

SOME ARGUMENTS FOR COMPLEMENT-HEAD ORDER IN BASQUE DPs

Xabier Artiagoitia

UPV/EHU

In this article¹ I will be comparing two different views of the basic internal structure of the Basque noun phrases, viz:

(1) the antisymmetric view: [D... [Q... [Adj... [_{NP} N]]]]

(2) the head-parameter view: [[[_{NP} N] Q] D]

I will argue that what we might call the classical generative view, exemplified in (2), namely that Basque is also a head-final language in the DP field, is basically right and that (1), developed in Oyharçabal (2006) and based on Cinque (2005), is misguided. I will also have in mind giving a positive reply to a question posed by Longobardi: "... a substantial number of problems are still to be addressed theoretically and typologically. [Among them...] *are there really languages with phrase-final D and other mirror-image phenomena? And, if so, how are they to be treated?*" (emphasis mine) (Longobardi 2001: 600).

Adjectives are missing in (2) for two reasons: while the classical head-parameter view doesn't necessarily commit oneself to a given analysis of DP-internal adjectives, this is precisely the case in Cinque's (2005) version of the antisymmetry program, who endorses the Cinque-Scott's templatic approach (cf. Cinque 1994, Scott 2002). These latter studies claim that adjectives are specifiers of DP-internal functional heads, heads that are themselves arranged along a universal hierarchy. The second reason not to mention adjectives in (2) is the fact that they are the subject matter of section 4, where I briefly summarize the argument, presented extensively in Artiagoitia (2006a), that even a Cinque-Scott approach to adjectival modification is compatible with a head-final analysis of Basque and need not lead to an antisymmetric view of the DP.

This article is organized as follows: section 1 critically reviews Cinque's (2005) antisymmetric approach to DPs. The subsequent sections present three sorts of data to argue against that view for Basque DPs: section 2 proposes a unified analysis of both prenominal and postnominal quantifiers; section 3 discusses Western Basque data related to demonstratives; section 4 deals with DP-internal adjectives. The three together will show that antisymmetry cannot adequately handle the data, whereas the head-parameter accounts for them in a principled way.

¹ This article is dedicated to Patxi Goenaga, a Basque grammar master for older and younger generations, and a model for all in so many other respects. This study, a revised and shortened version of Artiagoitia (2008), has been made possible by research project EHU07/13. I thank A. Elordieta, J. Emonds, and M. Huarte for their very helpful comments; all remaining errors are my own.

1. Cinque's (2005) version of antisymmetry: review and critique

In his revision of Greenberg's well-known Universal 20, namely:

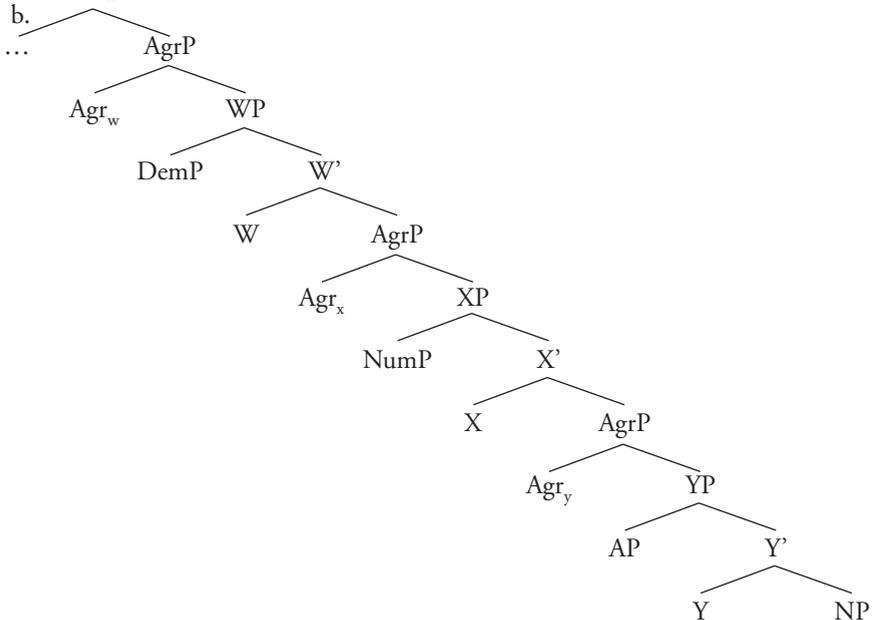
- (3) "When any of all of the items (demonstrative, numeral, and descriptive adjective) precede the noun, they are always found in that order. If they follow, the order is either the same or its exact opposite" (Greenberg 1966: 87)

Cinque claims that the second part is incorrect: it is too restrictive given that *N-Num-A-Dem* and *N-A-Dem-Num* orders are attested and it is also too powerful due to the absence of *Num-N-Dem-A* languages. Beyond these considerations, Cinque notes that not all attested orders have the same frequency. Here are Cinque's own estimations:

- | | |
|------------------------------------|---------------------------------|
| (4) a. Dem-Num-A-N (very frequent) | b. Dem-Num-N-A (frequent) |
| c. Dem-N-Num-A (very rare) | d. N-Dem-Num-A (rare) |
| e. * Num-Dem-A-N | f. * Num-Dem-N-A |
| g. * Num-N-Dem-A | h. * N-Num-Dem-A |
| i. * A-Dem-Num-N | j. * A-Dem-N-Num |
| k. A-N-Dem-Num (very rare) | l. N-A-Dem-Num (rare) |
| m. * Dem-A-Num-N | n. Dem-A-N-Num (very rare) |
| o. Dem-N-A-Num (frequent) | p. N-Dem-A-Num (very rare or *) |
| q. * Num-A-Dem-N | r. Num-A-N-Dem (very rare) |
| s. Num-N-A-Dem (rare) | t. N-Num-A-Dem (rare) |
| u. * A-Num-Dem-N | v. * A-Num-N-Dem |
| w. A-N-Num-Dem (very rare) | x. N-A-Num-Dem (very frequent) |

Cinque intends to articulate a proposal that will account for the existing or attested word order patterns as well as for their relative scarcity/frequency. That proposal pivots around two ideas. First, Cinque assumes the following universal hierarchy:

- (5) a. [... [WP Dem ... [XP Num [YP Adj [NP N]]]]]



In the tree-diagram, adjectives, numerals and demonstratives are all in the specifier position of some functional head, each associated with an agreement projection. Second, Cinque restricts movement possibilities to the following six:

- (6) i. no movement at all (unmarked option); or
 ii. movement of NP plus pied-piping of the type [NP [XP]] (unmarked option); or
 iii. movement of NP without pied-piping (marked); or
 iv. movement of NP plus pied-piping of the [XP [NP]] type (more marked still).
 v. Total (unmarked) versus partial (marked) movement of NP with or without pied-piping.
 vi. Neither head movement nor movement of a phrase not containing the (overt) NP is possible (except for focus XP-movement to some DP initial position).

