren zatiak]   bilatzen ari da.
        Maia *RollingStones* magazine.gen piece-D.pl look for prog aux.
        'Maia is looking for the pieces of the *RollingStones* magazine.'

---

[45] Recall that in English what was lost was not the existential interpretation, but only the narrow scope existential interpretation. In Basque, as we will see, when the existential interpretation is lost generally the DP is interpreted specifically; in cases this does not happen and the existential interpretation is still allowed, kind reading is neither blocked. In Italian, the kind reading is blocked even when you introduce an adjective.

(i)   Gianni è cosi pallido che sembra abbia visto i   paurosi fantasmi.
         Gianni is very pale   that seems he.has.seen the frightfull ghosts

In Basque, the introduction of an adjective (as is the case in (i)) does not block the existential reading of the DP. The DP *mamu beldurgarriak* can also get a specific reading.

(ii)   Angel zurbil-zurbil dago mamu beldurgarriak bilatu dituelako.
         Angel pale-pale   is   ghost frightful-D.pl find   aux.
         'Angel is so pale because he has find (the) frightfull ghosts.'

Now, two notes are in order: (1) the existentially interpreted DP *mamu beldurgarriak* is necessarily interpreted with narrow scope, and (2) the kind interpretation is not blocked.

(iii)   Mamu beldurgarriak ohikoak dira ingurune hauetan.
         ghost frightful-D.pl typical are region   these-in
         'Frightful ghosts are rare in this region.'

Since the kind reading is still available, the existential interpretation of the DP is not blocked.

(77b) Kepak   [nere aitaren   baratzako   satorrak] hil ditu.
       Kepa.erg [my father.gen vegetable garden mole-D.pl] kill aux
       'Kepa has killed the moles from my father's vegetable garden.'

(77c) Idoiak   [bere amak   azokan   erositako oilaskoa]   jan du bazkaltzeko.
       Idoia.erg [her   mother market-in buy   chicken-D.sg] eat aux lunch.for
       'Idoia has eaten for lunch the chicken her mother bought at the market.'

(77d) Etxea   nazkagarri zegoen, zoruan [bizilagunaren etxeko saguak]
       house-D.sg filthy   was   floor-in [neighbour.gen house.from mouse-D.pl]
       ikus zitezkeen eta harraska azpian [lagunek   oparitutako   labezomorroak].
       see aux   and sink   below-in [friend-D.pl give as present cockroach-D.pl]
       'The house was filthy; you could see the mice from our neighbour's house in the
       floor and the cockroaches given as a present by friends under the sink.'

(77e) Angel zurbil-zurbil dago [kanposantuan dauden mamuak]   ikusi dituelako.
       Angel pale-pale   is   [graveyard-in are   ghost-D.pl] see   aux.
       'Angel is so pale because he has seen the ghosts that are in the graveyard.'

(77f) Imanolek [nere osabaren upeltegiko   ardoa]   edan du.
       Imanol.erg [my   uncle.gen winery.from wine-D.sg] drink has
       'Imanol has drunk the wine from my uncles' winery.'

(77g) Jonek   [bere neskalagunaren liburuak]   irakurri ditu.
       Jon.erg [bere girlfriend.gen   book-D.pl(abs)] read   aux
       'Jon has read the books of his girlfriend.'

       All the definite expressions above must refer to some contextually unique group
of magazine pieces, moles, chicken, mice/cockroaches, ghosts, red pepper, and books
respectively; and the existential interpretation is blocked. Furthermore, the DPs in (77)
cannot get the kind reading and can only be interpreted in a specific manner when
combined with kind-level predicate. See the following as example.

(78a) # [Bizilagunaren etxeko   saguak]   ohikoak dira ingurune hauetan.

       [neighbour.gen house.from mouse-D.pl] typical   are region   this-in

       'The mice from our neighbours' house are common in this region.'

(78b) # [Amak   azokan   erositako oilaskoa]   munduan zehar   zabalduta dago.

       [mum.erg market-in buy   chicken-D.sg] world-in   around spread   is

       'The chicken that my mum bought in the market is widespread.'

This impossibility to obtain kind readings offers clear evidence in favour of the Neocarlsonian approach: the only way to get kind interpretation in Basque is through the definite generic determiner; a half overt-half covert DKP mechanism provides a free variable for existential closure. According to the ambiguity hypothesis, blocking the kind reading by means of a rigid designator or a definite possessive should not block the existential interpretation, but it does. From here, we can conclude that the existential interpretation is derived from the kind reading and that the Neocarlsonian approach gets the facts correctly.[46]

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[46] Artiagoitia (2002: 82) gives two examples where the DPs are inside a relative clause and, quite unexpectedly if the analysis proposed in this dissertation is on the right track, can still allow for the existential interpretation. Many of the speakers with whom I've checked these sentences agree with Artiagoitia's judgement when it refers to (i), but not so when it refers to (ii), which is claimed by some speakers to be interpreted obligatorily in a specific way.

      (i)   [Ikusita ez neuzkan   trenak]   ikusi ditut gaur goizean.
              [seen   not aux.COMP train-D.pl] see   aux this morning-in
              'This morning I saw trains I hadn't seen before.'

      (ii)   [Ezagutzen ez dudan   ardoa] ematen dute taberna honetan.
              [know   not aux.COMP wine] give   aux bar   this-in
              'In this bar, they serve wine I don't know.'

