

Logophoricity and emphatic determiners in Basque

JOSEBA ABAITUA

Abstract

At least for some Basque dialects, the binding domain of emphatic determiners such as *bera*, *berak*, *berari*, *bere*, etc., may be explained in terms of the notion *logophoricity*, as in Sells 1987. This notion is connected to the discourse roles SOURCE, SELF and PIVOT which typify a certain class of verbs as markers of a logophoric domain. In this domain, emphatic determiners may be bound to a designated role of the verb. Contrarily, within the same domain the corresponding neutral determiners *hura*, *hark*, *hari*, *haren*, etc., may be interpreted as obviative pronouns, that is, they may not corefer to an antecedent bearing any such discourse role.¹

1. Introduction

There is a class of pronominal elements in Basque that has attracted a great deal of attention in the specialized literature for the past decade. It concerns the paradigm of emphatic and non-emphatic determiners that function as third person pronouns. Previous studies have focused on the determination of binding domains in the context of sentence grammar; a topic central to some linguistic theories (eg. the Government and Binding theory of Chomsky 1981 & 1982). Within the Basque literature this matter has been largely dealt with by Rebuschi 1985a, 1985b, 1986, 1987a & 1987b. Some attention to this topic has also been given by Ortiz de Urbina 1986 and Maràcz 1986. The question of whether Basque is a configurational language (at some level of representation) has dominated the discussion. However, very little has been said about the central issue, that is, central issue, that is, the nature of the contrast between both types of determiners. Moreover, the status of zero anaphora and its distribution with respect to overt anaphora has been ignored.

(1) This paper is dedicated to the memory of Professor Koldo Mitxelena, whose teachings at the University of the Basque Country in Vitoria-Gasteiz have been of an immense value. The paper is based on a chapter of a Ph.D. thesis at the University of Manchester Institute of Science and Technology. The author gives special thanks to Paul A. Bennett, for the very helpful comments on previous versions and advice throughout the past three years at Manchester. Thanks are extended to all other members of the Centre for Computational Linguistics at UMIST for their motivating support during his stage at the Centre. The author expresses his gratitude to George Rebuschi, who was source of data, comments, and ideas, and to Joseba A. Lakarra, who provided the opportunity of presenting this paper. Thanks also to Donald Woods for proofreading the paper and to members of the R&D Laboratory of Fujitsu at Barcelona. This research was supported by a grant from the Department of Education, Universities and Research of the Basque Government.

The paper offers a novel interpretation, one that unfolds notions such as logophoricity, obviation, Centre rules, clause nucleus, and the lexical properties of certain verbs. No formal account is given but a mere indication of the problems and the necessary notions to solve them. These may be incorporated into any existing theory. Abaitua 1988 provides one such formal account within the parameters of the Lexical Functional Grammar of Bresnan, Halvorsen and Maling 1983 and Kameyama 1985.

Section 2 introduces the system that Basque uses to encode pronominal information. Firstly, the correspondence between free and bound pronominals is investigated. The lack of overt morphemes to indicate third person is interpreted as involving a system of zero pronominals. Alternatively, in the absence of proper overt items, Basque uses determiners instead. More specifically, determiners of third degree proximity such as *bera* and *hura*, which correspond to the emphatic and neutral forms respectively. The last part of the section presents data taken from Rebuschi 1987b, showing the distributional properties between these two types of determiners.

Section 3 presents the notion of logophoricity, following the discussion by Sells 1987. The discourse roles SOURCE, SELF and PIVOT are defined. These roles serve to mark logophoric arguments of verbs of communication and mental experience. Four tests are applied to the data from Basque that give substantial support to the hypothesis that while the emphatic determiner *bera* may be bound in a logophoric domain, the neutral determiner *hura* may not be bound within the same domain.

Section 4 concludes the paper by attempting a correlation amongst the most important notions discussed: logophoricity and obviation, zero anaphora and Centring rules, and the notions command and precedence which sustain non-coreference rules. It is also shown how the lexical properties of the relevant verbs are determinant in marking the logophoric individuals and the environment of a clause nucleus. The discovery of such correlations reinforces the content of the proposal.

2. Background

This section introduces the special system that Basque employs to encode pronominal information. We start by looking at the relation between the system of free pronominals and the agreement inflection of finite verbs. Then we draw our attention to determiners, for these fill the gaps in the absence of proper third person lexical pronouns. The section concludes with a presentation of the relevant data—largely borrowed from Rebuschi—that illustrates the distributional properties of the two types of determiners.

2.1. Free and Bound Pronominals

Basque has two major ways of overtly encoding pronominal information. One is in terms of bound morphemes of finite verbs inflection. The second is in terms of free pronouns². As we can see in the table below, there is a close correlation between these two types of pronominals.

