

Squibs and Discussion

MORPHOLOGICAL STRENGTH AND
SYNTACTIC CHANGE
Masataka Ishikawa
Hiroshima University

1 Introduction

In the minimalist framework (Chomsky 1991, 1993, 1995a,b, among others), LF checking is considered more economical than syntactic checking. Given this stipulation about economy, featural change from strong to weak, namely, the following scenario, would be expected:¹

- (1) Representations reflecting overt operations are prone to be reanalyzed as representations reflecting covert operations.

But a change in the opposite direction would be unlikely. This squib deals with the direction of change in the parametric strength of morpho-syntactic features within the minimalist framework. It is organized as follows. In section 2 I illustrate ways in which Old and Modern Spanish contrast with respect to the use of determiners with arguments. I propose in sections 3 and 4 that contrasts in the behavior of nominal expressions in Old Spanish and Modern Spanish are due to differences in strength of certain nominal features between the two grammars, suggesting that the features changed from weak to strong in the history of Spanish.

In this squib I adopt the following (abbreviated) DP structure:²

- (2) $[_{DP} D^0 [_{AgrP} Agr^0 [_{NumP} \dots N^0 \dots]]]$
(where NumP = $[\dots Num(ber)^0 \dots Gen(der)^0 \dots N^0 \dots]$)

I would like to thank Juan A. Sempere and Enrique Balmaseda Maestu for discussion of various aspects of the use of articles in Spanish. I gratefully acknowledge two anonymous reviewers' criticisms and advice on an earlier (somewhat different) version of this squib. Remaining errors in the analysis are my own.

¹ On the basis of data from the history of participle-object agreement in Spanish, Parodi (1995) suggests that diachronically overt movement (i.e., strong features) tends to be replaced by covert movement (i.e., weak features).

² See, for example, Mallén 1990, Delfitto and Schrotten 1991, Bernstein 1993, Ishikawa 1997b, and references cited there. Since nominal features such as Gender and Number (which have not changed since the Old Spanish period and are assumed to be strong in both Old and Modern Spanish) do not affect the basic analysis proposed in this squib, I abstract away from the intermediate functional projections below AgrP.

The determiner head (D^0) and the Q-type functional head (Agr^0) host the features [R(eferential)] (Longobardi 1994) and [P(artitive)] (Ishikawa 1997b and references cited), respectively.³ Nouns may be distinguished by assigning them either the feature [R] or the feature [P] (according to their lexical-semantic nature). As opposed to plural and mass nouns, which stand for unspecified amounts of (individual) entities, singular and abstract nouns refer to kinds or concepts, but not to (individualized) objects (Alarcos Llorach 1984, Vergnaud and Zubizarreta 1992, Longobardi 1994, among many others). Verbs in the latter group are assumed to be specified negatively for [R], but have no [P] specification in their lexical representation; verbs in the former group are marked positively for [P].⁴

In this system [P] attracts plural and mass nouns, but not singular or abstract nouns, to Agr^0 (since the latter lacks the feature [P]). In the absence of determiners (as in (3)), therefore, either [P] under Agr^0 (and [R] under D^0) would not be checked with singular and abstract nouns or [R] under D^0 would not be checked with plural and mass nouns.

$$(3) [_{DP[D^0] e}] [_{AgrP[Agr^0] e}] [_{NumP \dots N^0 \dots}]$$

The unavailability or availability of determinerless arguments in a language would thus signal the strength of [R] and [P], unavailability suggesting that they are strong in the language and availability suggesting that they are weak.⁵ Taking these assumptions as a point of departure, in the following sections I will examine the difference between Modern Spanish and Old Spanish nominals.

2 Singular Arguments in the History of Spanish

Modern Spanish contrasts with Old Spanish with respect to the acceptability of determinerless (concrete and abstract) nouns in argument position. In Modern Spanish, bare nouns are generally unacceptable in both subject and object positions.