Apart from this, Cinque regards movement without pied-piping (=6iii) as more marked than partial NP-movement (=6v, option b).

The detailed discussion of every single possible derivation is beyond the scope of this article.² Nonetheless, it should be pointed out that Cinque doesn't justify the restrictions in (6) one by one, and the metric for calculating markedness seems *ad hoc* in some cases.³ The order (4r) also deserves some comment: Cinque's own interpretation is that this order derives from partial NP-movement (marked option) followed by the [XP [NP]] type of pied-piping (a very marked option). However, it is not clear that there is NP-movement at all, for NP remains *in situ*, and the only required and obvious movement is that of the AgrP right above the numeral, so that the entire chunk is placed before the demonstrative. What is more, and contrary to Cinque's claim, that movement would not be of the [XP [NP]] type, but of the [XP [XP [NP]]] type, given that the nominal features that trigger movement are neither in the specifier of Agr_x in (5) nor in the specifier of the complement of the X head connected with it, but in the lowest complement of all heads. In this respect, it is doubtful whether this kind of movement should be possible in the first place.

Let us now concentrate on the derivation of two word orders: *N-A-Num-Dem* (= 4x) and *Num-N-A-Dem* (= 4s), taken to be the standard Basque order. The first one exploits using the option (6ii) three times to derive the surface order:

- (7) a. [... [_{WP} Dem ... [_{XP} Num ... [_{YP} AP [_{NP} N]]]]]]
 b. [... [_{WP} Dem ... [_{XP} Num ... [NP [_{YP} AP t_{NP}]]]]] (NP-movement)
 c. [... [_{WP} Dem ... [[NP [_{YP} AP t_{NP}]] [_{XP} Num ... t]]]] ([NP [XP]] pied-piping)
 d. [... [[[NP [_{YP} AP t_{NP} [_{XP} Num ... t]]] [_{WP} Dem ... t]]]] (idem (=6ii) again)

² In a tightly argued paper, Abels & Neeleman (2006) show that all orders and their relative frequency can be better accounted for in a non-antisymmetry approach using only leftward movement.

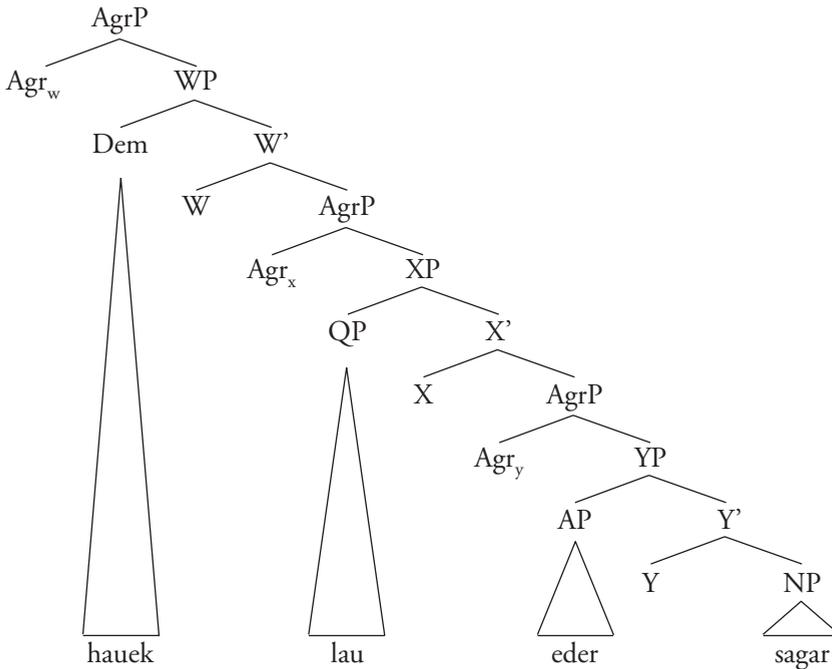
³ For example, the difference between the word orders in (4b-c-d) is whether NP-movement takes place partially once (=4b), or twice (=4c), or whether the NP-movement is total (=4d). Cinque makes a point in contrasting (4b) and (4c): the lack of pied-piping in (4c) would make it two times marked in contrast with (4b), which has pied-piping. But, in fact, given that only NP moves (around AP), it is doubtful that there is any pied-piping in (4b). If so, these two word order patterns only differ in whether their very marked option (partial NP-movement with no pied-piping) takes place once or twice; this in turn predicts, wrongly, that their relative frequencies should not be far away from each other.

In brief: taking (5) as the basic structure, NP moves first to the left of YP (i.e. to the specifier of a higher functional (agreement) head); next, the lowest constituent resulting from NP-movement and containing the moved NP in the specifier position moves past the Numeral to a higher specifier position of a functional (agreement) head; finally, the lowest constituent resulting from the previous pied-piping movement raises entirely past the demonstrative to a higher specifier, so that the surface order is obtained. Here is the basis of a second critique: this *snowball* movement treatment of surface order (4x) creates a paradox in that it is as frequent as (4a) yet it requires three consecutive movements, the three of which are only motivated theory internally.

As for the Basque standard order, Oyharçabal (2006) gives a plausible derivation in terms of Cinque's proposal:

- (8) a. underlying order: hauek lau eder sagar
 these four beautiful apple
 b. surface order: lau sagar eder hauek
 four apple beautiful these
 'these four beautiful apples'

- (9) [_{AGR_wP} [_{WP} hauek [_{AGR_xP} [_{XP} lau [_{AGR_yP} [_{YP} eder [_{NP} sagar]]]]]]]]]]



To derive the correct surface order (i.e. *Num-N-A-D*), Oyharçabal proposes NP movement to the specifier of the lower Agr_y projection and subsequent movement of the entire intermediate Agr_xP to the higher specifier of Agr_w, thus pied piping the constituent [*lau sagar eder*]. Schematically, in two steps:

tually no) DP-internal agreement morphology require overt movement of the kind advocated for Romance?⁴

In sum, the derivation of the standard Q, A, N combinations in Basque DPs along the lines of Cinque's proposal has two salient features: (a) one needs two separate and unrelated analyses of quantifiers (one analysis being very marked and the other totally unmarked); and (b) these two separate derivations rely on a series of overt movements that only have theory internal motivation. As we shall see in next sections, there is no trace of these two shortcomings if one adopts the head-parameter view to Basque DPs.