(2) The terms *free* and *bound* indicate the degree of dependence the pronominal item has at the level of morphology; *bound* means that it belongs within the inflection of the verbs, while *free* means that it has its own lexical status as a separate unit. These two terms should not be confused with the interpretation that they have within a theory of binding, where *bound* means that it is referentially dependant upon a given antecedent, and *free* means that it cannot be so.

Free Pronouns		Bound Morphemes of Verb Inflection		
		ABS	DAT	ERG
sing.				
1	<i>ni</i>	<i>n-</i>	<i>-t</i>	<i>-t</i>
2	<i>hi</i>	<i>b-</i>	<i>-n/-k</i>	<i>-n/-k</i> (sing. informal)
3	-	-	<i>-o</i>	-
pl.				
1	<i>gu</i>	<i>g-</i>	<i>-gu</i>	<i>-gu</i>
2	<i>zu</i>	<i>z-</i>	<i>-zu</i>	<i>-zu</i> (sing. formal)
2	<i>zuek</i>	<i>z-</i>	<i>-zue</i>	<i>-zue</i>
3	-	-	<i>-e</i>	<i>-te</i>

Table 1. Types of overt pronominals.

The parentage between free and bound pronominals is sufficiently manifest looking at table 1. This relationship is clearly exhibited by the absolutive pattern in all forms, as well as by both dative and ergative patterns for plural forms. The correlation exhibited by overt forms of first and second person carries over to third person as well, though, in the latter case, the correspondence is marked in default terms as a zero pronominal. That is to say, the absence of proper lexical third person pronouns is reflected by an analogous vacancy on the verb inflection. The approach advocated here, whereby missing agreement elements may be considered zero pronominals, is reinforced by the otherwise consistent pattern of person and number agreement characteristic of Basque finite verbs.

The range of morphemes that appears in the position corresponding to the third person absolutive, i.e. *b-*, *d-*, *l-* and *z-*, (as in *dator* '(s)he comes', *zeterren* '(s)he came', *letorke* '(s)he could come' and *betor* 'that (s)he should come') may be better interpreted as tense and modality markers, as suggested by Trask 1981, rather than as third person markers. Consequently, with the lack of an overt absolutive bound morpheme on the verb, we can assume that third person referents are cross-marked by a zero morpheme. This zero morpheme may be otherwise deemed absent from the finite inflection whenever there is no such referent with which to agree (compare (1) with (2) below).

Yet, third person plural referents are cross-marked by a range of plurality morphemes, depending on different tenses and modalities: *-z-*, *-it-*, *-izk-*, *-iza-* and *-(t)e* (as in the pairs *doa/doaz* 'he goes/they go', *dut/ditut* 'I have it/them', *diot/dizkiot* 'I have ... it/them to him', *daramat/daramatzat* 'I carry it/them', and *digu/digute* 'he/they have ... it to us').

The same principles that apply to the absolutive paradigm also apply to third person ergatives. Datives, on the other hand, are cross-marked by an *-io-* (*-ie-* for plural) morpheme, though in Eastern dialects this may be restricted to definite dative arguments.

The above interpretation of the data contrasts with the approach advocated in Ortiz de Urbina (1986: 85), where it is claimed that 'all finite verbs obligatorily include an absolutive marker'. Impersonal utterances containing no trace of absolutive referent seem to provide evidence to the contrary. Observe the contrast between (1) and (2) below:

- (1) *Sarritan mintzatu zaio, ez bait du aditu nahi.*
 Often talk aux3sgD neg because aux3sgE listen want
 'He has been advised several times, because he does not want to listen'
- (2) *Sarritan galdu zaio, ez bait du gorde nahi.*
 lose aux3sgD3sgA aux3sgE3sgA keep want
 'He has lost *it* several times, because he does not want to keep *it*'

According to my interpretation, neither *zaio* nor *du* in (1) above contain an absolutive marker, nor need they contain any. Such a marker is correctly interpreted as being absent in both cases. The opposite postulation introduces an unnecessary element with no referring expression to mark. However, in an appropriate sentence context as (2), *zaio* and *du* may be accounted for as containing an absolutive zero morpheme that cross-marks an equally zero pronominal 'Ø'. From the valency of verbs as *galdu* 'to lose' and *gorde* 'to keep', we know that an absolutive referent must be accounted for. As mentioned earlier, the status of the zero morpheme on the finite auxiliary may be granted as a default value in its otherwise consistent paradigm of overt agreement.