These DPs cannot get a kind reading and if the Neocarlsonian analysis is on the right track they should not allow an existential interpretation, but they do. I have nothing interesting to say right now and I'll leave it for future research, but note that it does not seem to be a coincidence that in the (only two examples of this kind) examples offered by Artiagoitia there is a negative particle inserted in the relative clause that appears with the DP; maybe, negative relatives are not rigid designators.

Now, as we said in section 4.4.2, in characterizing sentences, the Neocarlsonians have claimed that there is a type mismatch since the predicate does not accept kinds. Observing Basque data, it seems possible to claim that in fact these sentences do apply to kinds since the definite (generic) article -AK/-A can appear in this context with no problem. Note that French *des/du* can also get generic interpretations (see examples (67)) but special conditions are needed. Note also that we have claimed that Basque generic definite determiner is midway English and French in having the determiner overt while the preposition is covert. It does seem possible to analyse characterizing or habitual sentences by claiming that the Generic GEN operator provided by habitual or characterizing predicate itself binds the variable provided by the Basque DP (and the French DP when generically interpreted).

(79a)   Txakurrek   zaunka egiten dute.
        dog-D.pl(erg) bark   do   aux.
        'Dogs bark.'
(79b)   GENx [$^\cup$txakurrak$_k$(x)] [zaunka egin(x)]

However, I will go in a different direction and I will claim (as mentioned above) that these sentences directly apply to kinds, the only condition for this is that the DP that combines with this type of sentences must be formed with the definite generic version of the article -AK/-A. Crucially, note that in French (as well as in other Romance languages), the usual way to create characterizing sentences is by means of the definite article.

(80a) French :   Les pommes de terre   contiennent de la   vitamine C

        the apples   of ground contain   of-the vitamin C

        'Potatoes contain vitamin C.'

(80b) Italian: I   canni abbaiano alla   luna.

        the dogs bark   to the moon

        'Dogs bark at the moon.'

(80c) Spanish: En otoño, las palomas vuelan al   sur.

        in   fall   the pigeons fly   to the south

        'In fall, the pigeons fly south.'

(80d) Basque: Txakurrek   zaunka egiten dute.

        dog-D.pl(erg) bark   do   aux.

        'Dogs bark.'

It seems as though this kind of examples can be explained in the terms I'm

claiming; the only thing we would have to assume is that i.e. in Basque as well as in

Romance languages characterizing sentences can be formed in two different ways: real

indefinites (i.e. *A dog barks at the moon*) will need the GEN operator to be able to

appear in these sentences; DPs formed with generic definites on the other hand provide

the kind interpretation themselves (see also Giannakidou & Stavrou (1999)). This would

mean that there is no type mismatch and that GEN needs not be introduced to bind the

free variable (there is no variable to be bound).[47]

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[47] If this analysis is correct, it could be possible to postulate that English bare nouns are also definite
expression created by means of a covert definite generic determiner, just like in Basque and in Romance
languages. The only difference is that Basque and French definite generics are overt.

The generalization that follows from all this is expressed in (81)

(81)   A Basque definite DP can only get an existential (indefinite-like) interpretation if it can first have a kind-level meaning.[48]

Let me address a potential objection to the argument that the Basque definite generic, when existentially interpreted needs the presence of a covert type-shifter to end up with the correct type for interpretation. This claim appears to be inconsistent with what was claimed in Chapter 2. There, arguing about the internal structure of strong quantifiers (where the Basque definite determiner has been defended to be the overt domain restrictor), I assumed that languages with overt type shifters are able to block covert shifts (Chierchia (1998c)). There, I was able to block covert type shifts on the grounds that Basque has an overt partitive postposition (-*tik*).

Now, note that the partitive preposition used in constructions such a *beaucoup des étudiants* 'many of the students' in French is just the same that is used in partitive constructions as those presented in this chapter *des étudiants* 'of the students'. Basque makes use of the partitive postposition -*tik* 'of' in quantificational partitive constructions such *ikasleetatik asko* 'lit.: student-D.pl/of many', and apparently, the role that the *pred* type-shifter (in DKP) is claimed to play is exactly the same as the one carried out by -*tik*; that is to say, they both take an individual of type *e* and return a set of predicative type $\langle e, t \rangle$. Now, if this is the case, how is it possible to explain that there

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[48] The same generalization has been proposed by Zamparelli (2002a) for Italian definites. However, Zamparelli applies this condition to both existential as well as generic (in characterizing sentences) interpretation. For obvious reasons, I will only assume the need for covert type shifting in existential interpretations.

is in fact a covert type shifter that does exactly the same job an overt partitive preposition (postposition in Basque) does?

Here is how: if we assume (in line with Zamparelli (2002b)) that the French [preposition+determiner] complex *des/du* is a structure built on a kind-denoting definite we could argue that the partitive constructions *beaucoup des étudiants* and *des étudiants* or *mutiletatik asko* and *mutilak* (in its existential interpretation) are distinguishable in that the former means "being part of N" while the meaning of the latter is "being an instantiation of the kind". In fact, note that crosslinguistically, the behaviour of these two partitives is not the same. The "being part of" is a partitive construction everywhere, as the examples (82a) shows. On the other hand, the "instantiation of a kind" is a bare plural in English and in Spanish (can also be so in French and Italian -- see Zamparelli (2002a)), it can be a partitive construction in French and in Italian (not in English or in Spanish) and it is a definite DP in Basque (can also be so in Italian --see Zamparelli (2002a)). So it seems as though the fact that the morphological realization of the two constructions is parallel in some Romance languages leads us to a misleading conclusion.[49]

(82a) English: many of the students
       Spanish: muchos de los estudiantes
       French: beaucoup des étudiants
       Italian: molto dei studenti
       Basque: mutiletatik asko

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[49] Thanks to Ora Matushansky for pointing this out to me.