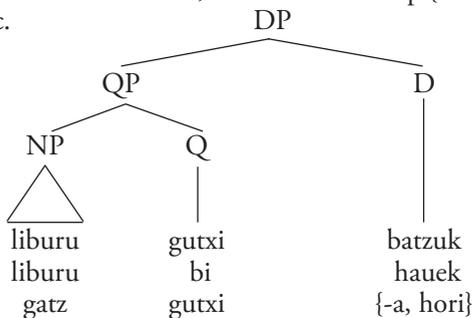
2. Basque quantifiers or the [_{QP} QP/XP-[...NP...]-Q]-D order

In this section, I propose an analysis of Basque quantifiers that doesn't require a double strategy and claim that Basque quantifiers behave pretty much as predicted by the classic head parameter. I outline my proposal in 2.1 and then I give ellipsis data to strengthen my point in 2.2.

2.1. An analysis for quantifiers on both sides

Basque DPs display the expected order if one assumes that a head-final QP is a complement of a D head:

- (13) a. lagun gutxi batzuk, liburu bi hauek.
 friend few various book two these
 'a few friends, these two books'
- b. Gatz gutxi neukan, eta neukan gatz {gutxia, gutxi hori} xahutu dut.
 salt little I-had and I-had.C salt little.art little that spent aux
 'I had little salt, and I have used up {the, that} little salt I had'
- c.



These data don't imply that all combinations of any Q and any D are possible; in this, Basque is no different from other languages. On the contrary, they suggest that postnominal Qs show up just where we should expect them given the head parameter: if QP is a *bona fide* complement of D in a head-final language, then NP should precede Q, and Q should precede D, exactly what we find.

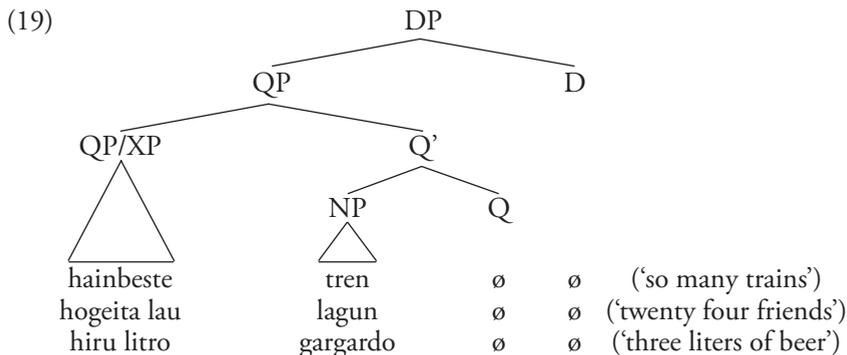
⁴ The only exception is the double-determiner DPs, studied in section 3.

Second, Basque numerals themselves have a phrasal flavor in many respects: most numerals seem to be structurally complex in that they are based on coordinate structures (17a); some *are* complex (17b) when constructed in combination with some adverb or phrase and maintain the same distribution; and some higher numerals just mirror the structure of measure phrases (18a-b):

- (17) a. [hogeita lau] (<* hogeita eta lau) egun, [hirurogeita lau] egun, ...
 twenty four twenty and four day sixty four day
 ‘twenty four days’, ‘sixty four days’ (lit: twenty *and* four, sixty *and* four)
- b. [ehundik gora] lagun, [ehun eta ez dakit zenbat] lagun
 hundred.from up friend hundred and not I.know how many friend
 ‘more than a hundred people, a thousand and I don’t know how many people’
- (18) a. [bi mila] lagun, [bostehun] liburu
 two thousand friend five hundred book
 ‘two thousand friends, five hundred books’
- b. [bi tona] patata, [bost kutxa] liburu
 two tone potato five box book
 ‘two tones of potatoes, five boxes of books’ (lit. ‘two tone potato’, ‘five box book’)

Admittedly, the first piece of evidence is weak in isolation given that X⁰ coordination is possible in principle, but the second and third ones are telling: paraphrases like ‘more than one hundred’, or ‘one thousand and I don’t know how many’ (the second including a coordinate structure) all sit to the left of NP in what appears to be the [spec, Q] position. Finally, complex numerals like *bi mila* ‘two thousand’ or *bostehun* ‘five hundred’ all follow the same pattern as measure phrases, with the quantifying unit (i.e. thousand, hundred) behaving exactly like a regular measure of a partitive construction (cf. Artiagoitia 2006b and Goenaga 2008 for a similar view).

This more detailed view of Basque numerals provides a fresh perspective on the data in (15) and suggests that the left-right choice or dichotomy of Basque quantifiers is a mere reflection of an alternation between QP or XP *vs* Q: it is precisely because most numerals are phrases, and not heads, that they occupy the left, hence specifier, position, just like regular measure phrases. In a tree diagram:



We are now left with a handful of *offending* quantifiers in (15c): these may be to the left of NP in some dialects for no good reason and, at first sight, there is no trace

of their phrasal status. For these quantifiers, we may be forced to say that they are heads lexically specified in certain dialects to have their complement to their right:

- (20) a. [_{DP} [_{QP} [_Q *franko*, *anitz*, *asko*] NP] D]
 b. *franko*, *anitz*, *asko*, ... Q: [+__NP]⁷

This may sound like an *ad hoc* solution, but if there is some exception to the head parameter, we expect it to be in the functional field (cf. Fukui 1988 and others), and these indefinite quantifiers are certainly a closed class of grammatical/functional elements. Thus, the solution in (20), though not totally satisfying, is still plausible.⁸

2.2. Arguing for the same hierarchical position of both types of quantifiers: ellipsis

In the analysis advanced in the previous subsection, the location of a given quantifier depends on its phrasal or head status. Nevertheless, regardless of their location, the hierarchical position of quantifiers remain the same, as NP or [_{XP} N-A] ellipsis shows. Here are some examples:

