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# Wh-distributives in Basque<sup>1</sup>

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## 0. Introduction

In this work, I present evidence from Basque in favour of the existence of a Distributive head in the functional architecture of the clause, which is involved in fixing the scope of distributive quantification and in introducing distribution over plural DPs. In this, the paper follows the line of earlier work, initiated by Link (1987) and Choe (1987), and pursued later by Szabolcsi (1997), Lasnik (1995), Schwarzschild, (1994), Beghelli (1995), Beghelli and Stowell (1997) and Lin (1998) among many others, that argue in favour of such a head. The Basque distributive construction examined in detail here has nevertheless a number of properties that set it apart from the very general properties that have been attributed to Distributive heads in previous work: the construction is only possible with a *wh*-pronoun as the distributive key, and the range of the distribution are functions, not individuals or events. The very narrow properties of the Basque construction raise a question about where to locate its distinctive properties: is this something we must directly encode on the Distributive head as part of a lexical parameter? Is this related to its relative position in the clause structure? Some of the properties of the construction seem distinctly odd from a cartographic point of view. The ontology of the distribution (ranging over functions rather than individuals) for instance, cannot be determined by invoking ordinary selectional restrictions: the distributive key and the distributive share may belong to different clauses. The functional status of the shares is syntactically represented in the form of a definite DP that includes a bound pronoun, something like *his NP*. This is certainly not the only possible option one would think of, taking into account all the work that has been done on the functional reading of indefinites (Reinhart, 1997 and much subsequent work).

I will opt for an analysis that has some of the characteristic properties of floating quantification: the *wh*-pronoun in Basque sits in an independent Distributive projection, but is merged to another element, a contextual restriction *C* with maximality semantics (see Cheng, 2009; Etxeberria and Giannakidou, 2010, 2014), that can independently float into a focus projection, which in Basque obligatorily hosts the Share. In this position, the floating context restriction imposes certain requirements in the set of admissible DP shares: they must be definite or specific. Since definite or specific shares do not covary, the Share must include some co-varying element inside. This covarying element is a bound pronoun. The presence of a bound pronoun in the share is at the basis of its functional interpretation.

This analysis provides, I think, an elegant syntactic account of the most important properties of Basque *wh*-distributives, and perhaps more importantly, takes away much of the very specific properties of the construction as the result of the interaction

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with features that arise in other parts of the grammar. This makes the general contribution of Distributive heads more easily recognizable from a comparative point of view. By so doing, the paper also contributes to the more general debate about the appropriate granularity of universal statements regarding the substantive properties of cartographic maps.<sup>2</sup>

The paper is organized as follows: section 1 provides the very basic properties of the construction, both syntactic and semantic. Section 2 discusses the range of wh-pronouns that can participate in the construction and examines critically some of the recent approaches to the semantics of wh-pronouns in the light of the Basque data. Section 3 argues for a basic clausal syntactic structure that contains both a Distributive head and a focal position that in Basque hosts the Share of the distributive construction. Section 4 describes the very specific restrictions that hold on the possible shares in the Basque wh-distributive constructions. Section 5 discusses comparative evidence, based on a number of Scandinavian languages, that paves the way to a finer semantic characterization of the Share as obligatorily involving a choice function. Section 6 gives a syntactic rationale of why the share should have the form of a possessive DP in Basque. Section 7 concludes.

## 1. Basque wh-distributives: basic syntactic patterns

### 1.1. Lexical distributive quantifiers and wh-distributives

Among the grammatical means to represent distributive relations, Basque has constructions such as (1), built on wh-pronouns (from Etxepare, 2002):<sup>3</sup>

- (1) a. Nork bere ama maite du  
 who.ERG 3S.POSS mother.DET love AUX  
 “Everyone<sub>i</sub> loves his/her<sub>i</sub> mother”
- b. Athleticeko hamaika jokalariak zelaira atera ziren.  
 “The eleven players of Athletic de Bilbao came out to the playground”
- Zein bere tokian jarri zen.  
 which 3S.POSS place.DET.LOC positioned AUX  
 “Everyone<sub>i</sub> took his/her<sub>i</sub> place”

The constructions in (1) should be compared on the one hand to lexical distributive quantifiers, represented by the quantifier *bakoitz* “each” in Basque:

- (2) a. Bakoitzak bere ama maite du  
 each.ERG 3S.POSS mother.DET love AUX  
 “Each one<sub>i</sub> loves his/her<sub>i</sub> mother”

<sup>2</sup> See among others, Shlonsky and Bocci (2019), Ramchand and Svenonius (2014), Biberauer and Roberts (2015), Cinque and Rizzi (2016), Roberts (2019).

<sup>3</sup> I will be using the following grammatical glosses : ERG (Ergative), DAT (Dative), ABL (Ablative), ALL (Allative), AUX (Auxiliary), DET (Determiner), EVID (Evidential), AFF (Affirmative particle), GEN (Genitive), IMP (Imperfective), LOC (Locative), PART (Partitive), POSS (Possessive), PROSP (Prospective).

b. Jokalari bakoitza bere tokian jarri zen  
 player each.DET 3S.POSS place.DET.LOC positioned AUX  
 "Each player took his place"

And on the other hand, to interrogative clauses, as illustrated in (3b).

(3) a. Nork bere ama maite du  
 who.ERG 3S.POSS mother.DET love AUX  
 "Each one<sub>i</sub> loves his/her<sub>i</sub> mother"

b. Nork maite du bere ama?  
 who.ERG love AUX 3S.POSS mother.DET  
 "Who loves his/her mother?"

(3a) is the distributive quantificational construction. (3b), uttered with interrogative intonation and showing the *wh*-pronoun in the position immediately preceding the verbal phrase (the focal position), is a partial question.

We could synthesize the basic data in (1)-(3) by saying that in Basque, phrases phonologically identical to *wh*-items function as key terms in a distributive quantification when they are not uttered with interrogative intonation, and do not occur in the preverbal focal position (3a). The phenomenon occurs in both generic and episodic contexts (cf 1a,b). Let me add that in all cases, the *wh*-pronouns are obligatorily followed by a DP containing a pronoun, which functions as the share of the distributive structure. Without such a DP, the distributive construction is out:

(4) \*Nork liburu bat erosi du  
 who.ERG book one bought has  
 "(Intended meaning) Everyone bought a book"

As one would expect, this restriction does not extend to lexical distributive quantifiers of the *each* sort:

(5) Bakoitzak liburu bat erosi du  
 Each.DET.ERG book one bought has  
 "Each one bought a book"

Apart from this, the semantic properties that *wh*-distributives present seem to assimilate them to *each*-type quantification. Similarly to what has been observed for *each*-quantification (see Beghelli and Stowell, 1997), *wh*-pronouns in distributive constructions have an existential presupposition that is lacking in other *wh*-based constructions. Consider in this regard the contrast between the interpretation of the *wh*-pronoun as an interrogative pronoun and the *wh*-pronoun as part of the distributive construction. Whereas the existence of some visitor or other is entailed by the *wh*-word in (6b), it is just pragmatically implied in the question (6a):

(6) a. Nork bisitatu du bere herriko museoa, inork egin badu?  
 Who.ERG visited has 3S.POSS town.GEN museum.DET anyone.ERG done if.has  
 "Who visited his/her town's museum, if anyone did?"

- b. Nork bere herriko museoa bisitatu du, #inork egin badu  
 who.ERG 3S.POSS town.GEN museum.DET visited has anyone.ERG done if.has  
 “Everyone visited his/her town’s museum, #if anyone did”

The presupposition of existence is also apparent if we embed the wh-word in a conditional. Consider (7a-b), with a cardinal quantifier and a wh-based existential quantifier.

- (7) a. Ikasle askok beren lana bukatzen badute, lasai egon gaitzke  
 student many.ERG 3PL.POSS work finish.IMP if.AUX relaxed be we.can  
 “If many students finish their work, we can relax”
- b. Norbaitek bere lana bukatzen badu, lasai egon gaitzke  
 someone.ERG 3S.POSS work.det finish.IMP if.AUX relaxed be we.can  
 “If someone finishes his/her work, we can relax”

None of (7a-b) presuppose the existence of students or of individuals in the context, although they may conversationally imply it. (7a-b) can be followed by sentences that directly question the existence of any relevant individual:

- (8) a. Ikasle askok beren lana bukatzen badute, lasai egon gaitzke,  
 student many.ERG 3PL.POSS work.DET finish.IMP if.AUX relaxed be we.can  
 “If many students finish their work, we can relax”  
 baina ba ote da ikaslerik hemen?  
 but AFF EVID is student.PART here  
 “But is there any student here?”
- b. Norbaitek bere lana bukatzen badu, lasai egon gaitzke  
 someone.ERG 3S.POSS work.DET finish.IMP if.AUX relaxed be we.can  
 “If someone finishes his/her work, we can relax”
- baina ba ote da inor ere lanean?  
 But AFF EVID is anyone at.all working  
 “But is there anyone at work?”

Compared to (7a-b), wh-based distributive constructions presuppose the existence of a plural set of individuals in the domain of discourse, and in this, they behave as *each*-quantification (9a-b) (see Etxeberria, 2012).

- (9) a. Nork bere lana bukatzen badu, lasai egon gaitzke  
 who.ERG 3S.POSS work.DET finish if.has relaxed be we.can  
 “If each person finishes his/her work, we can relax”
- #Baina ba ote da inor ere lanean?  
 But AFF EVID is anyone at.all working  
 “But is there anyone working?”
- b. Ikasle bakoitzak bere lana egiten badu, lasai egon gaitzke  
 student each.DET.ERG 3S.POSS work.DET do.IMP if.AUX relaxed be we.can  
 “If each student finishes his/her work, we can relax”

#Baina ba ote da ikaslerik batere?  
 But AFF EVID is student.PART at.all  
 “But is there any student at all?”

Wh-distributives in Basque also induce a maximality interpretation in the set denoted by the wh-word. Consider in this regard the contrast between (10a-b):

- (10) a. Ikasleek beren lana egin dute, baina ez denek  
 students.ERG 3PL.POSS work.DET done have but not all.ERG  
 “The students did their homework, but not all of them”
- b. Nork bere lana egin du, #baina ez denek  
 who.ERG 3S.POSS work.DET done has, but not all.ERG  
 “Each person did his/her homework, #but not all”

A definite DP such as “the students” in (11a) allows exceptions, in the sense that in a large group of students, (11a) can describe situations where one or two students did not do their homework. (11b), a wh-based distributive, does not allow such a reading. It thus incorporates a maximal interpretation for the domain set denoted by the wh-word. A similar effect arises with lexical *each* in Basque:

- (11) Ikasle bakoitzak bere lana egin du, #baina ez denek  
 each student.DET.ERG 3.SING.POSS work.DET done has, but not all.ERG  
 “Each student did his/her homework, #but not all of them”

The distributive construction exemplified by (1a,b) raises at least two basic questions: one is exactly how the wh-pronouns involved in this distributive structure get their quantificational import. As the wh-items themselves do not necessarily carry a universal distributive force in Basque, it must be the case that the quantificational import of those structures is at least in part contributed by the syntactic context in which they are found. The other question raised by the construction is why such a distributive relation should require a possessive phrase as the share. This does not naturally follow from its distributive status.