- (4) a. *(La/Una) tortuga salió del río.
 the/a turtle came-out-3SG from-the river
 ‘The/A turtle came out of the river.’
 b. *(La) paciencia es una virtud importante.
 the patience is-3SG a virtue important
 ‘Patience is an important virtue.’
 c. *(Los/Unos) estudiantes lo buscaban.
 the/some students it-ACC looked-for-3PL
 ‘The/Some students were looking for it.’

³ [+P] may be lexicalized in Romance as *de/di* as in expressions like *una botella de vino* (Spanish)/*una bottiglia di vino* (Italian) ‘a bottle of wine’.

⁴ Referential names would lexically be marked [+R], pronominals [−R].

⁵ Here I assume (on the basis of Longobardi 1994:659–660) that the positive feature ([+F]) is checked in a chain containing a [+F] expression, and the negative feature ([−F]) is checked in a chain not containing a [+F] expression.

- d. Les envió *(la/una) carta.
 them-DAT sent-3SG the/a letter
 'He sent the/a letter to them.'

Old Spanish counterparts, on the other hand, did not require determiners.⁶

- (5) a. Caridat non es embidiosa . . .
 charity not is-3SG envious
 '(Man's) Virtue is not to be envious (of others) . . .'
 (*La Primera epístola de San Pablo a los Corintios*;
 Fotitch 1969:99)
- b. Ora es venjda . . .
 time is-3SG come
 'Time has come . . .'
 (*Planto por Jerusalem* 14a; Menéndez Pidal 1982:288)
- c. Moros lo çercaron e lo
 Moors it-ACC looked-for-3PL and it-ACC
 derribaron . . .
 threw-down-3PL
 'Moors searched for it and threw it down . . .'
 (*Planto por Jerusalem*; Menéndez Pidal 1982:287)
- d. Aprende nueva cosa . . .
 learns-3SG new thing
 'She learns a new thing . . .'
 (*Proverbios Morales* 334; Fotitch 1969:125)

A similar contrast exists between the two stages with respect to (prepositional) objects referring to specific or referentially unique entities: the definite article is required in Modern Spanish (6a–b), whereas it was not in Old Spanish (6c–d).

- (6) a. Le lavó los/*Ø pies a la niña.
 her-DAT washed-3SG the/Ø feet to the girl
 'She washed the girl's feet.'
- b. En el/*Ø mundo no existe tal cosa.
 in the/Ø world not exists-3SG such thing
 'Such a thing does not exist in the world.'
- c. E sueles lavar pies e
 and are-in-the-habit-of-2SG wash-INF feet and
 manos . . .
 hands
 'And you usually wash your feet and hands . . .'
 (*Disputa del agua y el vino* 74; Kohler 1970:34)

⁶ In Old Spanish generic subjects could also be used without definite articles (see, e.g., Menéndez Pidal 1964); in Modern Spanish they take definite articles obligatorily.

- d. En mundo tal cabdal non a como el
 in world such asset not there-is-3SG as the
 saber . . .
 knowledge
 'In the world there is no (other) asset as important as
 knowledge . . .'
 (*Proverbios Morales* 326; Fotitch 1969:125)

The acceptability of determinerless arguments in Old Spanish clearly contrasts with the unacceptability of their counterparts in Modern Spanish.⁷ In what follows I discuss how one could account for the presence and absence of articles in the Old Spanish and Modern Spanish DPs illustrated above.

3 [R] and [P] in Old Spanish: A Proposal

Given the property of Modern Spanish nominals illustrated in (4), I adopt the following stipulation:⁸

- (7) In Modern Spanish [R] and [P] are strong.

For Old Spanish there are (at least) two possible analyses.

- (8) a. In Old Spanish [R] and [P] were weak.
 b. In Old Spanish [R] and [P] were strong.

In the Old Spanish examples in (5) the relevant DPs would have two empty functional heads (above NumP in the syntax) since the singular or abstract noun moves to neither Agr⁰ nor D⁰. Determinerless (singular or abstract) nouns would create a checking violation if [R] and [P] were strong in Old Spanish (as in Modern Spanish). The fact that examples such as those in (5) were grammatical in Old Spanish indicates that there was no checking (Full Interpretation) violation. Suppose that [R], but not [P], was weak in Old Spanish. Even under this assumption, determinerless (singular) nominals would be ruled out since neither [R] nor [P] can be checked before Spell-Out (similar to the above case). The unchecked strong feature [P] (under Agr⁰) would cause the derivation to crash.

