

# COMPETENCE FOR PREFERENCES

Roger Martin

Yokohama National University

Juan Uriagereka

University of Maryland

## 1. Introduction

In this paper we treat the phenomenon of syntactic preference as a grammaticality judgment that emerges in situations of structural ambiguity. There seem to be instances where, despite the fact that several relevant structures for some terminal string are grammatical, speakers somehow feel that they do not all have the same grammatical status: one or more are *preferred* over the others. To account for this phenomenon, we presumably need some sort of comparison set as well as a procedure to establish the appropriate choice(s). In this paper we will concentrate only on one well-studied example of syntactic preference, which emerges in the interpretation of scopally ambiguous sentences.

Before presenting our account of preferences, we need to consider the way a *chain* is constructed. For Chomsky (1995), a chain is an  $n$ -tuple of phrase-markers linked up by way of a moved item. If  $L$ , a sister to  $K$ , moves to merge to  $K'$ , the object thus formed is the chain  $\{\{L, K\}, \{L, K'\}\}$ . If something happens to  $L$  in one position (link) in the chain, it happens to  $L$  *in all* positions. For example, when the 'head' of a chain moves, the entire chain expands. Implicit in this is the idea that chains are objects encoding several derivational stages, all of which co-exist in an array of phrase-markers, and that the computational system somehow has access to all of the stages simultaneously, at least within given domains.

## 2. The Basic Facts

Consider the example in (1):

- (1) A boy saw every girl.

Apparently speakers that find (1) ambiguous typically prefer the reading in which *a boy* takes scope over *every girl*. However, it is difficult to even state an accurate description of where such preferences arise. It is not the case, for instance, that a quantifier that precedes another, or even that the subject, always has preferred wide scope, as (2) and (3) establish.

- (2) Two salesmen showed a car to every customer.
- (3) A car was shown to every customer.

In (2), although the preferred reading is that on which widest scope is assigned to the subject, there seems to be no preference with respect to relative scope of the two internal arguments of the verb (i.e., either one can take intermediate or narrowest scope), despite the fact that *a car* precedes *every customer*. Similarly, in (3), speakers don't seem to be compelled to assign widest scope to *a car*, despite the fact that it both comes first and is moreover the subject of the sentence. The speaker preferences cited above, and most of those that we refer to in this paper, are taken from Pica and Snyder (1995), who report experimental data from a study by Snyder (1994). Snyder conducted a psycholinguistic experiment to test for preferences and discovered some interesting generalizations, which we seek to account for here. For the purposes of this paper, we will not second guess Snyder's data, aware as we are of the difficulty of coming up with reliable observations in this domain and the need for further experimental studies.

The results of Snyder's study can be summarized as follows:

- (4) a. Subjects take preferred wide scope, except when displaced from a  $\theta$ -position that is lower than that of other scope-interacting arguments.
- b. Arguments internal to VP do not exhibit noticeable scope preferences, even when linearly arranged in various ways.
- (5) a. Scopal interaction is absolutely limited to local domains (where standard binding effects are manifested).
- b. Dative shift somehow fixes the scope of the displaced argument.

(4) concerns preferences, whereas (5) deals with judgments of absolute grammaticality. Examples (1)-(3) above illustrate claim (4a) and the example in (2) illustrates claim (4b). The claims in (5a) and (5b) are illustrated by the examples in (6) and (7) respectively:

- (6) a. Some boy believes every girl is capable of cheating.  
*cf.* Some boy<sub>i</sub> believes he<sub>i</sub>/\*himself<sub>i</sub> is capable of cheating.
- b. Some boy believes every girl to be capable of cheating.  
*cf.* Some boy<sub>i</sub> believes himself<sub>i</sub>/\*him<sub>i</sub> to be capable of cheating.
- (7) a. Two salesmen showed a customer every car.
- b. A customer was shown every car.

(7b), where *a customer* takes widest scope, contrasts minimally with (3). Assuming that the passivized indirect object first undergoes dative shift, (7b) presumably falls under generalization (5b).

### 3. Towards a Solution

It is unclear what (5b) follows from. We report it here only in order to compare the examples in (7), where *clear* preferences obtain (in fact, obligatoriness of given readings), to those in (2) and (3), where Pica and Snyder claim speakers do not have preferences that distinguish cars and customers in terms of scope. As for (5a), the

result is expected if the theory of quantifier interaction proposed by Kitahara (1996) and Hornstein (1995) is essentially correct, at least for core scopal interactions.