Thus, the postulation of a double interpretation for the range of auxiliaries that lack first and second person pronominal information is being made. There would be no need to express agreement information under one interpretation³, while agreement would be marked through a zero morpheme under the second interpretation⁴. The choice

(3) This is further supported by examples such as (i) and (ii) below, where there is no need to express person or number agreement on the finite auxiliaries *du* and *da*, since there is no absolutive argument with which to corefer:

- (i) *Joan dela esan du.*
 go aux3sgA-comp say aux3sg-E
 'He said that he went'
- (ii) *Beranduegi dela erabaki omen da.*
 late-too aux decide part. aux
 'Apparently, it has been decided that it is too late'

Despite the completive clauses *joan dela* 'that he went' and *beranduegi dela* 'that it is late' taking the place of object and subject of the verbs *esan* 'to say' and *erabaki* 'to decide' in (i) and (ii) above respectively, it is not possible to say that these are in a relation of agreement with the finite auxiliary. These two completive clauses do not refer to any particular object or individual in the world and consequently they cannot be either singular or plural, nor first or second person. In other words, such completive clauses are not applicable to agreement relations.

(4) Accordingly, there will be four possible interpretations for the finite form *du* as follows:

between either two possibilities being determined by the subcategorization properties of the governing verb in each case.

2.2. Zero Anaphora

Partially given to the rich verb inflection, it can be expected that Basque is a language with an extensive use of zero anaphora⁵. Here we distinguish between bound and free anaphora, in the sense that the notion 'anaphora' applies to both (i) pronominals that are obligatorily assigned antecedent within some context (eg. the context of a sentence for the reflexive *herself* in English), i.e. *bound anaphora*, and (ii) pronominals that are only optionally assigned antecedent within a similar context (the non-reflexive *her*), i.e. *free anaphora*. This use of the term anaphora is still somehow restrictive, since there may be many other items in a language besides pronominals fulfilling anaphoric roles (cf. Cornish 1987)⁶.

(i) When *du* marks no agreement in person or number with either subject or object:

Ez du merezi etortzeak

no aux worth come-nom-E

'it's not worthwhile to come'

(ii) When *du* marks a 3rd singular subject, but no object:

Txoriak txistuka jardun du.

bird-E singing engage aux-3sgE

'the bird has been singing'

(iii) When *du* marks a 3rd singular object, but no subject:

Euria egin du

rain-A make aux-3sgA

'it rained'

and (iv) when *du* marks both a 3rd singular subject and object:

Txakurrak katua zirikatu du

dog-E cat-A chase aux-3sgE3sgA

'the dog chased the cat'

The difference in all four interpretations is independent of the morphology of *du*, only if because *du* is free from any overt bound morpheme marking person or number (in clear contrast with the forms *ditu*, with absolutive plural, *dute* with ergative plural, and *dituzte*, with both absolutive and ergative plurals). The four mentioned interpretations are the result of combining the two allowed zero morphemes with *du*, namely, both the 3rd person singular ergative and absolutive zero markers. Datives on the other hand are marked through the *-io-* morpheme, leaving no place for a zero morpheme in this case.

(5) It has been shown in a number of papers that finite inflection is not a necessary condition for zero anaphora phenomena, cf. Chinese, Japanese, Korean among other languages (see the discussion in Kameyama 1985, or in Cole 1987).

(6) It must be pointed out that our use of the term *anaphora* is less restrictive than in the Government and Binding (GB) theory of Chomsky 1981. Although there is not sufficient space to delve into this discussion here, a few words are in order.

GB theory of Binding gives the term *anaphoric* a rather specialized interpretation: that an 'anaphoric item must be bound within some specified local domain, known as governing category'. Such definition only applies to lexical reflexive and reciprocal pronouns as well as to empty subjects of some infinitive and gerundive clauses in English, and perhaps other languages (the empty subject is known as PRO). The postulation is made that *anaphoric* elements are in complementary distribution to *pronominal* elements in

As a matter of fact, Basque is characterized by being extremely permissive with regards to the requirement of overt pronominals in the syntax. Given the rich inflection of finite verbs, it seems natural that overt pronominals may be generally left unexpressed. The case is, however, that zero pronominals are not only allowed in finite clauses, but also in tenseless clauses.

The topic of zero anaphora itself deserves a separate study (similar to Kameyama's 1985 for Japanese). Only then will the magnitude of this property be demonstrated⁷. The assumption that we advocate here though, is that Basque makes an extensive use of zero anaphora. Moreover, this is not only possible with subjects but also with direct and indirect objects, as (3) and (4) below illustrate.