Now consider nominalization ([_{DP} D⁰ AgrP [_{NumP} EC AP]]) in Old Spanish. In this period the adjective could be nominalized with or without a determiner (see (9a–b)); by contrast, in Modern Spanish this construction requires the definite article (see (9c)).

⁷ I will not deal with plural arguments in any systematic way here; they would require a different treatment since, where they are concerned, Modern Spanish patterns with Old Spanish in a number of respects. What is crucial seems to be the sharp contrast between the two periods with respect to the acceptability of determinerless singular arguments.

⁸ I tentatively adopt the view that when determiners are present, nouns are attracted to Agr⁰ by determiners occupying [Spec, AgrP] for Gender/Number checking in Modern Spanish. The determiner undergoes cliticization to D⁰ and [R] is checked in the resulting chain (Parodi 1994, Ishikawa 1997b, and references cited there).

- (9) a. Non sé fuerte nin reçio . . .
 neither know-1SG strong nor robust
 ‘I know neither a strong man nor a robust man . . .’
 (*Libro de buen amor* 187c; Blecua 1992:54)
- b. Como buenos uassallos et leales . . .
 as good vassals and faithful
 ‘As good vassals and faithful ones . . .’
 (*Versión amplificada de la PCG*; Menéndez Pidal 1982:303)
- c. Me gusta más *(la) azul.
 me-DAT pleases-3SG more the blue
 ‘I like the blue one better.’

If the empty (pro)nominal head is specified only for [-R] (but not for [P], as opposed to partitive pronominals; e.g., *ende* ‘of it’ (Old Spanish)), [P] under Agr⁰ would cause a checking violation (in the syntax) if [P] is strong in Old Spanish. Weak [R] and [P] would allow the determinerless nominalization construction (i.e., LF checking) in Old Spanish, whereas strong [R] and [P] would require the definite article (i.e., syntactic checking) in Modern Spanish.

Notice also the following possibility. An article and a possessive could cooccur in Old Spanish. In Old Spanish a nominal expression with a definite article and a possessive could be interpreted existentially.

- (10) Bevemos so vino e comemos el so pan . . .
 drink-1PL their wine and eat-1PL the their bread
 ‘We (are) drink(ing) their wine and (are) eat(ing) their bread . . .’
 (*Cid* 1104; Menéndez Pidal 1964:1067; cf. Company 1991)

The nouns *vino* and *pan* have an indefinite existential interpretation. If D⁰ needs to be (lexically) empty for the assignment of an existential interpretation (Longobardi 1994), (10) suggests the following (pre-LF) representation with an empty D head, assuming that the definite article occupied the specifier of the highest functional projection and the possessive occupied (or moved to) the specifier of some (lower) functional projection (e.g., Genitive Phrase):⁹

- (11) [_{DP} article [_D e] [_{XP} possessive. . .N. . .]]

⁹ As opposed to the Modern Spanish definite article, which is a D head, the (early) Old Spanish definite article was not a (functional) D head (although it functioned as some sort of semantic determiner), as, for example, the possible use of articles with vocatives in early Old Spanish (vs. the impossibility of such a construction in Modern Spanish) would lead one to postulate (Ishikawa 1997a). My assumption is that the early Old Spanish definite article and possessive were pronominal elements (as their etymological origin may well suggest; cf. Ishikawa 1995).

If [R] were strong in Old Spanish, it would have to be checked in the syntax, but the head noun (*pan*) does not move to D^0 in the syntax. Therefore, strong [R] would not be checked. In sum, it seems the available data (e.g., (5), (6), (9), and (10)) point to a weak-versus-strong difference between the two systems; namely, [R] and [P] were weak in Old Spanish, but are strong in Modern Spanish.