(82b)   English: students

       Spanish: estudiantes

       French: des étudiants

       Italian: dei studenti

       Basque: mutilak

There is still another point that has not been clarified: why is it that the Basque definite determiner can not get the existential interpretation when in subject position? Recall from chapter 2 that we mentioned that subjects have usually been described to be topic positions (in opposition to object positions). This is in fact quite a common assumption for many languages (i.e. see Ordoñez & Treviño (1999) for Spanish, Kiss (1995) for Hungarian, a Discourse Configurational Language, like Basque, Frota (1995) for Portuguese, etc.). In Japanese for example the topic marker only attaches to generic noun phrases in subject position. If this is the case, the topicalization of the subject will block the existential interpretation, and the interpretation of the subject will only be definite or generic.

The last section of this chapter concentrates on the singular definite generic determiner and will try to explain the way in which this determiner can get kind interpretation. It will be claimed (following Dayal (2004) and Zamparelli (2002a)) that the common noun can denote in the object domain (yielding the normal specific reading) as well as in the taxonomic domain (yielding taxonomic readings). Hence, the kind reading of the singular DP comes from the combination of the taxonomic common noun and the normal definite determiner, that is, the normal *iota*.

4.6.5.2. The Singular Generic Determiner:

Singular definites, apart from the typical definite reading (specific), can be used to express kind interpretations when combined with kind-level predicates as shown by the examples in (83).

(83a) English: The lion will become extinct.

(83b) Spanish: El tigre desaparecerá dentro de 250 años.

                      the tiger disappear-fut in   of 250 years

                      'The tiger will disappear in 250 years.'

(83c) French: Le castor abonde   dans cette région.

                      the beaver is abundant in   this region

                      'The beaver is abundant in this region.'

(83d) Italian: La volpe è rara in queste regioni.

                      the fox   is rare in this   region

                      'The fox is rare in this region.'

(83e) Basque: Lehoia   desagertu egingo da.

                      lion-D.sg[50] disappear do.fut aux

                      'The lion will become extinct.'

The question that immediately arises is why a language accepts two different ways of expressing kinds. In English, kinds can be formed by means of bare plurals or by means of the singular definite generic. In Romance languages, both plural as well as singular definites can be used to express kinds. In Basque too, plural as well as singular

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[50] In this case, 'D.sg' is really singular. See below for some differences between mass terms and this kind of singular expressions.

definites are used to form kinds (recall that although mass terms have been claimed to be number neutral --see section 4.6.4--, can also express kinds).

The most common answer is that singular and plural kind-denoting expressions are not alike (see Kleiber (1990), Krifka et al. (1995), Chierchia (1998c), Dayal (2004) and references therein). But, how can this be explained? Chierchia (1998) claims that in order to get a kind reading with the singular definite generic the property *tiger* in (84) is turned into a mass by neutralizing the singular-plural distinction with a function he calls MASS creating a group out of it (see Schwarzschild (1996)). The generic interpretation of *the tiger* in (84) will be derived as follows.

(84)   The tiger is widespread $\Rightarrow$ THE(MASS(tiger)) $=$ g(ι MASS(tiger))

The expression in (84) will denote the group of all tigers, and this is consistent with the fact that the noun has singular morphology. The choice of groups is based on Kleiber (1990), who noted that the definite generic has a mass-like behaviour in that it cannot combine with numerals.

(85a)   * The tiger is three/many/numerous.
(85b)   Tigers are three/many/numerous.

Zamparelli (2002a) claims that the effect shown in (85) is due to some other factors related to the syntactic singularity of expression like *the tiger* (note *the group is three/many*). *Numerous* can be predicated of a group since *the group is numerous* is grammatical; however, *numerous* is also deviant when applied to kind-constructions.

(86)   ?? This kind of animal is numerous in this region.

As a consequence, he claims that Chierchia's analysis cannot be on the right track and proposes (see also Dayal (2004)) an analysis where common nouns are assumed to denote properties of ordinary individuals (sets of individuals) or properties of sub-kinds (sets of kinds). The second denotation will be the one required to express meanings like the ones in (83). Hence, the singular definite determiner which appears in singular generics will be the normal definite determiner (*iota*) applied to the kind meaning of the noun and will return the largest possible sub-kind out of it, i.e. the kind itself.

In favour of the fact that the singular definite generic is the normal *iota* operator, Dayal (2004) claims that in order to fulfil the uniqueness requirement of this operator it is necessary to access the correct set of taxonomic entities. Thus, in order to satisfy the uniqueness requirement of a sentence like (87),

(87)   The lion will become extinct.

the set of taxonomic entities will be {DOG, WHALE, TIGER …} (see (88)). Now, when instead of the singular definite, the plural is combined with the set of sub-kinds, the interpretation will refer to different sub-kinds such {ASIAN LION, AFRICAN LION, BERBER LION, ASIAN LION + AFRICAN LION, AFRICAN LION + BERBER LION …} (see (88)).