- (21) a. *Jonen hiru sagar gorriak* ikusi ditugu, baina *Mirenen bost sagar gorriak* ez.
 gen three apple red.art see aux but Mary.gen five apple red.art no
 ‘We saw John’s three red apples, but not Mary’s five red apples’
 b. *Jonen hiru sagar gorriak* ikusi ditugu, baina *Mirenen bost-ø-ak* ez.
 ‘We saw John’s three red apples, but not Mary’s five [ø]’
 (where [ø] = [*sagar gorri* ‘red apples’])
- (22) a. *Jonen sagar gorri biak* aurkitu ditut, baina *Mirenen sagar gorri bi-ak* ez.
 gen apple red two.art find aux but Mary.gen apple red two.art no
 ‘I found John’s two red apples, but not Mary’s two red apples’
 b. *Jonen sagar gorri biak* aurkitu ditugu, baina *Mirenen ø-bi-ak* ez.
 ‘We saw John’s two red apples, but not Mary’s two [ø]’
 (where [ø] = [*sagar gorri* ‘red apples’])
- (23) a. *Ehundik gora sagar gorri erosi eta [bainbat ø]* goxo-goxoak irten dira
 hundred.from above apple red buy and so many tasty-tasty.art turn aux
 ‘We bought more than a hundred red apples and so many [ø] turned out to be very tasty’ (where ø = [*sagar gorri* ‘red apples’])
 b. *Hainbeste sagar gorri erosi dituzu ezen [[ø]-asko] hondatuko dira jan aurretik.*
 so many apple red buy aux that many get rotten aux eat before
 ‘You bought so many red apples that many [ø] will get rotten before eating’
 (where ø = [*sagar gorri* ‘red apples’])
- (24) [_{DP} possessive [_{QP} QP [_{XP} ø] Q] D]⁹ (XP = [NP-A] combinations)

⁷ This idiosyncratic lexical behavior needs to be specified for every Q. For example, in Lekeitio Basque only *nahiko* is used as a prenominal Q head. The rest of non-phrasal Qs are postnominal, as expected.

⁸ One must not forget that even defenders of the head-final character of the language claim that Basque clauses must have some head-initial functional category: that head is *Comp* for Ortiz de Urbina (1989), or its Rizzian replacement *Force* (Ortiz de Urbina 1999), or Σ (Laka 1990), or just about all functional categories above *v* (*T*, *Neg*, and *Comp*) for Elordieta 2001.

⁹ To simplify matters, I assume that possessives occupy the [spec, D] position, as in Abney (1987). Given that possessives, [spec, Q] or Q and D can co-occur, the data here are at odds with Emonds’ (2008) proposal to collapse Q/D as the only functional head above N in languages like English.

In other words, both prenominal quantifiers (= 21a-b, 23a) or postnominal quantifiers (= 22a-b, 23b) may license empty $[N-A]_{XP}$ combinations, whatever XP turns out to be.

Likewise, the combination of a genitive and a determiner may license QP-ellipsis, whether quantifiers precede or follow the noun; the silent structure is something like $[QP-[NP-A]_{XP}-[Q \emptyset]]_{QP}$ in example 25a and $[[NP-Adj]_{XP}-Q]_{QP}$ in example 25b:

- (25) a. *Jonen hiru sagar gorriak* aurkitu ditugu, baina *Mirenen-ø-ak* ez.
 gen three apple red.art find aux but Mary.gen.art no
 ‘We found John’s three red apples, but not Mary’s [\emptyset ’]
 (where [\emptyset] = [*hiru sagar gorri* ‘three red apples’])
- b. *Jonen sagar gorri biak* aurkitu ditugu, baina *Mirenen-ø-ak* ez.
 gen apple red two.art find aux but Mary.gen.art no
 ‘We found John’s two red apples, but not Mary’s [\emptyset ’]
 (where [\emptyset] = [*sagar gorri bi* ‘two red apples’])

- (26) $[_{DP} \text{possessive } [QP \emptyset] D]$

Thus, quantifiers, whether they precede or follow NP, all sit in the same layer of structure (i.e. in the QP layer mediating between NP-adjectives and D).

Although ellipsis data could be accommodated in a Cinque-type of antisymmetry approach to Basque DPs, there are some differences that suggest that a head-final analysis is preferable: the surface [complement-X] order is given for free by the head-parameter; the double location of quantifiers is explained in terms of the [spec, Q] vs Q alternation, independently needed to account for the distribution of measure phrases, and does not require two separate derivations (one marked and one unmarked). My proposal explains the surface order of quantifiers with no recourse to movement; and, finally, this lack of movement squares well with the morphosyntactic poverty (lack of number concord or agreement) of the Basque noun phrase. I think that these three reasons seriously undermine a Cinquean view of the Basque DP.

3. Western Basque demonstratives or the [Demonstrative-complement-D] order

In this section, I will argue that the double determiner structures of Western Basque are easily accounted for by the head-parameter but can only be handled within Cinque’s approach in some contradictory way. Here is a sample of the relevant data:

- (27) *Standard Basque*
- | | |
|--|---|
| a. <i>andre</i> { <i>hau, hori, hura</i> } | b. <i>andre</i> { <i>hauek, horiek, haiek</i> } |
| girl this that that over there | these those those over there |
| ‘{this, that, that over there} woman’ | ‘{these, those, those over there} women’ |
| c. <i>andre-a, andre-ak</i> | |
| woman.art/sg, woman.art/pl | |
| ‘{the, a} woman, (the) women’ | |
- (28) *Western Basque*
- | | |
|---|------|
| a. <i>hau neska gazte-au</i> / <i>hau neska gazte-a</i> | |
| this girl young.this | .art |
| ‘this young girl’ | |

- b. hori neska gazte-ori / hori neska gazte.a
 that girl young.that .art
 ‘that young girl’
- c. hónek lau sagar gorri-ok / hóneklau sagar gorri-ak
 these four apple red.art/prox these four apple red.art
 ‘these four red apples’
- d. hórrek neska gazte-ok / hórrek neska gazte-ak
 those girl young.art/prox
 ‘those young girls’
- e. ha neska gazte-a
 that (over there) girlyoung.art
 ‘that young girl over there’
- f. hárek neska gazte-ak
 those (over there) girlyoung.art
 ‘those young girls over there’

In Standard Basque, the proximal, medial and distal demonstratives show up in the last position of DPs and have the same distribution as the article. Since all demonstratives can be accented and used independently, they are usually written as independent words; on the other hand, the article is always enclitic and is written as a suffix. Nonetheless, it is well known to Basque scholars¹⁰ that the article comes from the (possibly) older form of the distal demonstrative **ha* > *-a*; this *ha* form is precisely the distal demonstrative in Western Basque (cf. 28e). What is special about Western Basque (Zuazo 1998) is that demonstratives show up first in DP and the D head itself displays agreement with the demonstrative:¹¹ depending on speech groups or towns, either the unaccented form of the demonstrative itself written as a suffix (*-au*, *-ori* for singular DPs) and the proximate article (*-ok* for plural DPs)¹² is repeated in the D head, or the regular article (*-a* for singular and *-ak* for plural) appears in D.