### 1.2. Three basic configurations

The Basque distributive constructions present three possible configurations, illustrated by (12a-c):

- (12) a. Nork bere lana egin du  
 who.ERG 3S.POSS work.DET done he/she.has  
 “Each person did his/her<sub>i</sub> job”
- b. (Guk) nork bere lana egin dugu  
 we.ERG who.ERG 3S.POSS work.DET done we.have  
 “We each<sub>i</sub> did his/her<sub>i</sub> job”
- c. (Guk) nork gure lana egin dugu  
 we.ERG who.ERG our work.DET done AUX.1PLE.3SGA

“We each did our job”

The basic differences concern on the one hand, the sharing of person and number feature attributes between the possessive pronoun and the wh-pronoun, and the presence/absence of an (non-wh) overt subject agreeing with the auxiliary. The latter, if present (12b,c), is always plural. (12a,b) show agreement in person and number between the wh-pronoun and the possessive pronoun. (12c) does not show agreement between the wh-pronoun and the possessive pronoun, but between the plural DP subject and the possessive pronoun. Agreement relations are represented by co-indexing. In (12b,c), the wh-pronoun is not an argument, but rather looks like a floating wh-element, agreeing in case with an antecedent DP in argument position. As we will see, distributive interpretations set a clear distinction between (12a,b), on the one hand, and (12c) on the other. Following a terminology proposed by Beghelli (1995), (12a,b) present Strong Distributive readings. (12c) on the other hand, represents an instance of Weak Distributivity. As I will show next, only (12c) is compatible with cumulative readings.

Cumulative interpretations are possible with (12c), but impossible with (12a,b). Consider as a starting point sentences like (13a-c).

- (13) a. Atzo, nork bere etxean egin du lo  
yesterday who.ERG 3S.POSS houses.DET.LOC done AUX sleep  
“Each person<sub>i</sub> slept in his/her<sub>i</sub> house”
- b. Atzo, nork bere etxean egin dugu lo  
yesterday who.ERG 3P.POSS houses.DET.LOC done AUX sleep  
“We slept each<sub>i</sub> in his/her<sub>i</sub> house”
- c. Atzo, nork gure etxean egin dugu lo  
yesterday who.ERG 1PL.GEN houses.DET.LOC done we.have sleep  
“We each slept in our house”

If we pluralize the share the result is pragmatically odd in (13a,b), with agreement between the wh-pronoun and the possessive pronoun, but perfectly natural in (13c), where no such agreement exists:

- (14) a. #Atzo, nork bere etxeetan egin du lo  
yesterday who.ERG 3P.POSS houses.DET.LOC done has sleep  
“#Yesterday, each person slept in his houses”
- b. #Atzo, nork bere etxeetan egin dugu lo  
yesterday, who.ERG 3S.POSS houses.DET.LOC done we.have sleep  
“#Yesterday, we each<sub>i</sub> slept in his/her<sub>i</sub> houses”
- c. Atzo, nork gure etxeetan egin dugu lo  
yesterday, who.ERG 1PL.POSS houses.DET.LOC done we.have sleep  
“Yesterday, we each slept in our houses”

The oddness of (14a,b) follows from the strong distributive reading of the examples: they require that each of the elements of the set denoted by *nork* to have slept in more

than one house yesterday. In other words, (14a,b) require that the share co-varies and multiplies in tandem with each of the members denoted by the plural set. From this point of view, the distributive relation is identical to the one contributed by *bakoitz* “each”:

- (15) #Atzo, bakoitzak bere etxeetan egin du lo  
 yesterday, each.ERG 3P.POSS houses.DET.LOC done AUX sleep  
 “Each one<sub>i</sub> slept in his/her<sub>i</sub> houses”

(14c) does not impose such a reading, and allows a pragmatically plausible interpretation in which houses do not multiply for each of the persons involved.

### 1.3. Summary

Strong distributive readings require that the wh-pronoun agrees in person and number (3<sup>rd</sup> person singular) with the possessive pronoun. This singular agreement restriction reminds very much of variable binding. Let us summarize the three basic configurations as in (16).

(16) **Strong Distributivity**

- a. [<sub>AgrS</sub> *wh* AgrS/T<sup>0</sup> ... [<sub>PossP</sub> *his/her book*]... [VP ...]]]  
 \\_\_\_\_\_ / (Agree)

**Strong Distributivity**

- b. [<sub>AgrS</sub> *We* AgrS/T<sup>0</sup> [<sub>WhP</sub> *wh* ... [<sub>PossP</sub> *his/her book*]... [VP ...]]]  
 \\_\_\_\_\_ / (Agree)

**Weak Distributivity**

- c. [<sub>AgrS</sub> *We* AgrS/T<sup>0</sup> [<sub>WhP</sub> *wh* ... [<sub>PossP</sub> *our book*]... [VP ...]]]  
 \\_\_\_\_\_ / (Agree)

## 2. The wh-paradigm and the distributive construction

### 2.1. Asymmetries between ‘what’ and ‘who/which’

The distributive construction in Basque is not possible with all indeterminate pronouns. It is possible only with *nor* “who” (1a) and *zein* “which” (1b); it is not possible with *zer* “what”, in either episodic or generic contexts (from Etxepare 2002):<sup>4</sup>

<sup>4</sup> A corpus search in the Basque Reference Corpus (*Euskararen Ereduzko Prosa*, 25 million words) yields no single example of wh-distributive construction with *zer* « what ». Neither does the Basque Historical Corpus (11.9 million words, spanning from the XVIth to the middle of the XXth century). Both corpora show a large number of wh-distributive constructions with *nor* « who » and *zein* « which ». The corpora are available on line at the *Euskara Institutua* (Basque Institute) of the University of the Basque Country (UPV-EHU), <https://www.ehu.eus/en/web/eins/home>. The corpus also yields one example with the wh-pronoun *non* « where », which sounds natural to me :

- (i) Hona iritsi eta hemen gelditu zitzaigunari Olentzero deitu genioan,  
 here arrived and here remained aux.rel.det.dat Olentzero called we.did



- (17) a. \*Gelan sartu, dena hankaz gora zegoela ikusi,  
 “He came into the room, saw that everything was a mess”

eta *zer* bere tokira eramaten hasi zen  
 and what 3S.POSS place.ALL put.IMP started AUX  
 “and started to put each thing in its proper place”

- b. \*Mundu honetan *zerk* bere saria du  
 world this.LOC what.ERG 3S.POSS reward.DET has  
 “In this world, each thing has its corresponding reward”

In this, wh-based distributivity and lexical quantification of the *each* sort behave differently. Basque literary registers attest to the existence of universal quantifiers made out of *zer* “what” by the direct addition of the lexical quantifier *bakoitz* “each” (data from *Euskararen Erreduzko Prosa/Reference Corpus of the Basque Language*):

- (18) a. Dena ondo, *zer bakoitza* bere tokian  
 All fine, what each.DET 3S.POSS place.LOC  
 “All is fine, each thing in its place”  
 (*Gerrako ezbeharrak*, from Arrinda, 1998)

- b. Ankisek ... *zer bakoitza* banaka azaltzen dio  
 Anchises.ERG what each.DET one.by.one explain.IMP AUX  
 “Anchises explains to him each thing, one by one”  
 (Ibiñagabeitia, 1962, translation of the Iliad)

One difference between bare wh-distributives and lexical quantification of the *each* sort is that the latter requires the presence of number<sup>5</sup> and it brings with it a domain restrictor in the form of the definite article *-a* (Etxeberria, 2005; Etxeberria and Giannakidou, 2010): *bakoitz* “each” requires a D, and is singular in Basque, whereas it is not obvious that *zer* introduces either D or grammatical number. This difference allows us to connect the asymmetry apparent in distributive constructions between *who/which* and *what* with another one arising in the interrogative domain: only *who/which* seem to involve a number specification in Basque. Thus, *nor* “who” and *zein* “which” in Basque can trigger plural agreement in questions, unlike *zer* “what”:

---

edo Suilaro, edo Putierre, **non bere maneran**  
 or Suilaro, or Putierre, where its way.in

“To what arrived and remained here we called Olentzero, or Suilaro, or Putierre, in each place according to its own way”

Anjel Lertxundi (2004) *Konpainia Noblean*. Alberdania. (p.292)

<sup>5</sup> Strong quantifiers in Basque show overt number marking in D (Etxeberria, 2005). This marking is plural for quantifiers *gehien* « most », *guzti* « all », singular or plural for pronominal *dena* « all », and singular for *bakoitz* « each ». The plural affix is a bound morpheme, it follows the article, and has a distinct exponence as *-k*.

- |   |  |   |   |
|---|--|---|---|
| (i) a. Ikasle guzti-a-k<br>student all-det-pl<br>« All students » | b. Ikasle gehien-a-k<br>student most-det-pl<br>« Most students » | c. Den-a-(k)<br>all-det-pl<br>« All (of them) » | d. Ikasle bakoitz-a<br>student each-det<br>« Each student » |
|---|--|---|---|

- (19) a. Nor/zein etorri da/dira?  
 Who/which come AUX/AUX.PL  
 “Who/which has/have come?”
- b. Zer erori da/\*dira mahaitik behera?  
 What fall AUX/AUX.PL table.ABL down  
 “What has/\*have fallen from the table?”

*What*-phrases can trigger plural agreement in Basque only when they have an overt nominal count restriction:<sup>6</sup>

- (20) Ze(r) liburu leituko dituzu udaran?  
 What book read.PROSP AUX(PL) summer.LOC  
 “What books are you going to read in summer?”

We may assume that a distributive relation requires a set consisting of individualized atoms, therefore demands a grammatically count expression (see Gil, 1995). This suggests that the denotation of *zer* is such that it does not include atomic subparts (it is not consistent, in the sense of Landman, 1991). This is the conclusion independently reached by Heim (1987) for English *what* too, which she suggests to interpret as “something of kind x” (Heim, 1987: 29). If this approach to *who/what* asymmetries is correct, the Basque equivalent of *what* is semantically excluded from the construction.