4 A Speculation

If [R] and [P] were weak in Old Spanish, how could they be checked in structures like (3)? In other words, how could the noun have moved to D^0 ? Let us assume that each step of attraction in the syntax needs to be licensed by feature checking obeying minimality (Chomsky 1993, Rizzi 1990), whereas movement at LF need not be. The latter may be motivated by the checking of a nonadjacent feature involving the coindexation of intervening positions (Form Chain; Chomsky 1986, 1993). In other words, syntactic movement involves more steps (derivationally less economical), whereas LF movement involves the fewest steps (derivationally more economical).¹⁰

This may well be the consequence of the conception of structure building in the minimalist framework (Chomsky 1995a,b), in which structures are built bottom up in a step-by-step fashion before Spell-Out (Merge). In the syntax, elements need to move successive-cyclically (i.e., “Shortest Movement”), since strictly speaking only one potential landing site is available at each point in the derivation at which Move can apply. At LF, on the other hand, the (entire) structure is “there.” If the lexicon is inaccessible at LF, no new projections (except for adjunctions) will be built up after Spell-Out. LF operations can scan the whole structure, look for the highest potential landing site, and move elements in one step. If Form Chain may apply as a last resort option, [R] and [P] can be checked in Old Spanish at LF. On the other hand, strong [R] and [P] in Modern Spanish require a determiner for checking.

5 Concluding Remarks

The discussion in this squib implies that given a conception of the structure of grammar such as the one assumed in the minimalist framework, a learning device should be able to settle on a hypothesis that entails a weak-to-strong switch in the strength of a parametric feature

¹⁰ Why does this dichotomy exist between syntax and LF? In a pretheoretical (and somewhat metaphorical) sense, it may be conceived that overt movement needs “more strength” to carry a full phonological load (thus allowing movement over only a short distance at one time), whereas covert movement needs “less strength” to carry a lighter phonological load (thus allowing long-distance movement), if one conceives of the former as attraction of the entire category and the latter as attraction of only the nonphonological material (Groat and O’Neil 1996; cf. Zwart 1996).

(cf. Galves 1996). If the present discussion proves to be on the right track, the development of the Spanish DP involves a parametric change of [R] and [P] from weak to strong. The switch in the strength of [R] and [P] caused a cluster of changes in the use of articles to take place within a relatively short period. (In)definite nominals and generics (with common and abstract nouns) all came to take an article around the early 14th century, a development that can be viewed as a consequence of the parametric change in question, namely, to avoid the checking (FI) violation. Then roughly the late 13th century was the last phase of the “weak-D (= [R] and [P])” period in the history of Spanish.

Finally, why would weak features be reinterpreted as strong features? One possibility is that language may tend to gravitate toward maintaining representational similarity at the two interface levels (i.e., PF and LF). If the speaker’s grammar contains weak features, the two interface representations may differ.

- (12) a. [[weak F] . . . [weak F] . . . X . . .] (Spell-Out)
 b. [X_i . . . t_i . . . t_i . . .] (LF)

In such a case, checking (of weak features) takes place after Spell-Out. This could mean that a hearer would also need to perform “covert interpretive” mapping of the input (reflecting the speaker’s PF representation). It might be the case that such computational steps make the interpretive process less economical for the hearer. On the other hand, if the speaker’s grammar contains strong features, all syntactic operations are reflected in the speaker’s representation at Spell-Out. This structure is the input to the hearer-learner. By positing strong features in the relevant domain in the grammar, the hearer-learner could assume that necessary feature checking is already reflected in the input representation, which would presumably reduce his or her burden for “interpretive” checking of the input. From the decoder’s viewpoint, one way to follow the “least effort” strategy (Clark and Roberts 1993) would be to assume that the input string reflects necessary checking (resulting in fewer interpretive computational steps on the part of the decoder). The speculation would be that parallelism between the two interface-level representations (by making the strength of relevant features uniform within a given delimited domain)¹¹ might make the inferential (hypothesis-making) process in learning simpler and that such uniformity in feature strength, by yielding a more transparent interface, would make the system more “stable” (i.e., make the mental linguistic performance computationally

¹¹ Note that in this respect Old Spanish would have had weak D-features and strong N-features (such as Number and Gender) within the nominal domain, whereas Modern Spanish has only strong (D- and N-) features (see footnote 2).

simpler) from the point of view of local processing ease. Diachronically, this would mean that weak features may well be reinterpreted as strong features.