(88)   MAMMAL

...DOG...   LION   ...ELEPHANT...

...AFRICAN LION...   ...ASIAN LION...   ...BERBER LION...
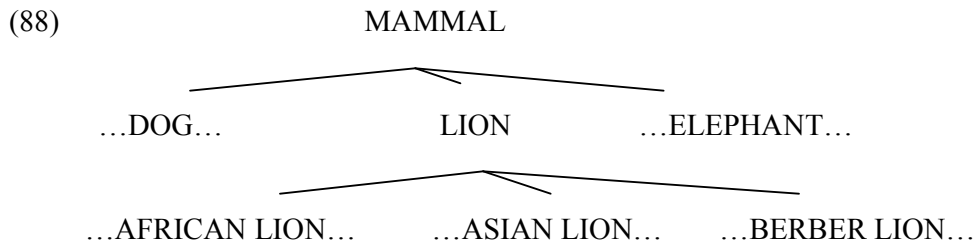
Now, in order to differentiate singular definite generics from bare nouns, something more needs to be said. According to Dayal, singular kinds are determinate in size and the fact that they are able to combine with kind-predicate (i.e. *to be common*) or collective verbs (i.e. *to gather*) is not problematic if it is assumed that while semantically plural they are grammatically atomic; this is what permits them to fulfil the requirement of singularity imposed by the number morphology and still be conceptually able to be interpreted as a kind. The difference between singular kinds and plural/mass (bare) kinds is that the former does not have a semantically transparent relation to their instantiations. This is why the singular definite generic is not allowed in episodic sentences unless the statement is attributed to the whole group, the whole species denoted by the noun *rat* in (90b).

(89a) Dogs are barking.   √ Existential interpretation
(89b) The dog is barking   ∗ Existential interpretation

(90a) Rats reached Australia in 1770.
(90b) The rat reached Australia in 1770.

Dayal (2004) provides more evidence for the claim that the singular definite generic cannot simply be derived by quantifying over instances of the kind. Singular

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kinds have been assumed to be acceptable in generic (characterizing) contexts, but clear differences arise between bare plurals and singular kinds. Examples (92) and (93) are taken from Dayal.

(91a)   Tigers roar when they are tired.
(91b)   The tiger roars when it is tired.

(92a)   Yesterday, between 3 and 4 whenever thieves entered the house, the police caught them.
(92b)   # Yesterday, between 3 and 4 whenever the thief entered the house, the police caught him.

(93a)   University professors seem to be born on a weekdays.
(93b)   # The university professor seems to be born on a weekday.

Dayal thus concludes that singular kind terms are atomic entities, and their only instantiation set includes a representative or a prototypical object.

This is the line of argumentation that will be adopted in order to explain the Basque singular definite generic and the interpretations it can obtain. Let us take back the example in (83e), repeated here as (94).

(94)   Lehoia   desagertu egingo da.
       lion-D.sg disappear do.fut   aux
       'The lion will become extinct.'

In line with Dayal (2004), I assume that the singular definite generic -A is the normal *iota* operator but that instead of combining with a common noun that denotes properties of ordinary individuals; it combines with a noun that denotes properties of sub-kinds (see the taxonomic hierarchy presented in (88)). Of course, the uniqueness requirement of the *iota* operator will be satisfied by the selection of the correct set of taxonomic entities, in the case at hand, the set of mammals.[51]

This taxonomic interpretation can also be obtained by plurals as well as by mass terms. Note that in opposition to what happens in English, where the taxonomic interpretation of masses is expressed by means of the bare mass noun, Basque mass terms (as well as the rest of Basque nouns that appear in argument position --see previous sections--) in their taxonomic reading (and everywhere) must necessarily appear with the definite article. With plurals too, the presence of the definite article is obligatory.

(95a) Ardoak   barietate asko ditu, ardo txuria,   ardo gorria,   ardo beltza…
         wine-D.sg variety many has wine white-D.sg wine red-D.sg wine black-D.sg
         'Wine has many varieties, white wine, rose wine, red wine.'

(95b) Lehoiek   arraza desberdin asko dituzte, lehoi Afrikarra,   lehoi Asiarra…
         Lion-D.pl breed different   many have   lion African-D.sg lion Asian-D.sg
         'Lions have many different breeds, the African lion, the Asian lion…'

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[51] The sentence in (94) can also make reference to a specific singular lion. Of course, for this interpretation, the verb *desagertu* is not interpreted as 'become extinct' but rather as the episodic predicate 'disappear' (from our sight, from the jail it is in, etc.), possible in a situation where a magician is performing and her most important challenge is to make a lion disappear. This specific interpretation does not concern us here.

There is a clear difference between the taxonomic interpretation of the singular definite generic and that of mass and plurals terms. While the former (as we said before, see example (94)) refers to the kind as a whole (lion kind), the latter refer to sub-kinds of the kind expression (African lion, Asian lion… / white wine, red wine…). Now, beside the differences we just note when in taxonomic contexts, mass terms and plural terms' behaviour shows some properties that singular kinds do not.