The Kitahara/Hornstein (K/H) approach does not involve the displacement of quantified elements into scope taking positions. Rather, quantifier scope piggybacks on the possible realizations of A-chains. The LF of (1) has the form in (8) (with so-called copies in *italic*), as a result of A-movement of arguments to Case positions.

- (8) [<sub>IP</sub> a boy [<sub>vP</sub> every girl [*a boy* [<sub>VP</sub> saw *every girl*]]]]

Depending on which copy of the displaced element is interpreted, different scopal relations emerge. The K/H theory predicts that scopal interactions exhibit the locality of A-movement, which is largely according to fact.

Also, consider an example like (2), in particular the reading where the direct object takes widest scope. For such a reading to obtain, the logic of the K/H system forces the subject and indirect object chains to be interpreted in their  $\theta$ -positions. Assuming the standard thematic hierarchy, when the direct object takes widest scope, *a fortiori* the subject must take scope over the indirect object, which in turn must take narrowest scope. According to our own judgments, this prediction seems to be correct.

More important to our concerns here, the K/H theory may help us provide an account for the preferences noted by Pica and Snyder. Suppose that chains are best represented as being comprised of several *simultaneous* derivational stages, so that in principle they exist in one or the other stage (say, the ‘foot’ or the ‘head’ of the chain), in a manner to be discussed in further detail below. As a matter of terminology, we will say that to interpret a chain in a particular chain-state  $\rho$  is to *collapse* the chain in  $\rho$ . Intuitively, the chains in (1) can collapse as in (9), which covers the space of possibilities involved in the relevant LF ( $\varphi$  signals a Case/agreement site, and  $\theta$  a  $\theta$ -position).

- (9) a. [<sub>IP</sub> a boy [<sub>vP</sub> every girl [<sub>VP</sub> saw]]]  
 $\varphi$   $\varphi$
- b. [<sub>IP</sub> a boy [<sub>vP</sub> [<sub>VP</sub> saw every girl]]]  
 $\varphi$   $\theta$
- c. [<sub>IP</sub> [<sub>vP</sub> a boy [<sub>VP</sub> saw every girl]]]  
 $\theta$   $\theta$
- d. [<sub>IP</sub> [<sub>vP</sub> every girl [*a boy* [<sub>VP</sub> saw]]]]  
 $\varphi$   $\theta$

75% of the representations in (9) collapse in a reading where *a boy* has scope over *every girl*, whereas only 25% collapse in the inverse reading. This interesting fact should be relevant in determining the observed preference, yet it is unclear how to even state it in standard terms.

#### 4. What are Preferences?

All other relevant things being controlled for, would *populations* of speakers be more likely to simply go with the more probable collapse? How would that model *a given speaker's intuitions* for preference? Populations seem at right angles with the nature of individual preferences.

Is it possible that the reported collapse rates are a matter of individual *performances*? Perhaps, but what would it mean for an individual to have a sense of preference *when examining the sentence in isolation*? Does a speaker carry a history of the times a given representation was somehow highlighted, thus yielding a particular preference?

That seems unlikely, especially for token sentences that speakers may have never heard, and for which preferences remain clear. Surprisingly, even in sentences that, for purely pragmatic reasons, lend themselves more easily to the inverse scope interpretation, standard preferences still obtain; they do not bend to the pragmatic bias. Observe the following:

- (10) a. A rich man cast every vote for the president.  
 b. Every vote for the president was cast by a rich man.

The only salient interpretation of (10a) is one that refers to the situation (which would normally be expressed as in (10b)) where each man casts one vote. And yet, as far as we can see, one cannot help but prefer the weird interpretation for (10a), whereby we somehow imagine a powerful man cheating to cast several votes.

How can a person *feel* to prefer one scope over the other—even overriding a pragmatic bias— if both scopes aren't somehow simultaneously evaluated, with one, somehow, winning over the other?

From our perspective, the representations in (9) do not correspond to separate LFs. They are (simultaneous) *states of the same LF*, understood as a collection of phrase markers.

More specifically, the chain created by movement of *a boy* has .5 probability of collapsing in the  $\phi$ -position and .5 probability of collapsing in the  $\theta$ -position. The same is true of the chain headed by *every girl*. The combined probability of each of the representations in (9) is .25. Three of those states with probability .25 of occurring are equivalent, in that they present the quantificational sequence *a > every*, which means that particular logical interpretation has .75 probability of occurring, as opposed to .25 probability of the *every > a* interpretation. If these representations exist simultaneously in an individual's mind, we can model a 'preference set' in terms of their probabilities. If in turn we allow the more probable representation to be preferable, that may help us model the choice itself.