## 2.2. The interpretation of *wh*-pronouns: Hamblin-set analyses

How should we characterize the denotation of the *wh*-pronouns involved in the distributive relation? As shown in the following table, *wh*-pronouns in Basque do not inherently carry universal/distributive force. The Basque *wh*-pronouns combine with other logical operators to form complex quantificational expressions:<sup>7</sup>

(21)

	Interrogative	Existential Wh+Comp	Free-choice Disjunct+Wh	Free-choice Wh+Want	Polarity Particle+Wh
+animate	<b>nor</b> “who”	<b>nor</b> +bait	edo+ <b>nor</b>	<b>nor</b> +nahi	<b>i-nor</b>
-animate	<b>zer</b> “what”	<b>zer</b> +bait	edo+ <b>zer</b>	<b>zer</b> +nahi	<b>e-zer</b>

<sup>6</sup> It may be relevant to note here that *zer* as a *wh*-determiner in questions is not compatible with just any count noun. A corpus search of the sequence *zer* « what » + animate *gizon* « man » in the *Euskarazko Erreduzko Prosa*, Basque Reference Corpus) yields only sequences in which the noun is interpreted as a type-denoting entity, in many cases followed by the noun *klase* « class, type » or *mota* « type », as in (i):

(i) Zer gizon klasek egiten du hori ?  
 what man type.ERG do.IMP AUX that  
 « What type of man does that ? »

(Paul Auster, *Brooklyn follies*, Oskar Arana’s translation, 2006)

*Zer* « what » thus coerces the interpretation of animate nouns into type-denoting entities. In order to avoid coercion, many Basque varieties use the reduced *wh*-form *ze*. The reduced form *ze* is not admissible as a distributive key either. See Idiatov, 2007 for comparative typological data on the functional distribution of the *who/what* distinction.

<sup>7</sup> For a general discussion of the complex forms in Table 1, see Etxepare (in press).

locative	<b>non</b> “where”	<b>non</b> +bait	edo+ <b>non</b>	<b>non</b> +nahi	<b>i-non</b>
temporal	<b>noiz</b> “when”	<b>noiz</b> +bait	edo+ <b>noiz</b>	<b>noiz</b> +nahi	<b>i-noiz</b>

Table 1

The paradigm in (21) invites the conclusion that Basque wh-pronouns provide the nominal base (the domain of quantification) for complex quantificational structures. That the bare wh-pronoun does not in and of itself express universal quantification is shown by the fact that bare wh-pronouns can contribute to existential quantification too, as in (22):<sup>8</sup>

- (22) Nor edo nor bada hor  
 who or who AFF.is there  
 “There is someone or other there”

Basque is thus typologically similar in this regard to other languages in which existential quantifiers, polarity and free-choice items, and interrogative pronouns share a common core (see Haspelmath, 1997; Bhatt, 2004, for a survey). Let us call this common core the “indeterminate pronoun” (Kuroda, 1965). One possibility, if we follow much recent work on the semantics of indeterminate pronouns, is that the pronoun denotes a Hamblin set. Under this view (developed by Hagstrom 1998; Shimoyama, 2001; Kratzer and Shimoyama, 2002; Yanovich, 2005; Kratzer, 2005; Cable, 2010) among others, indeterminate pronouns denote a set of individual alternatives:

- (23) [nor]<sup>w.g</sup> = {x: human (x) (w)}

Intuitively, this set of alternatives requires that the domain of quantification contain more than one element. Basque wh-distributives seem to fit this description. The wh-pronouns are anaphoric to a previously mentioned set. When they have an overt antecedent, this antecedent can only be a plural:

- (24) a. Nere lagunak, nork bere taberna kuttuna dute  
 my friends.ERG who.ERG 3S.POSS pub favourite.DET have  
 “My friends have each<sub>i</sub> (of them) their<sub>i</sub> favorite pub”
- b. \*Ikasle bakoitzak, nork bere taberna kuttuna du  
 student each.ERG who.ERG 3S.POSS pub favourite.DET has  
 “\*Each student has each their favorite pub”
- c. \*Nere lagunak, nork bere taberna kuttuna du  
 my friend.ERG who.ERG 3S.POSS pub favourite.DET has

Even without an overt antecedent in the same clause, the only available interpretation is a plural one:

<sup>8</sup> There is no simple existential wh-pronoun in Basque. That is, there is nothing like (i) in Basque with *nor* « who » an indefinite :

- (i) \*Nor etorri da  
 who come is  
 « Someone came » (intended)

- (25) Nork bere lagunik onena gonbidatu zuen  
 who.ERG 3S.POSS friend.PART best.DET invited AUX  
 “Everyone invited his/her best friend”  
 NOT “Someone invited his/her best friend”

There are however other properties of the construction that suggest that a Hamblin type analysis of the sort entertained for East Asian languages may not be the right approach for the *wh*-pronouns in the Basque distributive construction. Two of the fundamental properties of Hamblin-type semantics is that the alternatives created by the Hamblin set can expand as the *wh*-pronoun combines with further structure (by pointwise functional application, see Kratzer and Shimoyama, 2002), and furthermore that the kind of semantic object created by this type of composition crashes if the P-set (the set of alternatives) is not closed off by a quantifier which selects one, several or all of the alternatives. This is at the origin of the quantificational variability observed in distant quantification. As we will see, none of those properties are apparent in the Basque distributive cases.

First, unlike Japanese *wh*-pronouns, the Basque ones under this reading do not “expand”. That is, whereas quantification at a distance is a possibility in Japanese, Malayalam, Korean, Turkish, and many other languages, this does not seem to be the case in the constructions at hand. Compare in this regard the Japanese (26a) (from Yatsushiro, 2009) and the Basque (26b). Whereas the Japanese *wh*-pronoun can be quantified by an affixal additive operator at the outer edge of a possessive phrase (26a), no *wh*-distributive construction is possible in Basque (26b) under an analogous structure.<sup>9</sup>

- (26) a. Taroo-wa dono gakusee-no tomodati-mo syootaisita  
 Taroo-TOP which student-GEN friend-MO invited  
 “Taro invited a friend of every student”  
 b. \*Noren medikuak bere historiala dauka  
 who.POSS friend.DET.ERG 3S.POSS dossier.DET has  
 “Each one’s doctor has his/her dossier”

In this regard, the Basque distributive constructions differ from interrogative constructions, which allow “quantification at a distance” of the *wh*-pronoun. Arregi (2003) explores the possibility that clausal pied-piping in Basque can be compared with *wh*-scope marking constructions in languages like Hindi or German. In those languages an independent *wh*-word, typically the counterpart of English *what*, is interpreted as a *wh*-quantifier over propositions. The set of propositions which provides a restriction for the *wh*-quantifier is built on the basis of the denotation of the *wh*-word inside the pied-piped clause, the so-called Indirect Dependency Approach to *wh*-scope marking (Dayal, 1996). In the Indirect Dependency Approach to Basque clausal pied-piping, the *wh*-pronouns denote sets of alternatives that keep expanding

<sup>9</sup> Note that (variable) binding out of the possessive DP in Basque is possible with *bakoitz*, witness (i) :

(i) Gaiso bakoitzaren medikuak bere historiala dauka  
 patient each.DET.POSS doctor.DET.ERG 3S.POSS dossier.DET has  
 « Each patient’s doctor has his/her dossier »

as they combine with further structure, until they are closed off by a tacit interrogative operator. This operator can be indefinitely far away from the pronoun. The *wh*-pronoun can be embedded in a possessive phrase, in an entire clause, or in an adverbial clause (see Etxepare and Ortiz de Urbina, 2003):

- (27) a. [<sub>POSSP</sub> Noren ikaslearen lagunak]<sub>i</sub> t<sub>i</sub> etorri dira?  
 Who.POSS student.POSS friends.DET.PL come AUX  
 “Whose students’ friends came?”
- b. [<sub>CP</sub> Nor etorri dela]<sub>i</sub> uste duzu t<sub>i</sub>?  
 who come AUX.COMP think AUX  
 “Who do you think came?”
- c. [<sub>CausalAdv</sub> Nor agertu delako] aldegin duzu?  
 Who show.up AUX.COMP.BECAUSE left AUX  
 “Who is the x such that you left because x showed up?”

For (27b), Arregi (2003:122) proposes the following possible representation, with the CP providing the inner argument of the interrogative tacit quantifier *what*:

- (28) a. Se idatzi rabela Jonek pentzate su  
 what written has.COMP Jon.ERG think.IMP AUX  
 “What do you think that Jon has written?”
- b. [[<sub>DP</sub> Q [<sub>CP</sub> what written has Jon]]]<sub>i</sub> you think]

The Indirect Dependency account is reminiscent of other more recent approaches to pied-piping, such as Cable’s (2010), which is based on Hagstrom’s idea (1998) that the interrogative C targets not the *wh*-pronoun, but an independent Q-particle that may sit far away from it. Massive pied-piping of the sort in (27a-c) occurs when the Q-particle sits outside an island or a large portion of structure and this structure is dragged to C as part of the QP. Under this view, all interrogative pronouns are related to a Q-particle (see Hagstrom, 1998; Cable, 2010; Slade, 2011) and all instances of *wh*-fronting will, one way or the other, involve Q. If this is correct, pied-piping goes well beyond the more obvious massive instances addressed by Arregi. All cases in which a *wh*-pronoun is embedded by additional syntactic structure will be instances of pied-piping. Those instances may include, besides the large phrasal structures exemplified in (27a-c), less complex phrases too, such as the possessive structures discussed early on, Postpositional Phrases, or *wh*-determiner phrases. Here again, the asymmetry between interrogative *wh*-pronouns and distributive ones is striking. Consider first Postpositional Phrases. Whereas embedding a *wh*-pronoun inside a postpositional phrase is possible in interrogatives (29a-b), the *wh*-pronoun cannot be embedded in a PP in the *wh*-distributive construction (30a-b):

- (29) a. [<sub>CP</sub> [<sub>QP</sub> Q [<sub>PP</sub> norentzat]]]<sub>i</sub> uste duzu [<sub>i</sub> ekarriko duela]] ?  
 Q wh.GEN.FOR think AUX bring.PROSP AUX.COMP  
 “Who do you think he/she will bring it for?”
- b. [<sub>CP</sub> [<sub>QP</sub> Q [<sub>PP</sub> Norengandik] uste duzu [<sub>i</sub> jasoko dugula]] ?  
 who.POSS.LOC.ABL think AUX get.PROSP AUX.COMP

“From whom do you think we will obtain it?”