In episodic sentences, both mass terms in (96a) and plural terms (96b) allow making reference to instantiations of a kind[52], in other words, they can be interpreted existentially (see section 4.6.5.1). Singular kinds (singulars in general) on the other hand cannot pick out members of the instantiation set, and can only be interpreted as taxonomic kinds (or as a normal definite making reference to a single specific *monkey* that Alaitz has seen in Africa), in (96c).

(96a) Mass terms: Jonek **sagardoa** edan du.
                   Jon.erg cider-D.sg drink has
                   'Jon has drunk (the) cider.'
(96b) Plural terms: Julenek **liburuak** irakurri ditu.
                   Julen.erg book-D.pl read   has
                   'Julen has read (the) books.'
(96c) Singular kind: Alaitzek **tximinoa**   ikusi du (Afrikan).[53]

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[52] Recall from section 4.6.5.1 that mass terms and plurals can not obtain existential interpretations when in subject position; there, they are only able to get either the specific interpretation or the generic (kind) interpretation depending on the predicate they appear with. Of course, being grammatically atomic, the singular definite generic can only be interpreted specifically or taxonomically.

[53] It seems to me that we could get the same taxonomic (kind) interpretation with a mass term if someone who has never tried Basque cider comes to the Basque Country and tries it for the first time.

(i)   Mirenek   sagardoa   dastatu du Euskal Herrian.
         Miren-erg cider-D.sg taste   has Basque Country-in
         'Miren has tasted cider in the Basque Country.'

Alaitz.erg monkey-D.sg see   has (Africa-in)

'Alaitz has seen the monkey (in Africa).'

The difference between singular kinds and plural/mass (bare) kinds is that the former does not have a semantically transparent relation to their instantiations and necessarily forces taxonomic interpretations; the latter on the other hand, have a transparent relation to their instantiations and as a consequence, can obtain existential interpretation. Note that in the examples in (96), plurals and mass terms can not be interpreted taxonomically.

In Basque, just as in English, singular kinds do not show the same behaviour as mass and plural terms in generic statements. While at a first glance it seems singular kinds are accepted in such contexts, clear differences arise between singulars and plurals. The examples have been translated from (91-93).

(97a)   Tigreek   orro egiten dute nekatuta daudenean.
        tiger-D.pl(erg) roar do   aux tired   are-comp
        'Tigers roar when they are tired.'

(97b)   Tigreak   orro egiten du   nekatuta dagoenean.
        tiger-D.sg(erg) roar do   aux tired   are-comp
        'The tiger roars when it is tired.'

Although maybe not the most typical interpretation, *sagardoa* in (i) could refer to the *cider* as a kind and the correct taxonomic set would be *beverages*: {wine, water, beer…}. In this case, -A would still be number neutral, the difference would come from the common noun, that in this case would denote in the taxonomic domain. Note that apart from the taxonomic reading, the sentence in (i) can also be interpreted existentially, an interpretation that singular count nouns are not able to get.

(98a) Atzo,   3-etatik 4-ak   bitartean lapurrak   etxera   sartzen ziren guztietan,

yesterday, 3-from 4-D.pl between thief-D.pl house-to enter   aux.pl all-in

poliziak harrapatzen zituen.

police   catch   aux.pl

'Yesterday, between 3 and 4 whenever thieves entered the house, the police

caught them.'

(98b) # Atzo,   3-etatik 4-ak   bitartean lapurra   etxera   sartzen zen   guztietan,

   yesterday, 3-from 4-D.pl between thief-D.sg house-to enter   aux.sg all-in

poliziak harrapatzen zuen.

police   catch   aux.sg

'Yesterday, between 3 and 4 whenever thieves entered the house, the police

caught them.'

(99a) EHU[54]-ko irakasleak   astegunetan jaio zirela ematen du.

EHU-from teacher-D.pl weekdays-in born were seem   aux

'EHU professors seem to be born on weekdays.'

(99b) # EHU-ko   irakaslea   astegunean jaio zela ematen du.

   EHU-from teacher-D.sg weekday-in born was seem   aux

'The EHU professor seems to be born on a weekday.'

Basque sentence (99a) could be uttered in a situation where all the EHU professors were

born in weekdays; the singular kind in (99b) can not express the same meaning.

With all this data, the Basque plural -AK[55] and the number neutral -A that

appears with mass terms (which are ambiguous between the '∩' and the 'ι' operator --see

section 4.6.5.1--) are shown to pattern with English bare nouns. The singular definite

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[54] EHU stands for Euskal Herriko Unibertsitatea 'University of the Basque Country.'

[55] Note that this dissertation has shown that the parts the plural definite Basque determiner -AK is composed of (definite article -A + the plural marker -K) have different base positions: -A is base generated in D while the plural marker -K is based in NumP. See Chapter 3 section 3.4; see also section 4.6.4.1 in this chapter.

generic -A on the other hand behaves just like the singular definite generic of English and creates taxonomic interpretations. These properties offer a perfect environment to distinguish the denotation of the uppercase "KIND" (that in Dayal's terms indicate the taxonomic domain) and the lowercase "kind" (that indicates kinds reading associated with bare nouns in English and the definite generic plural and mass in Basque). Once these entities are shown to be different, no blocking effect is expected between the kind interpretations since the question of why a language accepts two different ways of expressing kinds is easily answered: they express different kind interpretations.