The idea is that chains are dual objects, involving a behavior with regards to configurational position and one with respect to movement. If we consider a chain *qua* the reach of its movement, then we should not reconsider it *qua* position, and vice-versa. This is because the positional modeling and the modeling of the chain's reach are really quite different. In terms of position, a chunk of a chain is a configuration; that is, a phrase-marker (itself a set of word combinations assembled via the Merge procedure). In contrast, in terms of its reach, via various configurations, a chain is a set of configurations; that is, a set *of sets* of word combinations. It is not clear what it would mean for a chain to be *at the same time* considered as a configurational object and as a set of objects thereof. Apparently the language faculty exclusively chooses one state or the other, somehow.

Given this notion of chain, the relevant chains in (8), as sets of phrase-markers, simultaneously face all of the possibilities in (9). Thus, it makes sense to speak of a degree (probability) of preference for this or the other logical array, computed pre-

cisely over those possibilities in (9). Of course, the instant interpretation takes place, commitments are made; the chains have collapsed into given states and not others. In other words, our treatment of the preference phenomenon is that strictly it only exists prior to interpretive commitment, however that commitment is achieved.

## 5. Testing the Theory

The other observations made by Pica and Snyder can also be accounted for in our terms. Consider the LF for (2) in (11), with the possible chain collapses in (12) (we assume that *to* creates the  $\theta$ -position, whereas the  $\varphi$ -position is some abstract Case-checking site, say, Spec of *vP*).

- (11) [<sub>IP</sub> 2 salesmen [<sub>vP</sub> every customer [a car [2 *salesmen*  
[<sub>VP</sub> to *every customer* [showed a car]]]]]]]
- (12) a. [<sub>IP</sub> 2 sm [<sub>vP</sub> every customer [a car [<sub>VP</sub> to [showed]]]]]]  
 $\varphi$   $\varphi$   $\varphi$
- b. [<sub>IP</sub> 2 sm [<sub>vP</sub> every customer [<sub>VP</sub> to [showed a car]]]]  
 $\varphi$   $\varphi$   $\theta$
- c. [<sub>IP</sub> 2 sm [<sub>vP</sub> a car [<sub>VP</sub> to every customer [showed]]]]  
 $\varphi$   $\varphi$   $\theta$
- d. [<sub>IP</sub> 2 sm [<sub>vP</sub> [<sub>VP</sub> to every customer [showed a car]]]]  
 $\varphi$   $\theta$   $\theta$
- e. [<sub>IP</sub> [<sub>vP</sub> every customer [a car [2 sm [<sub>VP</sub> to [showed]]]]]]  
 $\varphi$   $\varphi$   $\theta$
- f. [<sub>IP</sub> [<sub>vP</sub> every customer [2 sm [<sub>VP</sub> to [showed a car]]]]  
 $\varphi$   $\theta$   $\theta$
- g. [<sub>IP</sub> [<sub>vP</sub> a car [2 sm [<sub>VP</sub> to every customer [showed]]]]  
 $\varphi$   $\theta$   $\theta$
- h. [<sub>IP</sub> [<sub>vP</sub> [2 sm [<sub>VP</sub> to every customer [showed a car]]]]  
 $\theta$   $\theta$   $\theta$

Once again, the reading on which widest scope is assigned to the subject has high probability: 5 of 8 collapses. However, it would now seem as if the reading on which the indirect object has scope over the direct object also has high probability: 6 out of 8 collapses. But this is a mirage.

As Pica and Snyder note, preposition *to* affects the *c*-command relations between its dependent *every customer* and the other quantifiers in the sentence, for familiar reasons. Assuming scope is established under *c*-command, (12d) and (12h) are not situations in which the indirect object has a valid (syntactic) scope over the direct object. That tilts the collapse situation, at least partially, back to what we expect, as indicated below:

- (13) a. *every customer* > *a car* 4 out of 8 collapses  
 b. *a car* > *every customer* 2 out of 8 collapses  
 c. independent scope 2 out of 8 collapses

Of course, (13a) is still twice as likely as (13b). This, however, is less than what we saw in examples demonstrating the preference for subject wide scope readings. In (9), the subject is three times as likely to have widest scope as the object, and, in (12), the subject is more than three times as likely to have widest scope as the direct object, and almost three times as likely to have widest scope as the indirect object. In the absence of a detailed analysis of what these figures might mean, we simply mention them as factual.