- (30) a. \*Norentzat bere enkarguak ekartzen ditu  
who.GEN.FOR 3S.POSS order.DET.PL bring.IMP AUX  
“She/he brings her/his<sub>i</sub> orders for everyone<sub>i</sub>”
- b. \*Norengandik berea jasoko duzu  
who.POSS.LOC.ABL 3S.POSS.DET get.PROSP AUX  
“You will get his/her<sub>i</sub> own from each one<sub>i</sub>”

The equivalents of (30a-b) with the lexical quantifier *bakoitz* are perfectly possible in Basque:

- (31) a. Bakoitzarengandik berea jasoko du  
each.DET.GEN.LOC.ABL 3S.POSS receive.PROSP AUX  
“He/she will receive their own from each of them”
- b. Bakoitzarentzat bere enkarguak ekartzen ditu  
each.DET.GEN.FOR 3S.POSS order.DET.PL bring.IMP AUX  
“He/she brings his/her orders for everyone”

The wh-distributive construction is also much more restrictive in that wh-determiners do not license the distributive construction. The wh-pronoun *zein* “which”, can independently occur as an interrogative determiner in Basque. We also saw that *zein* “which” is one of the wh-pronouns that licenses the wh-distributive construction in Basque. Determiner *zein* can trigger pied-piping, but it cannot sustain a distributive construction (32a,b):

- (32) a. [[<sub>QP</sub> Q [Zein lagunek]<sub>i</sub> esan duzu [<sub>i</sub> gonbidatu zaituela]] ?  
which friend.ERG said AUX invited AUX.COMP  
“Which friend did you say has invited you?”
- b. \*Zein lagunek bere bizilagunak gonbidatu ditu  
which friend.ERG 3S.POSS neighbour.DET.PL invited AUX  
“Each friend has invited his/her neighbours” (intended)

Together with the potentially unbounded expansion of the domain of quantification, the other characteristic property of wh-pronouns *qua* Hamblin sets is their quantificational variability. But unlike typical indeterminate pronouns, the Basque wh-pronouns in the distributive construction do not allow different quantificational interpretations. They always require a universal one. The wh-pronoun does not show any quantificational variability in its interpretation under aspectual or adverbial quantifiers, as shown in (33), where the wh-pronoun is in the scope of habitual aspect and the adverb of quantification *normalki* “normally”.

- (33) Auzo-lanetan,  
communal-works.LOC  
  
normalki zeinek bere partea egiten du,  
normally which.ERG 3S.POSS part.DET do.IMP AUX

“In communal works, normally everyone does her part,

baina ez beti  
but not always

\*baina ez denek  
but not all.ERG

“During communal works, normally everyone does his/her part, but not always/#but not all”

In (33), the presence of an adverbial quantifier like *normalki* “normally” does not bring about any change in the interpretation of the wh-pronoun, which continues to be interpreted as a universal quantifier. This is unlike other plurality denoting DPs. Compare (33) with (34), where we substitute the wh-pronoun by the impersonal DP *jendea* ‘people’.

(34) Auzo lanetan,  
Comunal works.LOC

normalki jendeak bere partea egiten du,  
normally people.ERG 3S.POSS part.DET do.IMP AUX

baina ez denek/beti  
but not all.ERG/always

“During communal works, people usually do their share, but not all/but not always”

Whereas in (33) the adverb *normalki* “normally” can only unselectively quantify over events, but not over the set denoted by *zein* “which”, in (34) it can quantify over both events and individuals, making it possible to set a contrast on the quantificational interpretation of *jendea* “people”.

We should note also that there is no principled explanation, within the Hamblin set approach to the Basque wh-distributive construction, of why there should be an asymmetry between the equivalents of English *who/which* on the one hand and the equivalent of *what* on the other. The latter can “expand” in the case of interrogative constructions in Basque, as expected from a Hamblin-type analysis, but it is excluded from the distributive construction. I will take the wh-pronouns to be indefinite expressions introducing a plural discourse referent (Kamp and Reyle, 1993) of type *e*, over which the Distributive head operates.

### 2.3. Generalized Distributivity

Consider a verb like Basque *inguratu* “surround”. In English, the verb *surround* requires a collective agent (Beghelli and Stowell, 1997:88):

- (35) a. All the boys surrounded the fort  
b. ??Each boy surrounded the fort

In Basque the verb *inguratu* has two different meanings. On the one hand it can mean “walk a full circle around something”, an interpretation that I will call *dynamic*. On the other it means “enclose a space inside a circle”. I will call this interpretation *resultative*. The second reading cannot be predicated of an individual, but requires a sum. The three configurations diverge as to the interpretation they allow. Consider first the agreeing configurations (36a-b):

- (36) a. Nork bere gaztelua inguratu zuen  
 Who.ERG 3S.POSS castle.DET surround had  
 “Each person walked a full circle around the castle”
- b. Nork bere gaztelua inguratu genuen  
 who.ERG 3S.POSS castle.DET surround we.had  
 “We walked each a full circle around our castle”

In both (36a,b), the interpretation is necessarily the dynamic one, as the agreeing forms enforce atomic distribution over the set denoted by the wh-pronoun. Consider now the non-agreeing configuration (37):

- (37) Nork gure gaztelua inguratu genuen  
 who.ERG 1PL.POSS castle.DET surround we.had
- “We all surrounded our castle” (with “we” understood as a group numerous enough to be divided in collections that can independently surround a castle)
- “We walked each a full circle around our castle”

Whereas in (36a,b) the verb *inguratu* ‘surround’ can only have a dynamic reading, in (37) it can have either the resultative or the dynamic one. In either reading, the interpretation of the clause requires distribution over the set denoted by the wh-pronoun. The resultative interpretation implies a distribution over sums of individuals. Under its dynamic interpretation, (37) allows distribution over atomic individuals too. The kind of distribution that emerges from (37) is reminiscent of the workings of the *Generalized Distributivity* operator proposed by Schwarzschild (1994). The original motivation for using Distributivity operators was precisely to make sense of intermediate level distributivity in the interpretation of plurals. Note that (37) is incompatible with the idea that distributivity is contributed by a silent *each* associated to the wh-phrase or the predicate. This would account for atom-distributivity, but would not account for the intermediate readings. (37) is also incompatible with an underlying silent *all*, as this would open up the way to the collective interpretation available in English for verbs like *surround*, as in (35). I conclude that the kind of distributivity enforced over wh-pronouns in the Basque wh-distributive construction requires the presence of a silent Distributivity operator. The partition effected by this operator is mediated by a Cover. A Cover is a partition of a plurality P that obeys the following conditions (Gillon, 1987; Schwarzschild, 1994):

- (38) C is a cover of P iff:
- (i) C is a set of subsets of P
  - (ii) Every member of P belongs to some set in C



(iii)  $\emptyset$  is not in C

For instance, if P is a set that contains three members, say *Miren*, *Jon* and *Peru*, we could think of different ways of partitioning the set into smaller subsets. The different partitions would result in different covers:

- (39) P1:  $\{\{M, J, P\}\}$   
P2:  $\{\{M, J\}, \{P\}\}$   
P3:  $\{\{M\}, \{J, P\}\}$   
P4:  $\{\{M\}, \{J\}, \{P\}\}$

Leaving aside the (collective) partition in P1, that I assume is excluded by the mere presence of the Distributivity operator, note that the partitions in (39) illustrate (at a smaller scale) the different readings of the verb *inguratu* in Basque in its resultative meaning. The type of partition illustrated by (39) allows instances of people collectively surrounding castles as well as individuals walking a full circle around one. These options are not possible in the agreeing cases (cases in which the possessive is 3<sup>rd</sup> person singular and seems to be bound by the wh-pronoun). One possibility is that singular agreement eliminates all covers in which sums are involved. In other words, it confines all possible partitions to the atomic one. I will briefly come back to this in the next section.

### 3. How does distributivity arise? Elements and configurations

#### 3.1. A Distributive Head

Beghelli (1995) and Beghelli and Stowell (1997), among others, propose that the architecture of the clause, together with standard projections for Tense or Phi-features, also displays a functional head that is associated to distributive quantification. This distributive head selects another independent head hosting the share of the distributive relation.

- (40)  $[_{\text{RefP}} \text{Ref}^0 \dots [_{\text{DistP}} \text{Dist}^0 [_{\text{ShareP}} \text{Share} \dots [_{\text{VP}}]]]]]$

Szabolcsi (1997) and Brody and Szabolcsi (2003; also Kiss, 1987, 2002; Puskas, 1999) propose an analogous structure for Hungarian, a “discourse configurational language” (Kiss, 1995) where the actual scope relations would be directly observable in the overt relative order of (preverbal) nominal arguments. The Hungarian equivalent of the English functional sequence illustrated in (40) is (41).

- (40)  $[_{\text{TopP}} \text{Top}^0 [_{\text{QP}} \text{Q}^0 [_{\text{FocP}} \text{Foc} [_{\text{PredP}} \text{PredOp} [_{\text{VP}}]]]]]]]$

(40)-(41) yield the following equivalences for a discourse configurational language like Hungarian: the English Reference Phrase, which hosts definite DPs and collectively interpreted universal quantifiers, corresponds to the Topic Phrase in Hungarian; the Distributive Phrase is identical to the QP hosting distributive quantifiers in Hungarian (see Kiss, 1987); the Share Phrase corresponds to the preverbal focus position in Hungarian; and the Predicate Operator position is within the VP domain or in a minimally extended verbal projection, signaled as AgrP.