The most significant property that distinguishes these two types of kind interpretations is related to Number, a singular kind is really a singular and behaves as such as we have seen in the sentences like (97-99) above. Recall that mass terms have been shown to be number neutral (see section 4.6.4.1 as well as chapter 4) while plurals are just that, plurals.[56]

The sets of facts that have been introduced in this section predict that since singular kinds (being atomic) do not have a semantically transparent relation to their instantiations are unable to obtain existential interpretation in episodic object-level sentences. However, in section 4.6.4.1 it was claimed that there are some contexts

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[56] Dayal (2004) proposes a *scale of determinacy*:

(i)   Type I: identity determinate.
           Type II: identity indeterminate, size determinate
           Type III: identity and size indeterminate

A nominal that refers to a contextually salient and identifiable entity belong in Type I, normal definites would go in here. English bare nouns as well as Basque plural -AK and mass -A, being indeterminate in size, would belong in Type III. Finally, singular kind terms, having an atomic character will belong in Type II. This scale is claimed to be universal; languages differ in the respective point of the scale that they choose "as the cut-off for lexicalization". English use the lexical determiner for type I and II, Romance languages do so for the three types, Basque must be grouped with Romance languages since it lexicalises for Type I, II and III.

where Basque singular count terms seem to be behaving as real indefinites in that they can get an existential interpretation.

(100)   Julenek   kotxea   erosi du.   (=(54))
         Julen.erg car-D.sg buy   has

   ⇒ Existential: 'Julen has bought (a) car'
         ⇒ Specific: 'Julen has bought the car'

The most significant characteristic of the interpretation of sentences like (100) is that the subject (Julen in this case) can only be interpreted as having bought a single car. Now, recall from section 4.6.4.1 that singular count nouns in object position (*kotxea* in (100)) can only get an existential interpretation in so-called stereotypical contexts. These contexts are usually related to verbs of possession: buying a car, buying a house, having a husband, having a wife, having a baby, wearing a hat, etc.

Following the line of argumentation proposed in this section, it seems plausible to claim that *kotxea* (100) is just the *iota* operator combined with a common noun that denotes properties of sub-kinds (sets of kinds).[57]

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[57] Another possible explanation of these facts could go as follows: In Basque, even singular count terms are able to force existential interpretation in some very specific (stereotypical) contexts. Thus, what we would have to assume (following the explanation proposed for plurals and mass terms) is that the existential reading is derived through the kind reading. According to this analysis, the fact that the existential interpretation of the singular object in *Julenek kotxea erosi du* can only refer to a single car will be due to the fact that the determiner that combines with the noun is a singular determiner. However, this analysis makes plurals, masses and singulars completely equal in their readings, when they clearly are not; that's why I take the taxonomic analysis to be the correct one.

(101)   LOCOMOTION

…TRUCK…   CAR   …AIRPLANE…

       …GERMAN CAR…   …FRENCH CAR…   …SPANISH CAR…
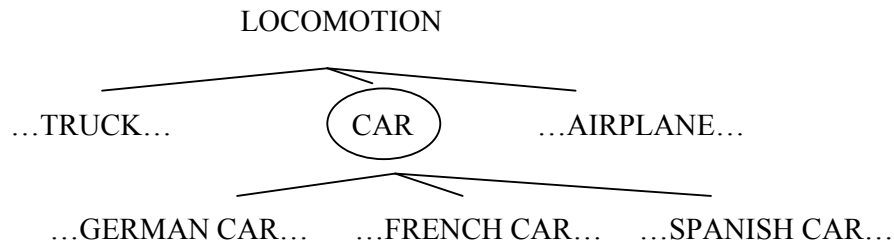
The only extra assumption that we would have to make is that it is the stereotypical context what forces the DP to only make reference to a single car (in (100)). Note also that we have claimed that the singular definite generic is in fact singular and atomic.

One argument in favour of this proposal is that in a society where having a spacecraft as the typical means for transportation, that is, a society where buying a spacecraft can be taken as stereotypical, it would be possible to utter the following sentence with the DP making reference to a single spacecraft.

(102) # Jonek   espazio-ontzia   erosi du.
         Jon.erg space-craft-D.sg buy   has
        'Jonek has bought (a) spacecraft.'

The same could be said about a society where having a lion as a pet would be stereotypical.

(103) # Tysonek   lehoia   erosi du.
         Tyson.erg lion-D.sg buy has
        'Tyson has bough (a) lion.'

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In our current society, the sentences in (102) and (103) can not be taken to be stereotypical; this is why they are hash-marked. The correct way to express these sentences would be by means of the indefinite.

(102') Jonek   espazio-ontzi bat erosi du.
      Jon.erg space-craft   a   buy has
      'Jonek has bought a spacecraft.'

(103) Tysonek   lehoi bat erosi du.
      Tyson.erg lion   a   buy has
      'Tyson has bough a lion.'

4.7. Conclusions to Chapter 4:

(i) In line with the so-called Neocarlsonian approach (see Chierchia (1998c), Dayal (2004), Zamparelli (2002a, 2002b) and references therein), which has been shown to be preferable to the Ambiguity approach (Wilkinson (1991), Diesing (1992), Gerstner & Krifka (1993) and Kratzer (1995)), this chapter has claimed that Basque -A is a definite article and as such is always base-generated in [Head, DP] (as standardly assumed for the definite determiner crosslinguistically). I claim that -A is a definite determiner everywhere (contra Artiagoitia (2002)), but very flexible in its ability to type-shift, the latter properly accounts its range of different interpretations.