To conclude, if the view presented here can be maintained, a parametric switch in feature strength from weak to strong is not a marginally possible (but unlikely) type of change, but a likely change in accord with one type of economy condition in diachrony.¹² This issue deserves further investigation using an expanded database (including other (nominal) constructions).

References

- Alarcos Llorach, Emilio. 1984. *Estudios de gramática funcional del español* (Studies in functional grammar of Spanish). 3rd ed. Madrid: Gredos.
- Bernstein, Judy. 1993. The syntactic role of word markers in null nominal constructions. *Probus* 5:5–38.
- Blecua, Alberto, ed. 1992. *Libro de buen amor* (Book of good love). (Juan Ruiz Arcipreste de Hita) Madrid: Cátedra.
- Chomsky, Noam. 1986. *Knowledge of language: Its nature, origin, and use*. New York: Praeger.
- Chomsky, Noam. 1991. Some notes on the economy of derivation and representation. In *Principles and parameters in comparative grammar*, ed. Robert Freidin, 417–454. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 1993. A minimalist program for linguistic theory. In *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger*, ed. Kenneth Hale and Samuel Jay Keyser, 1–52. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 1995a. Bare phrase structure. In *Government and Binding Theory and the Minimalist Program*, ed. Gert Webelhuth, 383–439. Oxford: Blackwell.
- Chomsky, Noam. 1995b. Categories and transformations. In *The Minimalist Program*, 219–394. Cambridge, Mass.: MIT Press.
- Clark, Robin, and Ian Roberts. 1993. A computational model of language learnability and language change. *Linguistic Inquiry* 24: 299–345.

¹² This does not mean that a hypothesis that posits the weak value for all relevant features within a given domain cannot be selected. Presumably, the choice for uniformity in this direction may be made, all else being equal, when strong environmental stimuli (e.g., weakening or loss of inflectional endings) are available. In the history of Spanish, the strong value has been selected for the D-features in accord with a diachronic economy condition suggested here (which was probably facilitated by the productive (and stable) overt Gender/Number agreement system, which has been maintained throughout the language's history).

- Company, Concepción. 1991. La extensión del artículo en el español medieval (Extension of the article in Old Spanish). *Romance Philology* 44:402–424.
- Delfitto, Denis, and Jan Schroten. 1991. Bare plurals and the number affix in DP. *Probus* 3:155–185.
- Fotitch, Tatiana, ed. 1969. *An anthology of Old Spanish*. Washington, D.C.: The Catholic University of America Press.
- Galves, Charlotte. 1996. Clitic placement and parametric changes in Portuguese. In *Aspects of Romance linguistics*, ed. Claudia Parodi, Carlos Quicoli, Mario Saltarelli, and Maria Luisa Zubizarreta, 227–239. Washington, D.C.: Georgetown University Press.
- Groat, Erich, and John O’Neil. 1996. Spell-Out at the LF interface. In *Minimal ideas*, ed. Werner Abraham, Samuel D. Epstein, Höskuldur Thráinsson, and C. Jan-Wouter Zwart, 113–139. Amsterdam: John Benjamins.
- Ishikawa, Masataka. 1995. On categorial evolution: A case study in Spanish possessives. In *Historical linguistics 1993*, ed. Henning Andersen, 205–216. Amsterdam: John Benjamins.
- Ishikawa, Masataka. 1997a. Evolution of Spanish nominal phrases. Paper presented at the XIIIth International Conference on Historical Linguistics, Heinrich-Heine Universität, Düsseldorf, August 10–17.
- Ishikawa, Masataka. 1997b. Feature checking, chain linking, and the distribution of noun phrases in Spanish. *Hispania* 80:556–568.
- Kohler, Eugene, ed. 1970. *Antología de la literatura española de la Edad Media* (Anthology of medieval Spanish literature). Paris: Éditions Klincksieck.
- Longobardi, Giuseppe. 1994. Reference and proper names: A theory of N-movement in syntax and Logical Form. *Linguistic Inquiry* 25:609–665.
- Mallén, Enrique. 1990. Clitic movement inside noun phrases. *Studia Linguistica* 44:1–29.
- Menéndez Pidal, Ramón. 1964. *Cantar de Mio Cid*, vol. 3. 4th ed. Madrid: Espasa-Calpe.
- Menéndez Pidal, Ramón. 1982. *Crestomatía del español medieval* (Anthology of medieval Spanish), vol. 1. 3rd ed. Madrid: Gredos.
- Parodi, Claudia. 1994. On Case and agreement in Spanish and English DPs. In *Issues and theory in Romance linguistics*, ed. Michael L. Mazzola, 403–416. Washington, D.C.: Georgetown University Press.
- Parodi, Claudia. 1995. Participle agreement and object shift in Old Spanish: A minimalist theory approach. In *Evolution and revolution in linguistic theory*, ed. Héctor Campos and Paula Kempchinsky, 276–301. Washington, D.C.: Georgetown University Press.