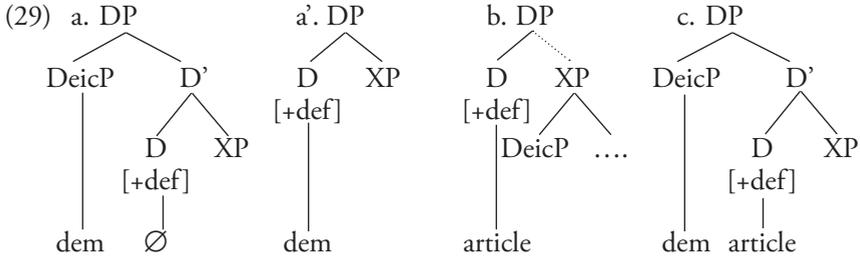
In this regard, I wish to bring to the discussion three remarks regarding the generative literature on demonstratives: first of all, several linguists have proposed to treat demonstratives as phrases (Brugè 1996, Brugè & Giusti 1996, Giusti 1997, Brugè 2002); others have proposed that demonstratives truly occupy the head position in DP (Roca 1996, Bernstein 1997, 2001);¹³ thirdly, in some languages, demonstratives and articles show up together in the DP layer, but in others they are away from each other, in different projections. The combination of these three considerations has given rise to the following structural possibilities for demonstratives (following a suggestion in Giusti (1997) I call phrasal demonstratives *deictic* phrases):

¹⁰ See Altuna & Azkarate (2001) for a review.

¹¹ Data like (27c) are common to all dialects, including Western Basque.

¹² The proximate article *-ok* also derives historically from a demonstrative; even today the accented form *hok* exists nowadays in various dialects.

¹³ It is not irrelevant to bear in mind that the typologist Dryer (1992) clearly mentions that languages vary precisely as to whether or not they treat *demonstratives* and *numerals* as heads.

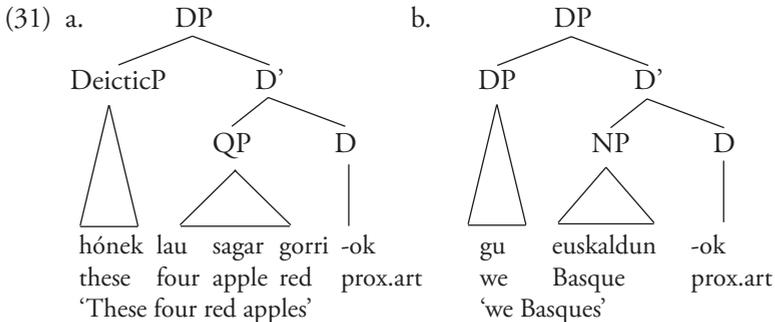


Granted that demonstratives are connected with a definite feature in the DP field (Brugé and Giusti 1996), authors vary whether they locate demonstratives that stand alone in the [spec, D] or D position itself (hence, we have two theoretical options, *a* or *a'*). To explain the case of languages where demonstratives and articles cooccur, it seems that both (29b) and (29c) are needed: the first one for languages where some expletive article occupies the D position and demonstratives are in some projection internal to DP; the second one for languages where demonstratives and articles seem to be in the left periphery of D, in [spec, D] and D positions respectively. Italian, French, English are languages where demonstratives stand alone; Spanish, Rumanian and Catalan are languages with (29a-b) alternation: either the demonstrative stands alone or it cooccurs with the article but in some internal position; languages like Welsh or Irish would only have this (29b) option; finally, there appear to be languages with option (29c) alone, such as Hungarian and Greek. These remarks generally hold for head-initial languages.

Now let us return to Western Basque. How could one account for the difference between this dialect and the rest, including Standard Basque? One easy solution comes to mind: let us suppose that Western Basque is the only dialect that treats demonstratives as deictic phrases. We then have:

- (30) a. standard dem.: hau, hori, hura, hauek, horiek, haiek = D
- b. Western Basque dem.: hau, hori, ha, hónek, hórrek, hárek = DeicticP

This amounts to saying that Western Basque behaves like Hungarian and Greek, i.e. this dialect chooses the option of filling the D head too, when a demonstrative fills in the [spec, D] position. As argued extensively in Artiagoitia (1998) and Rebuschi (2000), this structure is needed in Basque anyway, to account for phrases like *gu euskaldunok* 'we Basques' or *zuek siziliarrak* 'you Sicilians':



So, this is what distinguishes Western Basque:

(32) *Western Basque demonstratives*

If some deictic element fills in [spec, D], then D must be filled too (just like Hungarian).

Now, what is relevant about Western Basque demonstratives is that they perfectly exemplify a *specifier-complement-head* order, as expected from the head-parameter:

(33) spec-complement-head = [spec, D]-XP-D (where XP = FP or QP or NP)

- | | |
|---------------------------------|---------------------------------------|
| a. hau [neska gazte]-au (= 28a) | b. hónek [lau sagar gorri]-ok (= 28c) |
| this girl youg.this | these four apple red.art/prox |
| ‘this young girl’ | ‘these four red apples’ |

In a Cinquean approach, there might be different ways to obtain this *demonstrative-XP-D* order, but none of them comes out naturally. For example, assuming that demonstratives and D heads are in a *spec-head* relation, we might reach this stage of the derivation:

(34) [_{YP} hónek [_Y [_Y ok] [_{ZP} lau sagar gorri...]]]