(ii) Although mass terms share the property of triggering singular verb agreement with singular count terms this chapter postulates that they are number neutral (see Delfitto & Schroten (1991), Doetjes (1997), Dayal (2004), Krifka (2004), among many others). Semantically, mass terms share more properties with plurals than with real singulars; so despite agreement facts with verbs, masses are closer in behaviour to plurals than to singulars. Thus, count terms will be referred as (morphologically) singular or plural and their syntactic structure will contain the NumP functional projection while mass terms will be claimed not to bear number morphology at all and as a consequence no NumP functional projection will be needed. The analysis proposed in this thesis goes against Artiagoitia (2002)'s proposal who claims that in the existential interpretation the definite determiner is not a real determiner but a number marker that is placed in [Head, NumP], -A when singular, -AK when plural. The problem with Artiagoitia's analysis is that it forces us to treat mass terms as singulars, an undesirable conclusion (see § 4.6.4.1).

(iii) The different interpretations that definites can get in Basque follow from the Neocarlsonian approach. The existential interpretation of definites (in object position) depends on the kind-level reading (see Chierchia (1998c)). Here, it is claimed that is typologically in between English and French: the former makes use of bare plurals to get existential interpretation while the latter needs the definite plus the partitive preposition *de* (*du* for mass terms, *des* for plural count term) to express the same meaning; in Basque, the article is there while the preposition is not. Following Zamparelli (2001b), where it is argued that the definite determiner that combines with the partitive preposition in French and in Italian is a kind-denoting definite; existentially

interpreted Basque definite determiner is also claimed to be a kind denoting definite. Then, a covert version of the partitive preposition (similar to French *de*) gives us the predicative $\langle e, t \rangle$ type back. The role of this covert partitive preposition will be halfway the Derived Kind Predication (DKP), that is to say, it gives as an $\langle e, t \rangle$ type element but no existential closure. This local existential closure will be provided by the DKP which introduces an existential quantification over instances of the kind in episodic sentences. The difference between strongly interpreted weak quantifiers that cannot make use of the covert partitive preposition (see Chapter 2) and the existential interpretation of definites that are formed by means of the covert version of the partitive is that the former means "being part of N" while the meaning of the latter is "being an instantiation of the kind".

(iv) Common nouns have been assumed (Dayal (2004), Zamparelli (2002a)) to denote both in the object domain (yielding the normal specific reading) as well as in the taxonomic domain (yielding taxonomic readings). With this assumption, I have claimed that the singular definite generic (see § 6.5.2) is derived from the combination of the taxonomic common noun and the normal definite determiner, the normal *iota* operator.

CHAPTER 5

CONCLUDING REMARKS

5.1. Summary of the Dissertation:

Chapter 1:

This chapter first makes a short presentation of Generalized Quantifier Theory and then introduces some logical as well as some linguistic properties that help us differentiate strong from weak quantifiers in natural languages.

Once we consider all these properties, the division we get between Basque strong and weak quantifiers is the following (cf. Etxeberria (2002b)):

(1a)   **Strong Quantifiers**: *guzti* (all), *den* (all), *gehien* (most), *bakoitz* (each).

(1b)   **Weak Quantifiers**: *batzu(e)k* (some), *zenbait* (some), *hainbat* (some), *asko* (many), *gutxi* (few), *ugari* (many), numerals, *numeral baino gehiago* (more than numeral), *numeral baino gutxiago* (less than numeral), etc.

(i) Natural language quantification is contextually restricted by overt or covert domain variables (von Fintel (1994, 1998), S&S (2000a), Stanley (2002), Martí (2003)); crosslinguistically we must allow for both nominal restriction (St'át'imcets language) as well as for Q-det restriction, and languages differ with respect to whether they overtly or covertly restrict their quantificational domain (Giannakidou (2004)).

(ii) Basque generalized quantifiers provide clear evidence for the need of both nominal (Stanley (2002), S&S (2000a)) as well as Q-det domain restriction (Westerståhl (1985), von Fintel (1994), Martí (2003)) depending on whether the quantifiers are lexically strong or strongly interpreted weak quantifiers. Lexically strong quantifiers (*guzti* (all), *den* (all), *bakoitz* (each)) show clear evidence for Q-dets composing with D. Strongly interpreted weak quantifiers on the other hand, either incorporate partitive forms, or introduce a restriction by pragmatic means à la Büring (1996).

(iii) Assuming that Q-detP internal definite D is a nominal domain restrictor (Giannakidou (2004)), there is no need to reanalyze the standard generalized quantifier theory, since it gets things right crosslinguistically. Basque data provides further support in favour of this conclusion.

(iv) It has been shown that *most NPs* (maybe not *most of the NP* --see fn. 64--) and its crosslinguistic counterparts in languages like Spanish, Greek, Catalan and Dutch

do not behave as a Q-det, but rather have the status of a referential expression and behave as a superlative. A closer look at Basque *gehien* has shown that this conclusion is on the right track.

(v) *Guzti, den* and *oro* (not *bakoitz* that always behaves as a quantifier) have been treated as ambiguous between a real quantificational interpretation and a reading where they function as a DP exhaustive modifier (à la Brisson (1998, 2003)). *Oro*, in its quantificational interpretation seems to be behaving just like English *every* and Spanish *todo* in that it can not form a partitive construction and does not accept a definite determiner. This would show that Basque also possesses strong quantifiers that restrict their quantificational domain covertly, and as expected, the restriction will have to be done on the nominal (recall that the partitive *ikasleetatik oro* is completely out).