- (42) Hungarian-English equivalences

TopicP=RefP  
 QP=DistrP  
 FocusP=ShareP  
 PredOp=AgrP/VP

I will adopt the hypothesis that a Distributive functional head in the clausal spine is responsible for the distributive reading of the wh-pronouns in Basque. Although there is no overt exponent for this head in Basque, the proposed head may account for the inverted orders in Basque wh-distributive constructions when the distributive key is lower in the argument hierarchy than the share. In those cases, the wh-pronoun precedes the share, suggesting that the relative position of the wh-pronoun is a derived one. Thus, the unmarked word order for the following clauses is one in which the subject precedes either the indirect object or the object (43a,b):

- (43) a. Bere egitekoek mundu guziaz kezkatzen dute (SUBJ>OBJ)  
           3S.POSS obligations.ERG world all.DET.ABS worry.IMP AUX  
           “Everyone is worried about his/her obligations”
- b. Bere bankuak mundu guziaz hutsegina dio (SUBJ>IO)  
           3S.POSS bank.DET.ERG world all.THE.DAT failed AUX  
           “His/her bank failed on everyone”

If we replace the lower arguments by their corresponding wh-pronouns, they must precede the higher arguments:

- (44) a. Nor bere egitekoek kezkatzen dute (OBJ>SUBJ)  
           who 3S.POSS duties.DET.ERG worry.IMP AUX  
           “Each one gets worried by his duties”
- b. Zeini bere auzoak hutsegina dio (IO>SUBJ)  
           which.DAT 3S.POSS owner.DET.ERG failed AUX  
           “His/her neighbour failed on each one”

The sequence in (45) admits in principle a different analysis: one in which the wh-pronoun raises not to a designated Distributive projection, but to a left peripheral topic projection. This analysis of the sequences in (45) would comply with the fact that the wh-pronoun seems to make reference to a previously mentioned or known set. Topics in Basque precede the focus, and this is precisely the position in which the wh-pronoun occurs. One piece of evidence that shows this to be a problematic analysis is that the wh-pronoun must be adjacent to the focus. This is not a property of topics, which can precede other topics, or temporal and frame setting adverbs (45a). That is not an option in the wh-distributive construction (45b):

- (45) a. Gurasoak (maiz aski) beren seme-alabek zaintzen dituzte  
           parents.ABS quite frequently, 3PL.POSS children.ERG take.care.IMP AUX  
           “Parents, quite frequently, are taken care of by their children”
- b. Nor (\*maiz aski) bere seme-alabek zaintzen dute  
           who quite frequently, 3S.POSS children.ERG take.care.IMP AUX

“Parents, quite frequently, are taken care of by their children”

I take the adjacency between wh-pronoun and share to follow as a matter of cartography: the Distributive head c-selects the focus projection.

### 3.2. *The place of nor/zein "who/which"*

Capitalizing on the idea of an independent Distributive head in the clausal spine, I propose that the Basque wh-pronoun is attracted to the specifier of this Distributive Phrase. *Who/which* provide the restriction of the distributive operator active in the clause structure of Basque distributive constructions. Together, the wh-pronoun and the distributive head make up the distributive key. The Distributive head introduces universal distributive quantification over the members (atoms, sums) of the set denoted by the wh-word.

(46) [<sub>DistP</sub> Nor Dist<sup>0</sup> [<sub>ShP</sub> ...]]

The nature of the distribution itself will depend on the cover. I suggest that in Basque grammatical factors play a crucial role in determining the cover of the distribution. Remember that *who/which* in Basque can trigger both singular and plural agreement on the verb, a fact that we took to show that Basque wh-pronouns contain the feature [+Count]:

(47) Nor/zein etorri da/dira?  
Who/which come is/are  
“Who came?”

In the wh-distributive construction, the nature of the cover seems to depend on number agreement. If the number attribute is singular, the Distributive head will distribute over the atomic cells of the wh-pronoun, and we will have a strong distributive reading. The wh-pronoun will in this case agree with a 3<sup>rd</sup> person singular possessive pronoun in the share:

(48) Nork bere liburua erosi dugu  
wh.ERG 3S.POSS book.DET bought we.have  
“We bought each<sub>i</sub> (of us) his/her<sub>i</sub> book”

If the number attribute is plural, the Distributive operator will allow distribution over the sums provided by the Cover. This is spelled out as the weak distributive configuration, in which the possessive pronoun agrees in person and number (plural) with the subject.

(49) Nork gure liburuak sinatu ditugu  
who.ERG our book.DET.PL signed we.have  
“We have signed each our book”

### 3.3. *The Adjacency of the Share*

An intriguing property of wh-distributive constructions in Basque is that they require the adjacency of the indeterminate pronoun and the share :

- (50) a. Zaldi lasterketan,  
 At the races,  
 Nork [bere zaldiak]<sub>i</sub> uste du [t<sub>i</sub> irabaziko duela]  
 Who.ERG 3S.POSS horse.ERG thinks AUX win.PROSP AUX.COMP  
 “At the races, each person thinks that his horse is gonna win”
- b. Nori [bere etxea]<sub>i</sub> iruditzen zaio [t<sub>i</sub> ederrena]  
 who.DAT 3S.POSS house.DET seem.IMP AUX most.beautiful.DET  
 “His house seems to everyone to be the most beautiful one”
- (51) a. Zaldi lasterketan, \*nork uste du [bere zaldiak irabaziko duela]  
 b. \*Nori iruditzen zaio [bere etxea ederrena]

This otherwise intriguing property follows directly from the clausal architecture in (40), if Shares must be located in the focal position in the relevant constructions, as in Hungarian. If *nor/zein* occupy the Spec of a distributive operator and the latter selects a Share Phrase, itself a Focus projection in Discourse Configurational languages, and if focus movement is overt in those languages (the case in Basque), adjacency follows naturally from the distributive relation. It may be useful for the reader to consider what a parallel example would be in a better known language. If the relevant construction were available in English, it would look like (52).

(52) ...[DisP Who<sub>i</sub> Dis<sup>0</sup> [FP/ShP [his<sub>i</sub> horse]<sub>j</sub> F/Sh<sup>0</sup> [vP t<sub>i</sub> thinks [CP t<sub>j</sub> will win]]]

That the movement of the share involves focus is supported by several properties of the syntax of shares in this construction which assimilate them to foci: (i) the movement of the share is successive cyclic (53) (it triggers subject inversion in the intermediate clause); (ii) it requires the adjacency of the finite verb in its target position (54); and (iii) it optionally triggers clausal pied-piping (Ortiz de Urbina, 1989; Etxepare and Ortiz de Urbina, 2003; Arregi, 2003), as in (55):

#### SUCCESSIVE CYCLICITY

- (53) Nork [bere zaldiak]<sub>i</sub> esan du [CP t<sub>i</sub> uste dutela denek [CP t<sub>i</sub> irabaziko duela]]  
 who.ERG his horse.ERG said AUX think AUX.COMP all.ERG WIN.PROSP AUX.COMP  
 “Each one<sub>i</sub> of them said that all the people think that his<sub>i</sub> horse is gonna win”

#### FOCUS-VERB ADJACENCY

- (54) a. Nork [bere zaldiak]<sub>i</sub> esan dio Mireni [t<sub>i</sub> irabaziko duela]  
 who.ERG his horse.ERG told AUX Miren.DAT win.PROSP AUX.COMP  
 “Each one told Miren that his horse would win”
- b. \*Nork [bere zaldiak]<sub>i</sub> Mireni esan dio [t<sub>i</sub> irabaziko duela]  
 who.ERG his horse.ERG Miren.DAT told AUX win.PROSP AUX.COMP  
 “Each one told Miren that his horse would win”

#### CLAUSAL PIED PIPING

(55) a. Nork [bere zaldiak irabaziko duela]<sub>i</sub> esan dit [t<sub>i</sub> entzun duela]  
 who.ERG his horse.ERG win.PROSP AUX.COMP said AUX heard AUX.COMP  
 “Each person told me that he had heard that his horse would win”

b. Nork [[bere zaldiak irabaziko duela] entzun duela]<sub>i</sub> esan dit t<sub>i</sub> ]  
 who.ERG his horse.ERG win.PROSP AUX.COMP heard AUX.COMP told AUX  
 “Each person told me that he/she had heard that his/her horse would win”

I conclude that the syntactic representation of a sentence like (56a) is (56b):

(56) a. Nork bere ama maite du  
 Who.ERG 3S.POSS mother.DET love AUX  
 “Everyone<sub>i</sub> loves his/her<sub>i</sub> mother”

b. [<sub>DistrP</sub> (Nork) Dist<sup>0</sup> [<sub>FP</sub> [<sub>PossP</sub> bere ama]<sub>k</sub> Foc<sup>0</sup> [<sub>TP</sub> (nork)...maite du]]]

(56b) represents the movement of the wh-pronoun *nork* from Spec of TP (its Case position, see Rezac et al, 2014) to the Spec of DistrP, and the movement of the object share to the focus projection.

### 3.4. When the wh-pronoun is not an argument of the verb

(57) represents one of the three basic configurations that instantiate the distributive construction. The other two cases correspond to (57a,b) below. In (57a,b), the wh-pronoun does not occupy an argument position. The subject position is occupied by the pronoun *gu* “we”, which agrees with the auxiliary in person and number. The wh-pronoun agrees in case with the subject. The pronoun in the share agrees in person and number with the wh-pronoun in (57a), but not in (57b).

(57) a. (Guk) nork bere lana bukatu dugu  
 We.ERG who.ERG 3S.POSS work.DET finished WE.HAVE  
 “We have each<sub>i</sub> finished his/her<sub>i</sub> work”

b. (Guk) nork gure lana bukatu dugu  
 We.ERG who.ERG 1P.POSS work.DET finished WE.HAVE  
 “We have each finished our work”

Capitalizing on the parallel between clauses and DPs on the one hand (see Szabolcsi, 1994; Ogawa, 2001; Bernstein, 2001; Koopman, 2004; Etxeberria, Etxepare and Uribe-Etxebarria, 2012), and on the idea that distributive operators can apply at both the predicate and the DP level (see Lasersohn, 1995; Brisson, 1998), I suggest that cases such as (57a,b) correspond to a syntactic configuration in which the Distributive operator directly merges to the object DP. The Distributive head selects a focus phrase, and triggers the movement of the share to its outer edge (for DP-internal focus movement in Basque see Etxepare and Ortiz de Urbina, 2003).

(58) ... [<sub>VP</sub> DP<sub>PL</sub> v V [<sub>DistrP</sub> *who/which* Distr<sup>0</sup> [<sub>FocP</sub> *his/her NP* Foc<sup>0</sup> [DP]]...]]]

The two syntactic representations proposed for the argumental and non-argumental wh-distributive constructions make a very clear prediction. It should be possible to

treat the sequence *Wh-pronoun-Share* as a syntactic term, available for extraction, in (58), but not in (56), as that same sequence does not correspond to an independent syntactic term. This prediction is borne out in the context of topicalization. (59a) represents an attempt to topicalize the sequence *Wh-pronoun-Share* when the wh-pronoun occupies an argument position. (59b,c) represents the configuration in which the wh-pronoun is not an argument, but a floating pronominal form. In this case, extraction of the sequence *Wh-pronoun-Share* is available.