There is one other factor that may be relevant, which Pica and Snyder note in passing, namely *independent scope*. An array of quantifiers that do not interact syntactically in terms of scope may still be logically equivalent to an array of quantifiers that do. If so, (13c) is then logically equivalent to (13b), where in fact *a car* has scope over *every customer*. One way to think of this is that when *a car* has narrow scope, its semantic value is dependent on that of *every customer* (for each customer we have a corresponding car). But, in cases where *a car* does not interact in scope with *every customer*, the semantic value of the former is as independent from that of *every customer* as it would be if *a car* had wide scope; hence the logical equivalence. The point is that now the two collapses in (13c) can be interpreted together with those in (13b), in which case there is clearly no predicted difference in preference for one or the other the logical forms, in line with Pica and Snyder's observation. At the same time, we should not make too much of this, or present it as a certain solution for the time being, since even Snyder's careful experiments were not designed to control for such subtleties.

## 6. Dealing with a Puzzle

Let's now move on to (3), which poses a syntactic puzzle: How does the direct object manage to move over the indirect object in the passive construction? If the situation is as in (14), it would seem that the relevant paths embed.

$$(14) \left[ {}_{\text{IP}} \text{A car was } [{}_{\text{vP}} \text{every customer } [{}_{\text{VP}} \text{to } t \text{ [shown } t \text{ ]}]] \right]$$

For reasons discussed in Chomsky (1995: chapter 3), this is not considered a good configuration (in a nutshell, IP is too far away from *a car* to be able to engage its features in some relation that counts as the pre-requisite for movement). The situation might seem analogous to that arising in any simple transitive, like (8); but it is not. In (8), the thematically higher subject moves to the grammatically higher IP-Spec, whereas here the thematically higher *indirect object* moves to the grammatically lower vP-Spec. This suggests that there is an extra step of movement in the relevant derivation:

$$(15) \left[ {}_{\text{IP}} \text{A car was } [{}_{\text{vP}} \text{every customer } [t \text{ } [{}_{\text{VP}} \text{to } t \text{ [shown } t \text{ ]}]]] \right]$$

All steps of movement in (15) are the shortest possible, assuming that phrases within the same *local domain* (basically, the same projection) are equally close (or *equidistant*) to their targets (Chomsky 1995).



same as those of corresponding active sentences. Although we have no psycholinguistic evidence to back that claim up, it seems reasonable to say that either the sentence entirely disallows wide scope for *every boy*, or at least makes that reading highly disfavored, as was traditionally assumed. The question, then, is why *every boy* cannot take scope over *a girl*, assuming the chain created by movement of the latter can collapse in the lower  $\theta$ -position.

Obtaining such a reading would have to involve a higher collapse of *every boy*. It is reasonable to assume that the  $\theta$ -role of *every boy* is the result of its merging with *by*. Similarly, it would appear that the Case relation between *by* and *every boy* is inherent. If so, unlike the instances we have seen before, *by*-phrases would involve a single  $\phi/\theta$ -position, where both inherent Case is licensed and a  $\theta$ -role is assigned. Alternatively, it could be that the  $\theta$ -role is assigned in the complement position of the *by*-phrase and Case is checked in its Spec position, in which case all relations are still internal to the projection of *by*. Either way, *every boy* does not *c-command* *a girl*, regardless of whether the latter collapses in the higher or lower position, due to the intervening maximal projection of *by*. So under any of the possible combinations of collapses, either *a girl* takes wide scope over *every boy* or *every boy* and *a girl* do not interact in terms of scope at all, in which case the interpretation obtained is logically equivalent to one where *a girl* has wide scope. As a consequence we predict either total or overwhelming preference for the reading where *a girl* is assigned wide scope, as seems to accord to fact. Furthermore, under this analysis, (19) is not a counterexample to (4a), which is only about scope *interacting* arguments.

A similar argument can be made for (20) below, which according to our judgments involves either absolute wide scope of *a girl* or a very strong preference for such a reading.

- (20) A girl seems to every boy to be nice.

Conceivably, the indirect object in this instance receives inherent Case, differing from the diadic examples above. This analysis is consistent with two other circumstances.

First, despite the fact that indirect objects can in general undergo passive and dative shift in English, the indirect object in constructions like (20) cannot, as the examples in (21) show.

- (21) a. \*It seems every girl [that... ]  
 b. \*Every girl seems t [that...]  
 c. \*There seems (to) every girl [that...]