From then on, the article would cliticize onto the last element of the ZP constituent. But this view would make Western Basque radically different from standard Basque: it would lack *standard* movement of ZP to the left of the demonstrative *and* it would require an *ad hoc* article-lowering movement operation. Another option would be to derive the *Dem-Num-N-A* order as proposed by Oyharçabal for standard Basque up to the point where *Num-N-A* are to the right of the demonstrative (cf. 10a above), and then have the entire *Dem-Num-N-A* structure move past the article:

- (35) a. -ok ... [hónek [lau sagar gorri]] (= 10a)
 b. [hónek lau sagar gorri]_i-ok t_i

This second derivation would yield a paradox, though: the NP constituent is inserted *three steps down* in the constituent [hónek lau sagar gorri], so we would require not just [XP [NP]] pied-piping but rather [XP [XP [NP]]] pied-piping, a movement that seems dubious in Cinque's framework. On the other hand, the resulting order is still *Dem-Num-N-A*, an option that corresponds to Cinque's (4b) "frequent" order after all. However, the derivation would require movements that Cinque himself regards as very marked: partial NP-movement (marked); [XP [NP]] type of pied-piping (very marked option) for every adjective; and, finally, pied-piping of the [XP [XP [NP]]] type to move the constituent *honek lau sagar gorri* around the article, a move that should be very-very marked if allowed at all. In other words, unlike in the case of (4b), the derivation of Western Basque *Dem-Num-N-A*, because it also has a final article, should be considered a highly marked word order pattern. But, as we just saw in (29), cooccurrence of Dem and a D head is not so rare crosslinguistically.

To sum up, granted that the head-parameter is right, the derivation of Western Basque word order pattern with demonstratives makes recourse to two ideas that are widely spread in the demonstrative literature: that demonstratives can by themselves head phrases and that languages exist which have both [spec, D] and D positions filled. Whereas the Cinque antisymmetry approach leads to a far-fetched analysis

or a near contradiction, the head parameter predicts, and gives us for free, the order *demonstrative-XP-D*.

4. Basque adjectives or the [..._{[FP [FP NP F] F...]} Q]-D] order

In this section, I summarize a proposal (more fully developed in Artiagoitia 2006a): that Basque attributive adjectives can be analyzed in a complement-*head* fashion if one assumes the existence of a fixed hierarchy of functional heads à la Scott (2002), and if these adjectives are inserted in the head position rather than in the specifier position.

The Cinque-Scott approach to DP-internal adjectival modification is based on the idea that there is some universal hierarchy that governs the relevant ordering restrictions in the unmarked case. Here are two well-known examples of such hierarchies and a sample of the Basque case:

- (36) a. quality > size > shape > color > provenance (Sproat & Shih 1991)
 b. subjective comment > ?evidential > size > length > height > speed > ?depth > width > weight > temperature > ?wetness > age > shape > color > nationality/origin > material > compound element (Scott 2002)
 [where “A > B” indicates “A is further from noun than B”]
- (37) a. etxe zuri txiki polit bat (quality > size > color)
 house white small beautiful one
 ‘a beautiful small white house’ [data from Trask 2003: 137]
 b. ardo beltz ona (quality > color)
 wine black good.art
 ‘good red wine’
 c. praka urdin estuak (size/width > color)
 pant blue narrow.art
 ‘narrow blue pants’

I assume without further discussion that Basque also obeys the said restrictions, at least to the same extent other languages obey them (see Oyharçabal 2006 and Artiagoitia 2006a for relevant data).

The framework advanced in Cinque (1994) and developed in Scott (2002) criticizes the traditional adjunction approach to attributive adjectives on several counts: first, the idea of a relatively fixed order within adjectives squares well with the existence of a given hierarchy of functional projections, but not with the idea of adjunction, for which one would in principle expect free ordering. Secondly, the number of adjectives allowed inside a given noun-phrase is generally limited to 6-7, a limitation that is expected given a universal sequence of functional projections, but which is surprising given there is no *a priori* limitation on the number of adjuncts. Thirdly, the left position with respect to the noun needs to be stipulated on the adjunction view but follows naturally once adjectives are located in the specifier position of functional heads.¹⁴

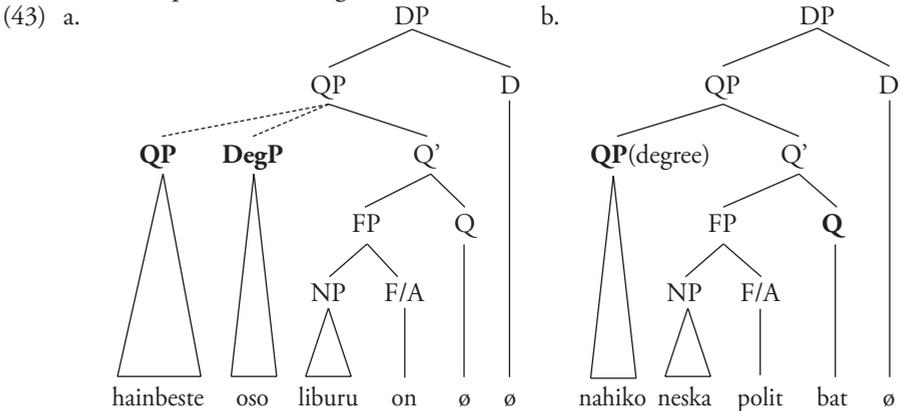
¹⁴ Scott (2002: 96-7) adds a couple of theoretical advantages for an *adjective as spec* analysis: it is more minimalist in that the distinction between adjuncts and specifiers is eliminated; in languages where adjectives display case and ϕ -features, this fact can be seen as a consequence of their status as specifiers in

Argument #1. The canonical position of the degree word modifying a DP-internal adjective is precisely to the left of the noun-adjective, as expected if the degree word occupies some specifier-position to the left of the functional head:

- (41) a. *oso emakume jatorra* b. $[_{DP} \text{oso} [_{FP} [_{NP} \text{emakume}] [_{F/A} \text{jatorr}]]\text{-}a]$
 very woman nice.art
 ‘the/a very nice woman’

In Artiagoitia (2004: 34), I conjecture that degree words occupy in fact the same specifier position of the phrase-structure layer where quantifiers are merged, either as specifiers or as heads. That conjecture, if correct, predicts that degree words and quantifiers will be incompatible; i.e. that they will be in complementary distribution. This is correct:

- (42) a. * *hainbeste oso liburu on erosi genuen.*
 so-many very book good buy aux
 ‘We bought so many very interesting books’
 b. * *nahiko neska polit bat etorri zitzaigun*
 quite girl beautiful one come aux
 ‘One quite beautiful girl came to us’ [data from Euskaltzaindia 1993]



In (43a) the pronominal quantifier *hainbeste* ‘so much/many’ and *oso* ‘very’ compete for the same and one specifier position of the QP-layer; in (43b), on the other hand, the quantifier/degree word *nahiko* ‘enough, rather’ is incompatible with the numeral *bat* ‘one’ in the head position.