- (59) a. \*Nork bere lana, atzo bukatu du  
 who.ERG 3S.POSS work.DET yesterday finished has  
 “It is yesterday that each one has finished his/her work”
- b. Nork bere lana, atzo bukatu dugu  
 who.ERG 3S.POSS work.DET yesterday finished we.have  
 “It is yesterday that we have each finished our work”
- c. Nork gure lana, atzo bukatu dugu  
 who.ERG 1PL.POSS work.DET yesterday finished we.have  
 “It is yesterday that we have each finished our work”

The same contrast arises in specificational pseudoclefts: (60b-c), with a gap in the free relative that is identified by the floating wh-pronoun and its following share, are possible; (60a) where the gap is linked to an argumental wh-pronoun and its corresponding share, is not possible. The reason is that in (60b-c), the wh-pronoun and the share constitute a single term. In those cases where the wh-pronoun is generated in an argument position, the adjacency of the wh-pronoun and the share is a derived one, and the sequence does not correspond to a syntactic term:

- (60) a. \*Atzo egin zuena, (eta horrenbesterakoa iruditu zitzaizuna)  
 yesterday done he.had.REL.DET and so.much.DET seemed AUX.REL.DET  
 nork bere lana izan zen, besterik ez  
 who.ERG 3S.POSS work.DET been was, else.PART NEG  
 “What he did yesterday (and seemed such a big deal to you) was each one his/her work, and nothing else”
- b. Atzo egin genuena (eta horrenbesterakoa iruditu zitzaizuna)  
 yesterday done we.had.REL.DET and so.much.DET seemed AUX.REL.DET  
 nork bere lana izan zen, besterik ez  
 who.ERG 3S.POSS work.DET been was, else.PART NEG  
 “What we did yesterday (and seemed such a big deal to you) was each one our work, and nothing else”
- c. Atzo egin genuena (eta horrenbesterakoa iruditu zitzaizuna)  
 yesterday done we.had.REL.DET and so.much.DET seemed AUX.REL.DET  
 nork gure lana izan zen, besterik ez  
 who.ERG 1PL.POSS work.DET been was, else.PART NEG

“What we did yesterday (and seemed such a big deal to you) was each one our work, and nothing else”

#### 4. Selectional Properties of the Distributive Head

The very specific properties displayed by the Share in wh-distributive constructions in Basque raise a number of issues. We may start by asking for instance, whether the focal restriction on the share of wh-distributive constructions in Basque is equally required by the lexical quantifier *bakoitz* “each”. In other words, are Shares focalized in Basque generally? A look at the corpus *Euskarazko Ereduzko Prosa* (Basque Reference Corpus), shows that Shares, in a distributive quantification involving *bakoitz* “each”, may occupy the preverbal focus position:

- (61) Ikasle bakoitzak bi liburu irakurri ditu  
each student.ERG two book read has  
“Each student has read two books”

But (61) is just an option, favoured by the unmarked SOV word order of the language. Unlike in the wh-distributive construction, shares in the lexical distributive construction are not required to occupy a focus position, as shown in (62), where the lexical quantifier itself is focused (occupies the position immediately preceding the verb):

- (62) Ikasle BAKOITZAK irakurri ditu bi liburu  
student each.ERG read has two books  
“EACH student has read two books (not say, the class as a whole)”

The relation between the distributive key and the share does not require adjacency either, in the case of the lexical distributive *bakoitz* (example from the Basque Reference Corpus):

- (63) Eguneko 1,13 kilo zabor sortu zituen iaz bizkaitar bakoitzak  
per.day 1,13 kilo garbage produced AUX last.year Biscayan each.ERG  
“Last year, it was 1,13 kilogram of garbage per day that was produced by each Biscayan”

The rigid configuration that has the distributive key and the share in adjacent positions in virtue of the focus movement of the latter is thus only enforced in the wh-distributive construction. One way of looking at this is the following: Basque lexical *bakoitz*, as is generally the case with lexical distributive Qs, can quantify over the event variable (Beghelli and Stowell, 1997). If this is the case, and if there is no syntactic correlate of event quantification in terms of overt movement into the share for the verb or the verb phrase, distributive constructions headed by *bakoitz* will dispense with focus movement, and therefore with the obligatory adjacency between the distributive key and the share observed in wh-distributive constructions.

Unlike event quantification, individual quantification requires the share to be in focus. Consider the following paradigm, where the share of the distributive quantification includes the modifier *diferente* “different”:<sup>10</sup>

- (64) a. Bizkaitar bakoitzak liburu (diferente) bat leitu zuen iaz  
 Biscayan each.DET.ERG book (different) one read AUX last.year  
 “Each Biscayan read a different book last year”
- b. Bizkaitar bakoitzak iaz leitu zuen liburu (\*diferente) bat  
 Biscayan each.DET.ERG last.year read AUX book different one  
 “Each Biscayan read a different book LAST YEAR”
- c. Iaz leitu zuen bizkaitar bakoitzak liburu (\*diferente) bat  
 last.year read AUX Biscayan each.DET.ERG book different one  
 “It is last year that each Biscayan read a different book”

If we aim for a true distributive relation between biscayans and books, such that the adjective *different* modifies the books co-varying with each of the Biscayan readers, only the configuration in which the indefinite DP *a different book* is in the preverbal focus position will do. In no other configuration will a true distributive reading obtain, even if the quantifier sits in its base position and c-commands the indefinite (59c). This suggests that focalization is a distinctive strategy to mark shares in Basque. When no focalized share is present, the quantifier can only be interpreted as targeting directly the event variable. This option is not available to wh-pronouns in Basque. The Basque wh-distributive is not alone in avoiding direct quantification over events. As noted by Farkas (1997:18), Hungarian reduplicated wh-pronouns introduce universal distributive quantification, but the domain of the quantification, unlike in the case of quantification by means of the lexical quantifier *mindenki*, cannot be the situation domain:

- (65) a. \*Ki-ki leült  
 who-who sat.down  
 “Each one sat down”
- b. Mindenki leült  
 Each one sat.down  
 “Each one sat down”

How should we integrate those differences in the syntactic representation of the clause. Is this something we must specify in the feature content of the Distributive head? I suggest the following selectional restriction for the Distributive Head:

- (66) Selectional properties of the Distributive Head:

Merge to a semantic predicate (AspP or focus).

The predicate can be a verbal projection (Hungarian and Basque lexical *each*), or it can be a “derived predicate” (Hungarian and Basque wh-distributive constructions,

<sup>10</sup> For the modifier *different* as an unambiguous marker of true distributed share status, see Beghelli and Stowell (1997: 90-93).



lexical *each*). By “derived predicate” I refer to a view of focus in which the main assertion of the clause corresponds to the scope of event quantification (see Herburger, 2001). Under this view, focus restructures the event quantification in such a way that the non-focused elements are mapped as part of the event restriction and the focus is mapped as the main predicate of the event quantification. Focus restructuring creates new semantic predicates, which become the main argument of the distributive quantification. This suggests that we should find distributive heads either in the vicinity of the vP/AspP, or in the vicinity of a focus projection. Basque wh-distributives obligatorily precede the focus projection. They are thus specialized for ‘derived predicates’.

## 5. Quantifying over functions

One of the striking properties of the Basque wh-distributive construction is that it does not allow just any element to covariate with the elements of the distributive key. The co-domain of the distributive relation must be a definite expression with a pronoun inside that makes covariation possible.<sup>11</sup>

- (67) Nork bere bizkar-zorroa hartu du  
 wh.ERG 3S.POSS backpack.DET taken has  
 “Everyone took his/her backpack”

The Basque restriction does not seem to be an ordinary feature of distributive constructions. One can nevertheless find typologically significant correlates in other wh-based distributive constructions across languages. I briefly describe a parallel phenomenon in the Scandinavian languages, which will also serve us as an entry into the semantics of shares in the relevant constructions.

### 5.1. Distance Quantification in Scandinavian Languages

Scandinavian languages provide very close counterparts of the Basque wh-based distributive construction in *distance distributivity* contexts (Zimmermann, 2002). Distance distributivity is instantiated, among other possible cases, by binominal *each* constructions in English:

- (68) The children ate two sausages each

<sup>11</sup> In my ears, the definite description may also correspond to a relative clause, either finite or non-finite, as in (ia-b). The relevant thing is that the share includes a pronominal form (silent or overt) that can be bound by the wh-pronoun :

- (i) a. Nork agindutakoa egin beharko du  
 who.ERG ordered.PARTC.GEN.DET do need.PROSP AUX  
 « Each person will have to do what has been ordered to him/her »
- b. Nork agindu diotena egin beharko du  
 who.ERG ordered PRESENT.3PLE.3SD.3SA do need.prosp AUX  
 « Each person will have to do what he/she has been ordered to »

Shares that do not involve a D, such as CPs, are not possible shares, despite the fact that they may involve a pronominal variable :

- (ii) \*Nork [pro etorriko dela] esan du  
 who.ERG come.PROSP is.COMP said has  
 « Each person said that he/she will come » (intended)

In (61), the quantifier *each* is syntactically merged with the Share of the construction (two sausages), but it distributes over the plural DP the *students*. Binominal *each* in English only admits indefinite shares:

(69) \*The children ate their sausages each

But a number of languages present a richer array of binominal constructions. Zimmermann (2002:40) notes for instance that in Norwegian, distance quantification can be effected in two ways: with the quantifier *hver* “each” in postnominal position or in prenominal position. When the quantifier is in postnominal position, the share must be indefinite. When it is prenominal, the share is definite, and it must contain a reflexive pronoun in the genitive case. The reflexive pronoun is bound by the plural antecedent of the floating quantifier:

(70) a. Guttene har kjøpt to pølser hver  
boys.the have bought two sausages each  
“The boys bought two sausages each”

b. Guttene har kjøpt hver sine to pølser  
boys.the have bought each their two sausages  
“The boys bought each their two sausages”

As seen in (70a,b), prenominal *each* precedes a possessive phrase. The equivalent of (70b) with an indefinite is not possible, as it is not possible to have postnominal *each* with a definite share (cf. English):

(71) a. \*Guttene har kjøpt sine pølser hver  
boys.the have bought their two sausages each  
“\*The boys bought their two sausages each”

b. \*Guttene har kjøpt hver to pølser  
boys.the have bought each two sausages  
“The boys bought each their two sausages”

Zimmermann notes the same phenomenon in Icelandic (2002:41), and Lødrup et al. (2019) point out the same two options in Swedish, with the prenominal position of the quantifier correlating with the presence of a possessive DP share. Vangsnes (2010) observes that in the North Germanic languages in general, the quantifiers corresponding to English *each* are morphologically speaking wh-items. Such is the case in Faroese too, where the same structural alternation between prenominal and postnominal instances of distance-quantification *each* is found. In Faroese, the possessive is a reflexive pronoun, and it agrees not with the DP subject, but with the wh-word/quantifier (Vangsnes, 2010), as in Basque strong distributive wh-constructions:

(72) a. Vit hava fingið eina bók hvør  
we have received one book each  
“We received one book each”

- b. Vit hava fingið hvør sína bók  
 we have received each his book  
 “We received one book each”

The Faroese constructions also raise an issue about the position of the possessive pronoun, which is prenominal in these cases, but more generally postnominal in Faroese. As noted by Delsing (1993) and more recently Stolz and Gorsemann (2001) Thrainsson (2004), Marit (2005) and Freyr (2009), the prenominal-postnominal alternation in Faroese possessive constructions is related to the focal/emphatic status of the possessor. Freyr (2009) observes that prenominal possessors typically have a focus reading, thus contrasting (73a,b):

- (73) a. Mamma mín (mótvegis øðrum folki)  
 mother my in contrast to other people  
 b. Mín mamma (mótvegis øðrum mammum)  
 my mother in contrast to other mothers

Stolz and Gorsemann (2001:574) note that the prenominal position of the possessor pronoun is obligatory when the reflexive possessor pronoun is reinforced by *egin* “one’s own”:

- (74) So hvort lamb kom til sína egnu mammu  
 so every lamb came to its own mother

Stolz and Gorsemann (2001) point out that the same factor (contrast) accounts for the prenominal position of the possessive pronoun in Icelandic, another Scandinavian language in which possessor’s are otherwise postnominal. Delsing (1993:162-166) provides analogous data for Norwegian and North Swedish. In other words, like in Basque, Scandinavian shares in distance quantification are also in focus when they are preceded by the distributive quantifier.