- (3) *Aitak pozik hartuko luke [norbaitek {Ø/bera} laguntzea]*
 father-E gladly take aux someone-E {Ø/him} helping
 'Father would gladly accept somebody helping him out'
- (4) *Aitak esan zidan [zuk giltzak {Ø/berari/niri} emateko]*
 father-E say aux you-E keys-A {Ø/him/me} give-to
 'Father told me for you to give {him/me} the keys'

Example (3), analogous to Ortiz de Urbina's example (1986: 257), contains an unexpressed direct object, or absolutive, of the verb *lagundu* 'to help'. Example (4), on the other hand, shows a similar indirect object, or dative, of the verb *eman* 'to give'. These empty arguments must be represented as zero pronominals; their reference being decidable from their immediate discourse context. In either case above the most likely antecedent can be identified with (though need not be so) an argument of the matrix verb, the subject of *hartu* 'to accept' in (3), and either the subject or indirect object of *esan* 'to say' in (4). The relevant observation about (3) and (4) above is that not only subjects (cf. example (2) above), as is otherwise well documented in other languages, but also direct and indirect objects may become lexically null in Basque. Crucially, these zero pronominals may occur in tenseless clauses, and not only in clauses with finite verbs⁸.

2.3. Determiners as third person Pronouns

We said above that there are no proper forms to indicate third person referents in Basque. The pronominal forms for first and second person singular are shown in table 2 below:

those domains. However, both this postulation and the definition of governing category, which are central to the theory, have turned out to be problematic. On the one hand, the complementary distribution between reflexive and non-reflexive pronouns has been shown to be only partial, as has been noted by Chomsky 1986 himself. On the other hand, the excessive variation in the definition of governing category (the locality domain) across languages has been a motive for doubts, cf. Rappaport 1986. Maling 1984, for example, has shown that long-distance (i.e. non-local or non-clause-bound) reflexives exist in Icelandic. Rebuschi 1987b studies some of the problems with this new proposal when applied to Basque. It should be pointed out that Basque reflexives and reciprocal elements have a rather different behaviour from their corresponding forms in English (eg. in Basque the reflexive *bere buruak* 'himself' may be the subject, cf. Ortiz de Urbina 1986, Abeitua 1988).

(7) Abeitua 1988 attempts a first approach to this problem by considering for Basque the system of Centring rules of Kameyama 1985 for Japanese. Centring rules are part of a framework of discourse grammar developed by Sidner 1983, Grosz, Joshi & Weinstein 1983, and Grosz & Sidner 1985, 1986.

(8) This homogeneous treatment of zero pronominals contrasts with that advocated by Chomsky 1981, 1982. See the works by Huang 1984, Rizzi 1986, Cole 1987, and Van Valin 1986, among others, discussing the rather problematic status of zero pronominals within GB.

CASE:	ABS	ERG	DAT	GEN	etc .
1 sg	<i>ni</i>	<i>nik</i>	<i>niri</i>	<i>nire</i>	...
2 sg	<i>hi</i>	<i>hik</i>	<i>hiri</i>	<i>hire</i>	...
1 pl	<i>gu</i>	<i>guk</i>	<i>guri</i>	<i>gure</i>	...
2 sg	<i>zu</i>	<i>zuk</i>	<i>zuri</i>	<i>zure</i>	...
2 pl	<i>zuek</i>	<i>zuek</i>	<i>zuei</i>	<i>zuen</i>	...

Table 2. Table of first and second person pronoun

These are the neutral forms. There also exist *emphatic* forms, such that *ni* becomes *neu*, *hi* becomes *heu*, *gu* becomes *geu*, and so on.

Determiners have three degrees of proximity in Basque, as in Spanish or in Japanese, and may be used to indicate a third person referent each one in its appropriate context. These determiners are for the singular absolutive: *hau*, I (i.e. 'this'), *hori*, II (i.e. 'that'), and *hura*, III. Determiners, like personal pronouns, possess emphatic forms, namely: *berau*, *berori*, and *bera*. It is the emphatic third degree determiner which is often employed as the equivalent of the English pronominal (*s*)*he*.

CASE:	ABS	ERG	DAT	GEN	etc .
3 sg	<i>bera</i>	<i>berak</i>	<i>berari</i>	<i>bere</i>	...
3 sg	<i>hura</i>	<i>hark</i>	<i>hari</i>	<i>haren</i>	...

Table 3. Table of determiners

Let us now concentrate on the contrasts between *hura* and *bera*.

2.4. Rebuschi's data

Prior to any further consideration, it must be pointed out that there is considerable dialectal variation in the choice of determiners as third person pronouns, a study of which is well beyond the scope of this paper (see Rebuschi 1985a, 1985b, 1986, and 1987a for a more detailed investigation on the issue). This diversity will obviously hinder an accurate account of the problem. Nonetheless, we can follow Rebuschi in making the following generalization: A major dialectal variation with regards to the binding domain of *bera* takes apart both classic Basque texts in the Labourdin dialect of the 17th century (the author Axular being the most important representative) and modern Lower Navarrese from all other dialects. The former two forms will be referred to, using Rebuschi's own terminology, as 'restricted Eastern forms'. These have been thoroughly analysed by Rebuschi himself in a number of papers (cf. Rebuschi 1986, 1987a). The emphasis of this paper is on the domain of *bera* in the unrestricted dialects.