The head status of the adjective is the key to account both for the order of the degree word with respect to the noun-adjective pair and for the degree’s incompatibility with any quantifier;¹⁶ if adjectives were not heads, we could explain neither

¹⁶ The only way to have this structure is resorting to relativization or having the adjective in post-nominal predicative position (Oyharçabal 2006):

- (i) a. *oso onak diren hainbeste liburu*
 very good.art are.comp so many book
 ‘so many books that are very good’
 b. *hainbeste liburu, oso onak*
 so-many book very good.art
 ‘so many books, very good’

the canonical position of the degree word nor its incompatibility with quantifiers.¹⁷

In sum, the behavior of degree words inside DPs is fully predicted by the proposal in Artiagoitia (2006a): if adjectives are simple heads, they cannot form a constituent with a corresponding degree word; the latter, if present at all, must be located on a different layer (here, the one reserved to prenominal quantifiers) and is, therefore, in conflict with overt quantifiers.¹⁸

Argument #2. Basque attributive adjectives cannot take lexical complements:

- | | | | |
|---------|--|----|--|
| (44) a. | emakume harroa
woman proud.art
'the/a proud woman' | b. | *emakume bere lanaz harroa
woman her work.inst proud.art
'the/a woman proud of her work' |
| (45) a. | poema zailak
poem tough.art
'(the) tough poems' | b. | *poema irakurtzen zailak
poem reading tough.art
'(the) tough to read poems' |

The impossibility of taking complements is expected if adjectives are merged as functional heads; their complement will be another functional phrase (headed by a second adjective) or NP; this is exactly what we find.

Argument #3. This is related to the behavior of adjectives with proper names. If Longobardi (1994) is right in claiming that universally proper names are Ns that get interpreted under the D position, the following paradigm is revealing:

- | | | | |
|---------|--|----|--|
| (46) a. | Aresti (N in D) | b. | * t _i zahar Aresti
old
'Old Aresti' |
| c. | * Aresti zahar (N <i>in-situ</i>)
old
'Old Aresti' | d. | Aresti zaharr-a (not restrictive)
old.art
'Old Aresti' |
| e. | gure / aspaldiko Aresti (*a) (not restrictive)
we.gen / long ago.of
'our Aresti, Aresti of long ago' | | |

¹⁷ So we have some kind of *doubly filled Q filter*: degree words cannot occupy the same position as quantifiers. As A. Elordieta (p. c.) points out to me, it seems that [spec, F/A] should be an option for degree words: there is, however, no room for that in Scott's proposal. For him, F is just a bunch of abstract syntatico-semantic features, which can be checked by an entire AP in spec or be realized as heads, but an F projection doesn't license discontinuous adjectival constituents. One option would be to generate degree words in [spec, F/A] and have them obligatorily raise to [spec, Q], perhaps due to some quantification requirement. The outcome would be the same: both degree words (many true Qs) and quantifiers compete for the same structural layer. I leave this issue for future research.

¹⁸ The order N-degree modifier-A (% *emakume oso jatorra*, lit. 'woman very nice-article') is marginal for some speakers; see Artiagoitia (2006a-b) for arguments that this order is derived via scrambling. Interestingly, having degree words occupy [spec, Q] predicts that the such words will be limited to one per DP, regardless of where they show up; this prediction is correct:

- | | | | |
|---------|---|----|---|
| (i) a.* | [nahiko [oso neska garai] jatorr]-a
quite very woman tall nice.art
'the/a quite nice very tall woman' | b. | *[oso neska garai] [nahiko jatorr]-a
very girl tall quite nice.art |
|---------|---|----|---|

because the proper noun cannot target D (due to the blocking effect of A in 41d; as a result of the entire NP being scrambled to a higher position in 49a).

Argument #4. We have tasted the flavor of this negative argument in (46e): all phrasal modifiers other than adjectives are to the left of NP in Basque. Let us see some more examples:

- (50) a. *etxe honetako biztanle-ak* vs a'. * *biztanle etxe honetako-ak*
 house this.of resident.art
 '(the) residents of this house'
- b. *Rayuelaren itzultzaile-a* vs b'. * *itzultzaile Rayuelaren-a*
 .gen translator.art
 'the translator of Rayuela'

This datum, although not decisive by itself, suggests that the reason for adjectives being to the right of the noun could very well be their head status.

So all in all, once we accept the validity of the head-parameter, the idea that Basque adjectives stand in the head position of a fixed hierarchy of functional heads seems well supported: from that point of view, there is no necessary correlation between the existence of that functional hierarchy and the Cinque-Scott antisymmetric approach. Moreover, the NP- $\{F_1/A_1\}$ - $\{F_2/A_2\}$... $\{F_n/A_n\}$ -Q-D order is derived with no movement, a feature that perfectly matches the lack of N-A concord in Basque.²¹

One final note of caution: it may well be that the cartographic approach to adjective ordering restrictions is poorly founded, as Zwart (2006) and Truswell (2008) argue. Under this hypothesis, we would be left with the notion that Basque attributive adjectives are heads to the right of NP, period; this location would be independent of a set of functional heads, and perhaps independent of the head parameter *per se*.²² Be that as it may, the evidence for the head status of Basque attributive adjectives seems to be robust.

5. Conclusions

To summarize, I have pointed out that the head-parameter can adequately handle three salient features of the Basque DPs (quantifiers are pre- and post-nominal; adjectives are distributed to the right of NP and have head-like features; there exist *demonstrative-complement-D* word orders in Western Basque). So we are left with the following internal structure for the Basque DP:

- (51) [_{DP} [_{PosP} Gen_{sub}, Gen_{obj} [_{QP} XP/QP [_{FP}... [_{NP} S O N] ...F_n] Q] Possessive] D]]]]

Where the sequence F_n corresponds to the different kinds of adjectives and Gen(itive) to subject or object genitive phrases, obviated for the purposes of this article. Cinque's antisymmetry approach, on the other hand, requires a double and even con-

²¹ One could in principle reconcile antisymmetry with the idea that adjectives are heads: nevertheless, this solution would still be problematic for several reasons. See Artiagoitia (2006a) for details.

²² For a classical [_{NP} NP-AP] adjunction analysis, the lack of modifiers and complements might be related to Emonds' (1976) *Surface Recursion Restriction*. See Artiagoitia (2006b) for discussion.