By capitalizing on the morphological closeness of wh-words and the lexical quantifier *each* in the relevant languages, I speculate that the prenominal *each* constructions are actually equivalent to the Basque wh-based distributives, where the wh-pronoun, morphologically identical to the wh-word, is merged to an independent Distributive head, and the Share moves into a focus position:

- (75) ...[<sub>vP</sub> DP<sub>PL</sub> v V [<sub>DistrP</sub> hvør Distr<sup>0</sup> [<sub>FocP</sub> sína bok Foc<sup>0</sup> ...]]]

The postnominal *each* cases, on the other hand, which only admit indefinite shares, would correspond to *bona fide* quantifier cases, equivalent in this regard to the English binominal construction with *each*. The contrast is similar to the one that arises between Basque *bakoitz*, which can be found in floating constructions with an indefinite share, and the wh-distributive construction, which cannot:

- (76) a. Hurrek bi saltxitxa hartu dituzte bakoitzak  
 children.ERG two sausages taken AUX each.DET.ERG  
 “The children had two sausages each”

- b. \*Hurrek, zeinek bi saltxitxa hartu dituzte  
 children.ERG wh.ERG two sausages taken AUX  
 “The children had two sausages each”

## 5.2. Semantics

Lødrup et al. (2019) propose, for the prenominal *each* constructions in Norwegian, a semantic analysis that capitalizes on the notion of a skolemized choice function. A skolemized choice function is a way to pair individuals with choices from a set. Lødrup et al. (2019:184) discuss the meaning of a sentence like (77):

- (77) Flickorna läste varsin bok  
 the.girls read each.her book  
 “Each girl read her book”

They argue that a logical form such as (78) does not appropriately express the meaning of (77):

- (78)  $[\forall x: \text{girl}(x)] [\exists y: \text{book}(y)] (\text{read}(x,y))$

The representation in (78) does not explicitly indicate that the choice of book  $y$  depends on the choice of girl  $x$ . They propose that the logical form of a sentence like (77) must include a functional variable  $f$  that explicitly marks the dependence of choices of books on choices of girls:

- (79)  $[\forall x: \text{girl}(x)] (\text{read}(x, f(x, \text{book})))$

The skolemized function variable in the second argument of *read* pairs each girl with a book that is associated to her by that function. The syntactic structure is transparent, in that it directly translates the mapping between the girls and the books associated to them by means of a possessive structure involving a pronominal variable. In Basque, only unique functions are accepted in the wh-distributive construction. The Share must always be either definite or specific. Weak quantifiers of all types are excluded from the Share (80). This is illustrated in the contrast below.

- (80) Context: in a book festival, the gathered writers graciously sign books for the public. The wh-word refers to the writers.

- a. Nork [bere liburua] sinatu zuen  
 who.ERG 3P.POSS book.DET signed AUX  
 “Each one signed his/her book”

- b. Nork [bere liburu guztiak] sinatu zituen  
 who.ERG 3P.POSS book all.DET.PL signed AUX  
 “Each one signed all his/her books”

- c. Nork [bere liburu ezagunetarik bi] sinatu zituen  
 who.ERG 3P.POSS book known.PART two signed AUX  
 “Each one signed two of his/her known books”

- d. Nork [bere liburu bakoitza] sinatu zuen  
 who.ERG 3P.POSS book each.DET signed AUX  
 “Each one signed each one of his/her books”
- e. Nork [bere liburu bakarra] sinatu zuen  
 who.ERG 3S.POSS book single.DET signed AUX  
 “Each one signed his/her only book”
- (81) a. \*Nork [bere liburu asko] sinatu zituen  
 who.ERG 3P.POSS book many signed AUX
- b. \*Nork [bere liburu gutxi] sinatu zituen  
 who.ERG 3S.POSS book few signed AUX
- c. \*Nork [bere liburu pila bat] sinatu zuen  
 who.ERG 3S.POSS book lot INDEF signed AUX
- d. \*Nork [bere liburu batzuk] sinatu zituen  
 who.ERG 3S.POSS book some signed AUX
- e. \*Nork [bere liburu bat] sinatu zuen  
 who.ERG 3S.POSS book two signed AUX
- f. \*Nork<sub>i</sub> [bere<sub>i</sub> bi liburu baino gehiago] sinatu zituen  
 who.ERG 3S.POSS two book than more signed AUX

The quantificational expressions available in the Share position of wh-distributive constructions are identical to those that have non-empty minimal witness sets, namely Principal Filters (Szabolcsi, 1997). When a quantifier Q denotes a Principal Filter, Q “talks about” some fixed individuals. The share in Basque wh-distributive constructions is either headed by the definite determiner *-a* or has a partitive structure, as in (81c). Existential, cardinal or comparative quantifiers cannot head the share in wh-distributive constructions. No restriction of that sort applies to lexical distributive quantifiers such as *bakoitz* “each”:

- (82) a. Idazle bakoitzak bere bi liburu baino gehiago sinatu zituen  
 writer each.DET.ERG 3S.POSS two book than more signed AUX  
 “Each writer signed more than two books of his”
- b. Idazle bakoitzak bere liburu asko sinatu zituen  
 writer each.DET.ERG 3S.POSS book many signed AUX  
 “Each writer signed many books of his”
- c. Idazle bakoitzak bere liburu pila bat sinatu zuen  
 writer each.DET.ERG 3S.POSS book lot a signed AUX  
 “Each writer signed a lot of his books”
- d. Idazle bakoitzak bere liburu batzuk sinatu zituen  
 writer each.DET.ERG 3S.POSS book some.PL signed AUX  
 “Each writer signed some books of his”

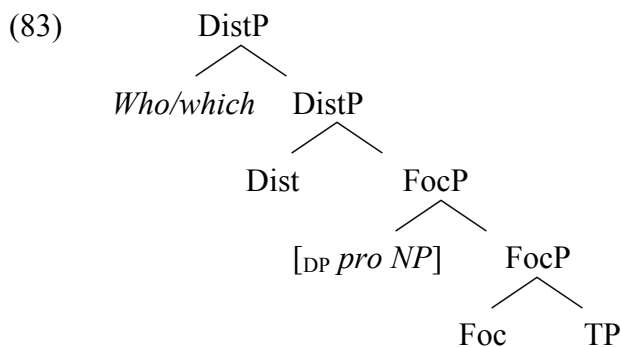
e. Idazle bakoitzak bere liburu bat sinatu zuen  
 writer each.DET.ERG 3S.POSS book one signed AUX  
 “Each writer signed one book of his: the last one”

## 6. Deriving the restrictions in the Share

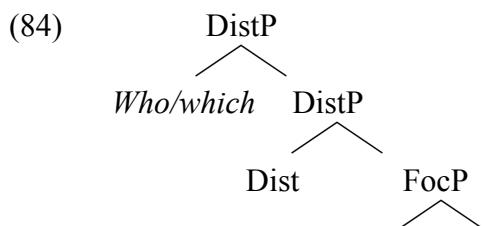
An appropriate analysis of wh-distributives in Basque must be able to address at least the following three outstanding properties of the construction:

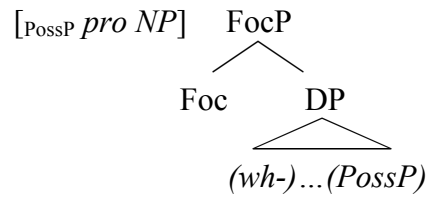
- (i) The dependency that is established between the wh-key and the semantic status of the Share, which must be definite or specific (section 5)
- (ii) The invariable, maximal interpretation of the wh-pronoun under all semantic contexts (section 1.1)
- (iii) The structural restrictions on the wh-pronoun as the key of the distributive construction (the wh-pronoun cannot be embedded in further structure, see section 2.2)

I assume, following the discussion in section 3, that the wh-distributive construction in Basque corresponds to a basic syntactic template that has a wh-pronoun in the Specifier of a Distributive head. This head selects a focus head hosting the share:



In syntactic terms, the mutual dependency established between the distributive ontology of the construction and the wh-morphology of the distributive key suggests that the two properties must be related. One possibility is that the dependency in question is established on the basis of Merge: the share and the distributive head hosting the wh-pronoun are merged as a single constituent, and semantic selectional restrictions (of the sort that makes that a given verb takes or not a wh-dependent as an argument, for instance) then apply to restrict the range of the distributive share to functional variables. This could work in principle for the DP-internal wh-distributive constructions, such as (84), in which both the Distributive operator and the share are within the same (extended) DP:





Note nevertheless, that the functional projection selected by the Distributive head is not the definite Possessive Phrase in the Focus Phrase, but the Focus projection itself, which acts as a general host for shares in Basque. In any case, Merge and concomitant semantic selection do not seem the right configuration for the argumental wh-distributive cases. In the argumental cases, the wh-pronoun and the Share may belong to different clauses, and the wh-pronoun can be separated from the share by (several) strong islands:<sup>12</sup>

- (85) Nor bere zaldiak irabazi duelako zoriondu dutelako  
 wh.ABS his horse.DET.ERG won has.BECAUSE greeted have.BECAUSE

dago kontent  
 is happy

“Everyone is happy because they have greeted him for HIS/HER HORSE having won”

No local selectional relation can be established between the higher distributive head in (85) and the share, several clauses down.