- Rizzi, Luigi. 1990. *Relativized Minimality*. Cambridge, Mass.: MIT Press.
- Vergnaud, Jean-Roger, and Maria Luisa Zubizarreta. 1992. The definite determiner and the inalienable constructions in French and in English. *Linguistic Inquiry* 23:595–652.
- Zwart, C. Jan-Wouter. 1996. “Shortest move” versus “fewest steps.” In *Minimal ideas*, ed. Werner Abraham, Samuel D. Epstein, Höskuldur Thráinsson, and C. Jan-Wouter Zwart, 305–327. Amsterdam: John Benjamins.

RECIPROCITY AND BINDING IN
EARLY CHILD GRAMMAR
Ayumi Matsuo
University of Connecticut

Previous research on the acquisition of the reciprocal anaphor, by Matthei (1981) and Otsu (1981), indicates that children have problems in acquiring its locality condition. In this squib I offer a new analysis of children’s difficulties in acquiring not only the locality condition but also the requirement that the trace of *each* be A-bound.

Heim, Lasnik, and May (1991) (HL&M), departing from Bennett (1974), propose that in general *other* means ‘y not identical with x’, where y is a range argument and x is a contrast argument.

- (1) I don’t like this picture, show me another. (HL&M 1991: 69)

In (1) y is *pictures* and x is *this picture*. The interpretation of sentence (1) suggests that *other* in *another*, *no other*, and so on, is a three-place relation as in (2), where Π is ‘the proper-part-of relation’ (HL&M 1991:67).

- (2) $other \Rightarrow \lambda x \lambda y \lambda z (z \cdot \Pi y \wedge z \neq x)$ (HL&M 1991:69)

However, when *other* appears as part of the reciprocal anaphor *each other*, there is a stricter requirement: the NP chosen as the range argument is always the NP that the quantifier *each* is attached to. HL&M claim that *other* in *each other* translates as a one-place predicate, as in (3).

- (3) $[e_i \text{ other}]_j \Rightarrow \lambda z (z \cdot \Pi x_k \wedge x_i \neq z)$ (HL&M 1991:70)

In (3) x_k and x_i refer to the range and contrast arguments, respectively, and they will be bound by a variable that is introduced by *each* in *each other*.

HL&M also note that this requirement is not observed when *other*

I would like to thank Howard Lasnik, Diane Lillo-Martin, and especially William Snyder for their thorough advice. Some parts of this squib were presented at GALA ’97 and the New Perspectives on Language Acquisition conference at the University of Massachusetts at Amherst in June 1997. I would like to thank Nigel Duffield, Tom Roeper, Ken Wexler, and two anonymous *LI* reviewers for their valuable comments. Also, my thanks go to Laura Conway, Anne Halbert, Kazuko Hiramatsu, Diane Lillo-Martin, Kazumi Matsuoka, Koji Sugisaki, Maki Yamane, and the teachers and children at the University of Connecticut Child Development Laboratories for assistance with the experiments. Finally, I am grateful to Nigel Duffield and Howard Lasnik for their help with the manuscript. I am responsible for any remaining errors.