- Bernstein, J., 1997, "Demonstratives and reinforcers in Romance and Germanic languages". *Lingua* 102, 87-113.
- , 2001, "Focusing the "right" way in Romance determiner phrases", *Probus* 13, 1-29.
- Brugè, L., 1996, "Demonstrative movement in Spanish: A comparative approach", *University of Venice Working Papers in Linguistics* 6: 1, 1-53.
- , 2002, "The positions of Demonstratives in the Extended Nominal Projection", in Cinque (ed.), 15-53.
- , and G. Giusti, 1996, "On Demonstratives", *Glow Newsletter* 36, 24-25.
- Cinque, G., 1994, "On the evidence for partial N-movement in the Romance DP", in Cinque 1994, (ed.), 85-110.
- , (ed.), 1994, *Paths towards Universal Grammar. Essays in honor of Richard S. Kayne*, Georgetown U. P., Washington DC.
- , 1999, *Adverbs and Functional Heads. A Cross-Linguistic Perspective*, Oxford U. P., Oxford.
- , (ed.), 2002, *Functional Structure in DP and IP. The Cartography of Syntactic Structures, Volume 1*, Oxford U. P., Oxford.
- , 2005, "Deriving Greenberg's Universal 20 and Its Exceptions", *LI* 36.3, 315-332.
- Elordieta, A., 2001, *Verb Movement and Constituent Permutation in Basque*, LOT series 47, Utrecht. Leiden University PhD dissertation.
- Emonds, J. E., 1976, *A transformational approach to English syntax*, Academic Press, New York.
- , 2008, "What is a letter? Which is the Extended Projection above N?", University of the Basque Country ms.
- Ettxepare, R., 2003, "Negation", in Hualde and Ortiz de Urbina (eds.), 516-564.
- Euskaltzaindia, 1993, *Euskal gramatika laburra: perpaus bakuna*, Euskaltzaindia, Bilbao.
- Fukui, N., 1988, "Deriving the differences between Japanese and English: A Case Study in Parametric Syntax", *English Linguistics* 5, 249-270.
- Giusti, G., 1997, "The categorial status of determiners", in L. Haegeman (ed.), *The New Comparative Syntax*, Longman, London, 95-123.
- , 2002, "The Functional Structure of Noun Phrases. A Bare Phrase Structure Approach", in Cinque (ed.), 54-90.
- Goenaga, P., 1980, *Gramatika Bideetan* [Thru the paths of grammar], 2nd revised edition, Erein, San Sebastián.
- , 2008, "Euskal neurri-sintagmen azterketa baterako: zenbat X, zenbat X-ago, zenbat X gehiago" [For an analysis of Basque measure phrases: how much X, the more X, how much X more], in *Jean Haritschelhar-i omenaldia. Iker-21*, Euskaltzaindia, Bilbao, 211-240.
- Greenberg, J., 1963, "Some universals of grammar with particular reference to the order of meaningful elements", in J. Greenberg (ed.) *Universals of language*, MIT Press, Cambridge MA, 73-113.
- Haddican, W., 2004, "Sentence polarity and word order in Basque", *The Linguistic Review* 21, 87-124.
- Hetzron, R., 1978, "On the relative order of adjectives", in H. Seiler (ed.), *Language Universals*, Gunter Narr Verlag, Tübingen, 165-184.
- Hualde, J. I. & J. Ortiz de Urbina, (eds.), 2003, *A grammar of Basque*, Mouton de Gruyter, Berlin.
- Kayne, R., 1994, *The Antisymmetry of Syntax*, MIT Press, Cambridge MA.
- Laka, I., 1990, *On the Nature of Functional Categories and Projections*, MIT PhD dissertation.
- Longobardi, G., 1994, "Reference and Proper Names: A Theory of N-Movement in Syntax and Logical Form", *LI* 25: 4, 609-665.

- , 2001, “The structure of DPs: some Principles, Parameters and Problems”, in C. Collins and M. Baltin (eds.), *The handbook of contemporary syntactic theory*, Blackwell, Oxford, 562-601.
- Mujika, J. A., 1999, “Erlatibo arrunta zehaztaile? Teoriak eta datuak” [Standard relatives restrictive? Theories and data], *Euskera* 44: 2, 1139-1158.
- Ortiz de Urbina, J., 1989, *Parameters in the grammar of Basque*, Foris, Dordrecht.
- , 1999, “Force Phrases, Focus Phrases and Left Heads in Basque”, in J. Franco and A. Landa (eds.), *Grammatical Analysis of Romance and Basque*, John Benjamins, Amsterdam/Philadelphia, 179-194.
- Oyharçabal, B., 2006, “DSaren barneko zenbait ordena kontu” [Some issues regarding the DP internal order], in B. Fernández & I. Laka (eds.), *Andolin Eguzkitza gogoan. Essays in honor of professor Eguzkitza*, UPV/EHU, Bilbao, 741-756.
- , 2007, “Antisimetriaren bidetik zenbait proposamen izen modifikatzaileen arteko ordenaz” [Some proposals on the order of noun modifiers using antisymmetry], talk given at the seminar *Antisimetria vs Buru parametroa: euskararen oinarritzko hitz hurrenkera ezbian*, Vitoria, February 14th.
- Rebuschi, G., 2000, “À propos d’une construction non-standard du basque”, *Lapurdum* 5, 237-282.
- Roca, F., 1996, *La determinación y la modificación nominal en español*, Universitat Autònoma de Barcelona PhD dissertation.
- Scott, G.-J., 2002, “Stacked Adjectival Modification and the Structure of Nominal Phrases”, in Cinque (ed.), 91-120.
- Sproat, R. & C. Shih, 1988, “Prenominal adjectival ordering in English and Mandarin”, in *Proceedings of the Eighteenth Annual Meeting of the North Eastern Linguistics Society*, 465-489.
- & —, 1991, “The cross-linguistic distribution of adjective ordering restrictions”, in C. Georgopoulos & R. Ishihara (eds.), *Interdisciplinary approaches to language*, Kluwer Academic, Dordrecht, 565-593.
- Trask, R. L., 2003, “The Noun Phrase: nouns, determiners and modifiers; pronouns and names”, in Hualde and Ortiz de Urbina (eds.), 113-171.
- Truswell, R., 2008, “Attributive adjectives and nominal templates”, University College London ms, to appear in *LI*.
- Zuazo, K., 1998, “Euskalkiak gaur” [Basque dialects today], *FLV* 30, 191-233.
- Zwart, J.-W., 2006, “Uncharted territory? Towards a non-cartographic account of Germanic syntax”, Groningen University ms.