The set of sentences below from Rebuschi 1987b serve to illustrate the discussion:

(i) Example (5) below shows the possessive pronominals *bere* and *haren* in complementary distribution. While *bere* is bound to an antecedent, eg. "Peio", in a domain (that we must define), *haren* cannot be bound in that same domain⁹.

- (5) *Peiok_i [(bere_{i,*j}/haren_{*i,j}) txakurra] ikusi du*
 Peter-E his dog-A see aux
 'Peter saw his dog'

(ii) Examples (6a & b) below show an asymmetry between both the zero pronominal 'Ø' and *bera* on the one hand, and *hura* on the other. The first two need only be free (i.e. unbound) in the domain of their own clause nucleus, i.e. the embedded finite complement of *esan*, 'to say', while *hura* needs to be free in a wider domain (though Rebuschi points out that some speakers accept co-reference of the latter).

- (6) a. *Peiok_i dio [(berak_{i,j}/Ø_{i,j}/hark_{7i,j}) ikusiko nauela ni]*
 -E says he-E see aux me-A
 'Peter says he will see me'
 b. *Peiok_i dio [nik (bera_{i,j}/Φ_{i,j}/hura_{7i,j}) ikusiko dudala]*
 I-E him-A see aux
 'Peter says I will see him'

(iii) Crucially, *hura* becomes acceptable in (7). One factor can be put forth to explain the contrast between (6) and (7) in relation to this. As Rebuschi suggests, there is a difference of domain, i.e. an intervening clause with a new referring expression in subject position, i.e. *nik*, 'I', renders coreference legitimate (for every speaker).

- (7) *Peiok_i dio [uste dudala (nik) [zuk hura_{i,j} ikusiko duzula]]*
 believe aux (I-E) you-E him-A see aux
 'Peter says I think you will see him'

(iv) Comparing (5) with (8), while every speaker accepts (5), some speakers of restricted Eastern dialects, points out Rebuschi, reject coreference of the possessive *bere* in (8). Thus suggesting that for these speakers the binding domain of *bere* is somehow narrower. This binding domain may take into account the minimal clause nucleus containing *bere* and the antecedent. Consequently, since there is no antecedent within the embedded clause in (8), the whole clause is deemed unacceptable by speakers of restricted Eastern dialects.

(9) The genitive may also be represented by a zero pronoun in contexts in which its antecedency is solved through other means, such as the so called 'sympatheticus' dative, denoting possession:

- (i) *Ø_i txakurra hil zaio Peiori_i*
 dog-ABS die aux -D
 'Peio's dog died' (lit. 'the dog died to Peio')

Notably, the neutral determiner is disallowed from that context, while the emphatic determiner is not:

- (ii) **[Haren/bera_i] txakurra hil zaio Peiori_i*
 he-GEN

- (8) *Peiok, dio [bere txakurra hil dela]*
 his-gen dog-A die aux
 'Peter says his dog has died'

For speakers of unrestricted dialects, the vast majority, the binding domain of *bera* cannot be specified in terms of the minimal clause nucleus criterium, but by some other, somewhat wider, criteria.

3. Logophoricity of emphatic determiners

The question of major concern still is how to delimit the contrast in domains between *bera* and *hura* for Western and nonrestricted Eastern dialects. This domain cannot be defined in structural terms, such as the minimal clause nucleus notion, which otherwise seems relevant for restricted Eastern dialects¹⁰. Thus, instead of resorting to structural notions (as Rebuschi does), I would like to venture the hypothesis that the distinction between *bera* and *hura* touches upon the notion of logophoricity. I will briefly introduce the ideas expressed in Sells 1987 relevant to a demarcation of logophoric phenomena, which builds on previous work cited therein (including Kameyama 1985 and Bresnan et al. 1983), and see whether this notion can be used to define a binding domain relevant to the distinction in question.

In a discourse situation involving predicates of communication or mental experience, Sells (1987: 455-461) suggests that the notion of logophoricity be moulded as the interaction of three primitive discourse roles (which he integrates into Discourse Representation Structures of Kamp 1981), namely:

- SOURCE: one who is the intentional agent of communication, i.e. the source of the report.
- SELF: one whose mental state of attitude is described, i.e. the person with respect to whose consciousness the report is made.
- PIVOT: one with respect to whose (space-time) location the content of the proposition is evaluated, i.e. the person from whose point of view the report is made.