Chapter 3:

(i) Weak quantifiers are not ambiguous between a cardinal and a proportional interpretation. When no overt partitive is used to create proportional strong quantifiers weak quantifiers are not quantificational, but rather, they behave as cardinality predicates of type $\langle e, t \rangle$ that are base-generated in NumP (specifier or head, normally not both).

(ii) The propositional partitive interpretation of weak-cardinal quantifiers when there is no overt partitive 'of the', is not due to the presence of a covert partitive

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construction as claimed by Partee (1988) and others; rather, this interpretation is explained in pragmatics terms (by means of the TFBS when in out of the blue sentences (Büring (1996)). With overt partitives, the weak quantifier will not be cardinal anymore and is claimed to be base-generated in Q-detP, together with the rest of strong quantifiers and will be of quantificational type.

(iii) In opposition to what has been claimed in the literature about the Basque definite determiner (-A/-AK), where it is assumed that both the -A and the plural marker -K are base generated together in the same syntactic position, in the DP head (or in "some kind of Number Phrase" --see Artiagoitia (2003)--); this chapter has suggested that the definite determiner -A and plural marker -K are base generated in different syntactic positions: The base position of the plural marker -K is NumP, while the base generating position of the Basque definite determiner -A (as standardly assumed for definite determiners crosslinguistically) is head of DP.

(iv) Weak-cardinal quantifiers cannot appear with the definite determiner (except numerals) due to the fact that they are unspecified for number. This unspecificity makes them unable to obtain a definite and referential interpretation. The only construction that allows the definite article to appear with these unspecified weak quantifiers is the partitive construction where the definite plays the role of the contextual domain restrictor. Numerals on the other hand, can appear with the definite determiner [Numeral+Noun+AK] and as a consequence are able to get definite as well as referential interpretations; of course, they can also form partitive constructions where as predicted they are interpreted as quantifiers.

(v) When the common noun that combines with weak-cardinal quantifiers is made silent, *batzu(e)k* and *zenbait* and their counterparts in English (*some*) and Spanish (*algunos*) can only obtain proportional, partitive-like interpretations. I claim that this interpretation (extending Büring's analysis to these cases) is the result of the Topic/Focus/Background Structure.

Chapter 4:

(i) In line with the so-called Neocarlsonian approach (see Chierchia (1998c), Dayal (2004), Zamparelli (2002a, 2002b) and references therein), which has been shown to be preferable to the Ambiguity approach (Wilkinson (1991), Diesing (1992), Gerstner & Krifka (1993) and Kratzer (1995)), this chapter has claimed that Basque -A is a definite article and as such is always base-generated in [Head, DP] (as standardly assumed for the definite determiner crosslinguistically). I claim that -A is a definite determiner everywhere (contra Artiagoitia (2002)), but very flexible in its ability to type-shift, the latter properly accounts its range of different interpretations.

(ii) Although mass terms share the property of triggering singular verb agreement with singular count terms this chapter postulates that they are number neutral (see Delfitto & Schroten (1991), Doetjes (1997), Dayal (2004), Krifka (2004), among many others). Semantically, mass terms share more properties with plurals than with real singulars; so despite agreement facts with verbs, masses are closer in behaviour to

plurals than to singulars. Thus, count terms will be referred as (morphologically) singular or plural and their syntactic structure will contain the NumP functional projection while mass terms will be claimed not to bear number morphology at all and as a consequence no NumP functional projection will be needed. The analysis proposed in this thesis goes against Artiagoitia (2002)'s proposal who claims that in the existential interpretation the definite determiner is not a real determiner but a number marker that is placed in [Head, NumP], -A when singular, -AK when plural. The problem with Artiagoitia's analysis is that it forces us to treat mass terms as singulars, an undesirable conclusion (see § 6.4.1).

(iii) The different interpretations that definites can get in Basque follow from the Neocarlsonian approach. The existential interpretation of definites (in object position) depends on the kind-level reading (see Chierchia (1998c)). Here, it is claimed that is in between English and French: the former makes use of bare plurals to get existential interpretation while the latter needs the definite plus the partitive preposition *de* (*du* for mass terms, *des* for plural count term) to express the same meaning; in Basque, the article is there while the preposition is not. Following Zamparelli (2001b), where it is argued that the definite determiner that combines with the partitive preposition in French and in Italian is a kind-denoting definite; Basque definite determiner in existential interpretations is also claimed to be a kind denoting definite; then, a covert version of the partitive preposition (similar to French *de*) gives us the predicative $\langle e, t \rangle$ type back. The role of this covert partitive preposition will be halfway the Derived Kind Predication (DKP), that is to say, it gives as an $\langle e, t \rangle$ type element but no existential closure. This local existential closure will be provided by the DKP which introduces an

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(iv) Common nouns have been assumed (Dayal (2004), Zamparelli (2002a)) to denote both in the object domain (yielding the normal specific reading) as well as in the taxonomic domain (yielding taxonomic readings). With this assumption, I have claimed that the singular definite generic (see § 6.5.2) is derived from the combination of the taxonomic common noun and the normal definite determiner, the normal *iota* operator.

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