Consider properties (ii) and (iii) of the construction. Wh-words are interpreted as denoting a maximal set in context. They must also be bare. This goes against what we know about wh-word-based quantification in Basque. As seen in Table 1 in section 2.2, wh-words in Basque do not have to be bare. In combination with other logical operators, they can also result in quantifiers that do not require maximality, such as the indefinite series headed by *-bait* in Table 1. This suggests that the maximality condition is somehow added to a more basic instance of wh-pronoun. It must therefore be enforced by extra structure else. This extra structural element cannot be an ordinary quantifier, as *each* or *all* in English, for the reasons layed out in section 2.3. The maximal interpretation of the Basque wh-pronoun is reminiscent of the maximal interpretation enforced by other independent particles like Chinese *dou*, as manifest in cases such as (86a,b), where the presence of *dou* ensures a good-fitting cover in the sense of Brisson (1998).

- (86) a. Haizimen qu-le gongyuan  
 children go-Perf park  
 “The children went to the park”

b. Haizimen **dou** qu-le gongyuan

<sup>12</sup> The relation between the distributive operator and the bound pronoun seems to be mediated by construal. Given the severely non-local configurations that contain the wh-word and the share, I also discard the option, put forward by Kayne (2002) and developed by Drummond, Kush and Hornstein (2011) for variable binding, of lumping together binding and movement.

children *dou* go-Perf park  
 “The children all went to the park”

Xiang (2008:236) observes that (86a) admits exceptions, in the sense that in a large group of children, (86a) can describe situations where one or two children did not go to the park. If *dou* is added, this ensures that every individual in the set of children is included. Maximality operators also have a plural presupposition, and this explains why they need to occur with a plural antecedent. Cheng (2009), following earlier work by Giannakidou and Cheng (2009) proposes that *dou* is a maximalizing operator, one that takes a function  $\langle e, t \rangle$  as predicate and returns the maximal collection of individuals denoted by the predicate, similar in this sense to a definite determiner. Chinese *dou* is a particularly interesting phenomenon, as it has been associated to the presence of a Generalized Distributivity operator in work by Lin (1998) and Tomioka and Tsai (2005).<sup>13</sup> I will take the distributive key in the Basque distributive construction to include a maximality operator, responsible of its maximal semantics. This is an inescapable move, given that wh-pronouns in Basque are not in and of itself required to express maximality, as in the case of the existential quantifier *nor edo nor* “someone or other”, discussed in section 2.2. The wh-pronoun must thus be syntactically complex. I will take the relevant structure to be similar to a clitic doubling construction with the maximality operator (D), that I assume to be akin to a determiner, adjoined to the wh-word:

(87) [<sub>WhP</sub> D [<sub>WhP</sub> wh ]]

This adjoined maximality operator floats into the focus head, and combines with it to restrict the range of the shares to those elements that are compatible with maximality semantics: definite and/or specific shares of the partitive sort. A simplified representative derivation is given in (88a-b):

(88) a. *Nork bere ama maite du*  
 who.ERG 3S.POSS mother.DET love aux  
 “Everyone loves his/her mother”

- b. [<sub>TP</sub> T [<sub>VP</sub> [<sub>WhP</sub> D [<sub>WhP</sub> *nork*]] v [<sub>VP</sub> ...*bere ama*... ]]] -> raise D to F (floating)  
 b. [<sub>FocP</sub> (D)+F [<sub>TP</sub> T [<sub>VP</sub> [<sub>WhP</sub> (D) [<sub>WhP</sub> *nork*]] v [<sub>VP</sub> ...*bere ama*... ]]] ->raise Share  
 c. [<sub>FocP</sub> *bere ama* (D)+F [<sub>TP</sub> T [<sub>VP</sub> [<sub>WhP</sub> (D) [<sub>WhP</sub> *nork*]] v ... ]]] -> Insert Dis  
 d. [<sub>DisP</sub> Dis [<sub>FocP</sub> *bere ama* (D)+F [<sub>TP</sub> T [<sub>VP</sub> *nork*.. ]]] -> move WhP through TP  
 e. [<sub>DisP</sub> *nork* Dis [<sub>FocP</sub> Share (D)+F [<sub>TP</sub> (*nork*) T [<sub>VP</sub> ... ]]]

If the maximality operator is a syntactic component of the wh-key in the distributive construction, and it floats into F, the locality facts mentioned in (iii), which prohibit

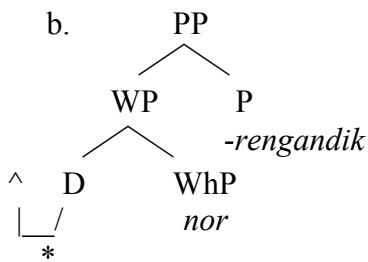
<sup>13</sup> Cheng actually builds her analysis of Chinese *dou* on a wider phenomenon: the contextual restriction of quantifiers. Giannakidou (2004), Etxeberria (2005), and Giannakidou and Etxeberria (2010, 2014), among others, have argued that the contextual restriction of quantifiers is mediated by independent morphosyntactic structure. They point out that contextual restriction in the quantifier domain is visible in many languages through the overt modification of the quantifier phrase or its nominal restriction by an article. This modification is visible in English *all*, for instance (cf. *all the men*). Giannakidou (2004) and Etxeberria and Giannakidou (2010) propose that this determiner functions not as an individual or Generalized Quantifier forming function, but as a modifier: “a function that preserves the type of the argument, and modifies it by supplying the contextual restriction C” (Etxeberria and Giannakidou, 2010:13). This larger view is, obviously, compatible with the above analysis.



wh-keys in determiners, possessive phrases and PPs (section 2.2) can be straightforwardly accounted for. Since the maximality operator D is combined directly with the wh-pronoun, it will end up embedded within further functional structure. From this position, the maximality operator cannot float. In other words, the structural restrictions on the wh-pronoun in wh-distributive constructions is a locality condition related to the floating status of D:

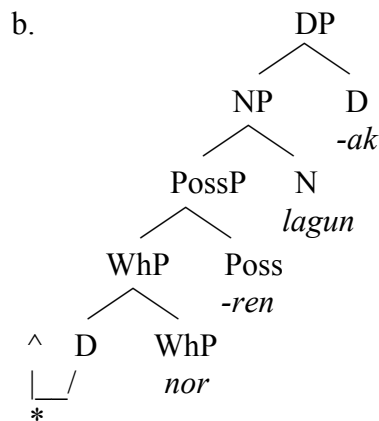
(89) *Postpositional Phrases*

- a. \*Norengandik berea jasoko du  
 who.POSS.LOC.ABL 3S.POSS.DET get.PROSP AUX  
 “You will get his/her own from each one”



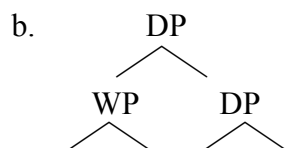
(90) *Possessive phrases*

- a. \*Noren medikuak bere historiala dauka  
 who.POSS friend.DET.ERG 3S.POSS dossier.DET has  
 “Each patient<sub>i</sub>’s doctor has his/her<sub>i</sub> dossier” (intended)



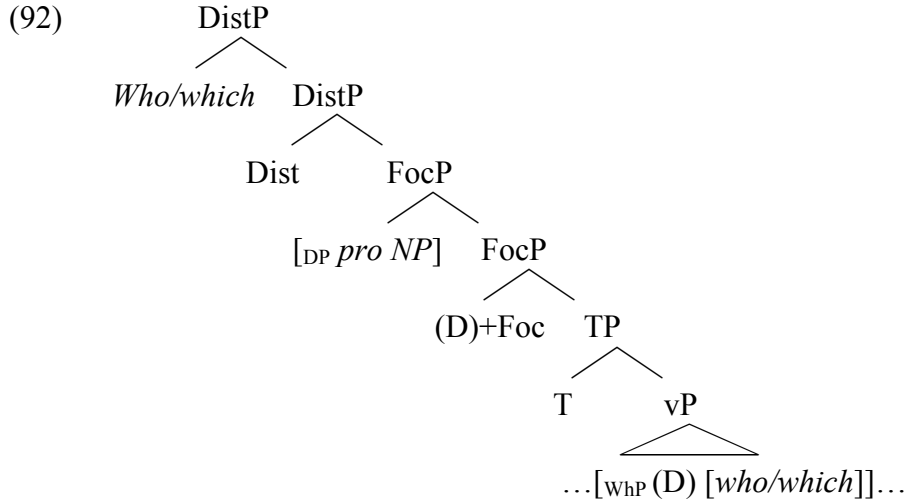
(91) *Determiners*

- a. \*Zein lagunek bere bizilagunak gonbidatu ditu  
 which friend.ERG 3S.POSS neighbours invited AUX  
 “Each friend has invited his/her neighbours” (intended)



^	D	WhP	N	D
	/	<i>zein</i>	<i>lagun</i>	<i>-ek</i>
*				

The structures in (89-91) are all of them opaque structures for extraction in Basque. The underlying representation of a wh-distributive construction is thus as in (110).



The floating-D hypothesis allows us to link in a coherent way the three otherwise unconnected properties of the wh-distributive construction. The maximality condition in the interpretation of the wh-pronoun follows from the independent existence of a maximality operator adjoined to the pronoun, that we have defined as D. The dependency between the wh-key and the definite/specific status of the share follows from the hypothesis that D floats into F, and ends up restricting the focus projection in which shares land in Basque. The structural restrictions on the wh-key in the distributive construction follow as locality restrictions on movement that one can independently observe in Basque. (92) has an added virtue: it accounts for free for the presence of a bound pronoun inside the DP. Since specific and definite DPs cannot covary, a pronoun is needed inside the DP to ensure that the distributive relation can be established. The presence of a bound pronoun inside the DP is finally the source of the ontology of the distribution: it ranges over functions because the possessive form of the share requires it, and the share has a possessive form because something like *his/her DP* is the minimal syntactic structure compatible with a maximality condition, that enables covariation.

## 8. Conclusion

By analysing in detail a distributive construction in Basque that presents particularly narrow conditions in both its semantic range and its syntactic distribution, I have probed the limits of the type of explanation that a cartographic approach can afford. We have shown that the Basque wh-distributive construction constitutes independent evidence for the existence of a Distributive operator that occurs as part of the clausal spine in the functional hierarchy. This functional projection, despite the very special conditions that seems to impose on both the key and the share of the distributive relation in Basque, can be shown to contribute just the very general features that Distributive operators have been claimed to possess cross-linguistically. The narrow conditions that make the Basque wh-distributive special among distributive

constructions must be found in features other than the Distributive head, and can be derived from a conspiracy of factors related among others to whether the wh-phrase can be associated to some tacit modifying adverbial or determiner.

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