Prototypical logophoric cases concern verbs of communication such as 'to say' (cf. Sells 1987: 456). A pronoun in the domain (eg. inside the sentential argument) of such predicate would be expected to be logophorically bound. The SOURCE role then becomes the prominent role, and being the highest in a hierarchy or implication system comprehending the three roles, the remaining two roles, SELF and PIVOT

(10) A problem internal to GB theory is that it is restricted to sentence grammar (cf. van Riemsdijk & Williams 1986: 185, 194), while most of the problems posed by anaphora transpass those limits. Furthermore, Lavinson 1987 shows how a considerable part of the phenomena captured by Chomsky's Binding principles should be properly treated as pragmatic tendencies rather than as grammaticality conditions. For an early approach to pronoun reference based on pragmatic/discourse tendencies see Hobbs 1978. A more principled account also based on preferences/tendencies is represented by the theory of Centring of Grosz & Sidner 1985.

(though for the purpose of this discussion the latter one is irrelevant), become involved as well. Thus, a clear logophoric domain is marked where the referring expression of the SOURCE role (i.e. the logophoric individual) becomes the candidate for antecedency.

In addition to verbs of communication, verbs of mental experience or psych(ological) verbs, such as 'to fear', 'to distress', etc. also identify a logophoric domain, this time with respect to the SELF role, thus also implicating the PIVOT role (see Sells 1987 for a more detailed exposition). It is important to notice that the logophoric individual is identified first with the lower role in the hierarchy. That is, if SELF and SOURCE identify different individuals, it is the SELF which would be considered first.

We will see that testing *bera* and *hura* in the context of such paradigmatic logophoric domains as those marked by verbs of communication and psych-verbs will shed some light onto the distinction between them. Let us consider the following four cases.

(i) In the set of examples above, particularly, with regards to (6) and (7), it can be observed how *bera* becomes dependent upon the 'SOURCE' role in (6), that is, the individual, *Peio*, who makes the report (and by implication it also identifies the 'SELF'). The form *hura*, on the other hand, disallows or obviates such identification. Interestingly, the contrast between (6) and (7) may be explained by the fact that a new 'SELF' role, i.e. *nik*, 'I', is introduced in the intermediate clause of the latter, which breaks up the logophoric domain, hence allowing a co-referential reading with *hura*. A similar example to the above, (9), typically shows the contrast between logophoric and non-logophoric pronominals:

- (9) *Mirenek_i esan du* [*{bera_{i|?}?}/hura*_{i|j}}] *joango dela*
 -E say aux she+LOG/-LOG go aux-COMP
 'Miren said [that she will go]'*

(ii) In the context of psych-verbs, i.e. predicates through which an external speaker reports the state of mind of some sentence internal referent, a similar contrast can be observed:

- (10) *Miren_i beldur da* [*Itziarreke_j ez ote duen {bere_{i|?}?/haren*_{i|j}}]txartela ekarriko*
 -A fear is -E neg prtle aux {+LOG / LOG} ticket bring
 'Miren fears Itziar might not brig her ticket'

It is quite symptomatic that while the preferred interpretation of *bere* is with the SELF role, i.e. *Miren*, *hura*, which we will define as non-logophoric pronominal, may not refer to that same individual, while it can perfectly well refer to *Itziar*, in its immediate dominating clause. Here again, the notion of logophoricity seems to prove relevant to the distinction between the two pronominals.

(iii) Consider further (11):

- (11) *Mirenek_i Itziar_j* [*bere_{i|?}?/Ø*_{i|j}}] *amarekin ikusi du*
 -E -A [+LOG/zero] mother-COM see aux
 'Miren saw Itziar with her mother'*

While in the English interpretation of (11) the pronominal can corefer with either antecedent, and the sentence is ambiguous; in Basque the pronominal *bere* has the

preferred reading in which it depends upon the SELF role, (i.e. assuming that a verb of perception like *ikusi*, 'to see', can be included among verbs of mental experience and hence creates a logophoric domain)¹¹.

(iv) Another common property of logophoric pronouns is their behaviour with plural pronouns. (Sells 1987: 449) indicates that such pronouns do not require antecedents with identical extensions but instead require that the antecedent be included in the set denoted by the pronoun, as illustrated by (12):

- (12) *Mirenek esan zuen [beraiek atera zirela]*
 -E say aux they+LOG-pl come-out aux
 'Miren said that they (including Miren) had come out'

This is an exact parallel to the example from the African language Ewe cited by Sells, who adds that similar facts have been found in Gokana and Mapun (cf. Sells 1987: 449).

Hence, although a more careful analysis of both *bera* and *hura* remains to be accomplished, and despite the proposed solution needing to be confronted against a broader amount of data, I suggest applying, on a tentative basis, the notion of logophoricity in the distinction between these two pronominals. The data presented in this section points towards the appropriateness of the possibility.

It would appear, from examples (6a & b) above, that the zero anaphor 'Ø' shares distributional properties with *bera*, as pointed out by Ortiz de Urbina (1986: 195-6). However, as we shall see below, *bera* is sensitive to a precedence factor in a manner that 'Ø' is not. Also, it must be remembered that a major characteristic of *bera* is that of being emphatic.

4. Conclusions

So far we have argued that the distinction between emphatic and neutral determiners, in their role as third person pronouns, involves the notion of logophoricity.

An important fact that has been left unexplored for lack of space concerns the role of zero pronominals and their distributional properties with respect to overt pronouns. Elsewhere, in Abaitua 1988 it has been suggested that zero pronominals fulfil in Basque an important discourse role as Centre encoders. This had been shown to be the case in Japanese (cf. Kameyama 1985: 100-106), but opposed to English, in which the role of the Centre is filled by the overt third person pronoun. The notion Centre may be briefly defined as a referring expression 'centrally being talked about' or 'in the centre of attention', at the time an utterance is produced in discourse. It is partially related to the notion 'topic continuity' in discourse of Givón 1983. The fundamental Centre rule in English stipulates that a continuous Centre is encoded by the overt pronoun (cf. Grosz et al 1983, Grosz and Sidner 1985). Abaitua 1988 argues that the same rule in Basque uses a zero pronominal. The idea resides in the fact that while in English overt pronouns are required throughout by the grammar, in Basque (as in Japanese) they are not. There is not room to dwell on this discussion here, but the

(11) *Itziar*, which under a system Centring rules can be interpreted as a forward looking centre (remaining in focus) cf. Kameyama 1985, is coreferred in (11) via a zero anaphor, as is common in Basque within certain domains.

assumption is that in unmarked situations, zero pronominals in Basque suffice to perform pronominal functions. Consequently, the two types of overt determiners *bera* and *hura* would be reserved for certain marked situations, one clear situation, it is argued, being determined by logophoric environments.

The phenomenon of *obviation* may be brought into the fore to reinforce upon this idea of logophoricity. Bresnan 1982 has designated (13) as a typical environment for obviation in English.

- (13) a. *Mary_i wished [\emptyset _i to win]*
 b. *Mary_i wished [for her_i to win]*

That is, in certain contexts as (13b)—typically for-subjects of infinitive complements of verbs such as *wish*, *hope*, etc.—an overt pronominal, eg. *her*, obviates the otherwise obligatory antecedency of the governing subject *Mary*. In contrast, the zero pronominal in (13a) is obligatorily bound to its antecedent *Mary*. Incidentally, example (13a) typifies one of the few cases where zero anaphora is allowed in English. English is, as we know, particularly restrictive in respect to zero anaphora permissibility. Other languages such as Italian, or Spanish widely permit zero anaphora in subject position. Languages such as Basque or Japanese permit their direct and indirect objects in addition to subjects.

The equivalent of (13) in Basque is (14) below:

- (14) a. *Mirenek_i nabiago luke [\emptyset _i irabaztea]*
 -E prefer aux to win
 'Miren preferred [\emptyset _i to win]'
 b. *Mirenek_i nabiago luke [berak_i irabaztea]*
 -E prefer aux to win
 'Miren preferred [for herself_i to win]'
 c. *Mirenek_i nabiago luke [bark_i irabaztea]*
 -E prefer aux to win
 'Miren preferred [for her_i to win]'

Clearly the only possible way of expressing obviation in Basque is via the neutral determiner *bark*. Between the two coreferential interpretations, sentence (14a) with a zero anaphora is preferred. Coreference here is obvious from the discourse context, a logophoric context dictated by the verb of mental experience *nabiago* 'to prefer'. The overt pronoun *berak* may also be used to emphasize upon the coreference. We may say that the emphatic nature of *berak* manifests itself in terms of a special condition imposed on the marked reference. If coreferential with a matrix argument, it necessarily becomes a contrastive form meaning 'x and not others' (glossed '!'). The verb *nabiago* 'to prefer' is a verb of mental state which marks its subject with the SELF role. It thus creates a logophoric domain that extends over to the infinite complement *irabaztea* 'to win', whose subject is the bound to the antecedent bearing the SELF role.

We may then establish a hierarchy that marks the zero pronominal as the preferred form for anaphoric purposes, before the emphatic determiner *bera*. This is to say, zero anaphora does not obviate a logophoric antecedent and the overt pronoun *bera* is emphatic as well as sensitive to logophoricity. We may further suggest that Sell's hierarchy amongst logophoric individuals, i.e. PIVOT > SELF > SOURCE, matters for

Centring rules in the sense that the Centre encodes the higher role in the hierarchy. But I leave this question open to further research.

We know that verbs of mental experience, including verbs of perception, such as *entzun* 'to hear', *ikusi* 'to see', and psychological verbs such as *beldur izan* 'to fear', *ahaztu* 'to forget', *gustatu* 'to like', in addition to verbs of communication, such as *esan* 'to say', *eskatu* 'to ask', including directive verbs, such as *agindu* 'to order', all qualify as logophoric verbs. The logophoric domain is marked by the argument structure of verbs like these, in the sense that the discourse roles SOURCE and SELF belong in their argument structure restricting the nature of their argumental referring expressions. For example, the verbs *beldur izan*, or *ahaztu* have their relevant argument marked [+self]; the verbs *ikusi*, or *esan* have it marked [+source]; while the directive verbs *eskatu*, and *agindu* possess two applicable arguments [+source, +self] each. The logophoric domain generated by these verbs extends to the embedded clauses that they may govern, as examples above show. In this matter there is a notion that gains some relevance; this is the notion of clause nucleus.

A clause nucleus is important because it serves to declare the context in which certain principles take place. This context is defined in terms of the argument structure of a verb; which corresponds to the domain of lexical subcategorization. In relation to overt and zero pronominals for example, Abaitua 1988 shows that a functional notion, command¹², applies in the context of a clause nucleus to both overt and zero pronouns as a condition of antecedency; but loses its force outside such a nucleus context. This is to say, that the pronominal item may not be within a 'higher' grammatical function (where higher is defined in terms of matrix and embedded clauses) than its antecedent. Thus, if the pronominal is an argument of the matrix verb, we cannot find an antecedent within an embedded complement clause. However, antecedents may (but need not) be found in noncomplement clauses, such as adverbial modifiers (i.e. adjuncts). The important point here is that such adjuncts do not belong in the clause nucleus of the verb:

- (15) a. [Peio_i erantzuna bazekiela] esan zuen [berak/Ø_s]
 -E answer-A know-comp say aux he-E
 'Peio knew the answer, he said'
 b. [{Berak_s/Ø_s} erantzuna bazekiela] esan zuen Peio_i
 'He knew the answer, Peio said'
- (16) a. Peio_i erantzuna bait zekien, irabazle atera zen [berak/Ø]
 -E answer-A because know champion came-out he
 'Since Peio_i knew the answer, he_i became the winner'
 b. {Berak_s/Ø_s} erantzuna bait zekien, irabazle atera zen Peio_i
 'Since he_i knew answer, Peio_i became the winner'
 c. Peio_i irabazle atera zen, {berak_s/Ø_s} erantzuna bait zekien.
 'Peio_i became the winner, since he_i knew the answer'

(12) This notion is called 'f-command' within LFG, but is essentially equivalent to the notion 'command' of Langacker 1969, later reformulated as 'c-command' within GB, eg. Reinhart 1976. We keep the notions 'command' and 'precedence' separate, as Langacker does, and contrary to Reinhart's claim that 'c-command' subsumes 'precedence'. Evidence from Basque, see below, and other languages (Japanese, Malayalam, among others, cf. Kameyama 1985) seems to favour our approach.

Examples (15a & b) display the contrast between commanding and commanded pronouns (either overt or zero) and their antecedent within a clause nucleus, the nucleus of the verb *esan* 'to say'. Coreference is not allowed in (15a) because the antecedent does not command the pronominal, but is rather commanded by it (i.e. the antecedent is within the embedded completive clause, while the pronominals belong in the matrix clause). In (15b), the distribution is interchanged and thus coreference is rendered acceptable.

A principle based on the notion of command may be established: the antecedent must command the pronominal. Still, as we learn from (16a), where the antecedent is in a 'lower' clause, this principle may be restricted to elements within a clause nucleus. In (16a) the antecedent is outside the nucleus marked by *atera* 'to (be)come' and hence coreference is permitted¹³. A similar problem is found in (16b), where a preceding factor seems to influence the acceptability of the coreference relation with the overt pronominal, while it does not with the zero pronominal. This is made evident by the resulting acceptability after a change of order in (16c).

Both these problems, the precedence factor with overt pronominals and the 'nuclearity' of the command principle, must be accounted for in a formal theory of grammar. Abaitua 1988 provides such formal account within the parameters of the LFG formalism. The explanations of these two, as well as the other cases studied above, were achieved by integrating into the grammar the notions: logophoricity and obviation, zero anaphora and Centring rules, clause nucleus and the separate notions of command and precedence.

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(13) Note that antecedency with regards to logophoricity may be determined by the PIVOT role. In the case of (16) such role identifies Peio, the subject of a verb, like *atera* 'to become', that is not a verb of communication, nor a verb of mental state.

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