This is expected if the indirect object position receives inherent Case, since quirky-type movement is not possible in a language like English.

Second, in Spanish, contrary to what we saw for passives in (16), constructions parallel to (20) (to the extent they are even grammatical) do not involve special agreement:

- (22) ??Las chicas les han parecido/\*as [t ser agradables]  
 the girls to them have.AgrS seemed/\*AgrO to be nice

Indeed, the fact that (22) is not so good (regardless of agreement) suggests that the dative phrase induces an intervention effect, particularly because the intermediate step in (15) doesn't seem to be available. Why such sentences are better in English



may relate to the fact that it allows ‘CP-deletion’ in epistemic contexts like this one, whereas that process is independently known to be impossible in Spanish. Indeed, (22) becomes perfect if, instead of a ‘full’ complement clause, a small clause appears as the complement of *parecido*, as in (23).

- (23) Las chicas les han parecido [*t* agradables]  
 the girls to.them have.AgrS seemed nice

The intervention effect of the dative in all these instances would be attenuated if the downstairs predicate manages to somehow associate to the upstairs one, in the process extending its local domain (Chomsky 1995: chapter 3). It is not unreasonable to assume that small clauses and IPs (i.e., contexts of ‘CP-deletion’) allow such reanalysis whereas the ‘full’ embedded clause in (22) resists it.

Incidentally, the fact that (22) doesn’t improve if we add the object agreement marker (in fact it gets much worse) indicates that the grammar is not ‘smart enough’ to freely add an agreement marker in order to salvage a derivation. What happens in (16) and similar instances is less teleological than attempting to allow a certain movement. The grammar for some reason has the paradigmatic option of passive participial agreement; given this dull option, a certain movement becomes available, which would otherwise be ungrammatical. However, no matter how useful this extra ‘agreement gate’ would have been in (22), the grammar cannot freely resort to it. This kind of ‘dumbness’, we might add, is not surprising given a minimalist view of the grammar.

If these ideas are on track, the scope facts in (20) are straightforward. The particle *to* introducing the indirect object is a bona-fide inherent Case marker, which means the phrase *every boy* never gets displaced to a (higher) structural Case position. Furthermore, the unique position where *every boy* can be interpreted is not one that allows this element to take scope over *a girl*. Thus, the chain created by *a girl* either collapses in a way in which *a girl* ends up with wide scope or, in a logically equivalent fashion, independent scope with respect to *every boy*. So the LF of (20) looks very similar to that of (19).

## 8. Conclusions

We have attempted to model syntactic preferences for certain readings in quantificationally ambiguous sentences. To do so, we argued that we first need a preference set, which we were able to base on the sorts of LF representations that arise within the K/H theory of quantifier scope. In addition, we assumed that (for reasons that we have left unclear, but which we will turn to highlight in a moment) one among various possible readings is always chosen for any given LF, which we have called a collapse. The gist of our idea is that the preference set allows for weighted probabilities for given interpretations, and those collapses that are simply more probable will correspond to speakers’ preferences. We argue that this should not be treated as either a population effect or a cumulative performance effect (though it is compatible with population and performance consequences); rather, it is a genuine individual effect. Thus, in our view, it is a systematic part of the language faculty, namely, a part of competence.

We would also like to note here that our approach to preferences is not necessarily limited to quantifier scope interactions, nor is it bound to a particular theory of how the possible LFs for those various interpretations are derived. Preferences for scope interactions turned out in practice to be relatively easy to model, and most of all we were fortunate to have access to Snyder's experimental results. However, in principle there is no reason to limit ourselves to quantifier interactions. There are other domains where preferences seem to arise (e.g., adjunct interpretation, and possibly various 'surface semantic' effects), and these too may well be amenable to our general approach; we further believe that such studies are very much worth pursuing, so long as appropriate probabilities can be computed and the predictions tested against speakers' intuitions. Also, our approach, if on the right tract, can help us explore possible theories of quantifier scope interactions, since only if we can construct a preference set with appropriately weighted probabilities (where what weight, or ratio, turns out to be 'appropriate' is of course an empirical issue), can we possibly explain preferences in our terms. In the cases we examined, the K/H theory of scope works well, but it may well be, however, that other approaches, based on (extensions of) a QR theory, can also be made to work.

We will conclude by noting the curious similitude between chain representations, as understood here, and what happens in quantum mechanics with the collapse of the wave function. In a nutshell, and without attempting to explicate the matter beyond this summary statement, any given particle can be in multiple possible states at once —until we make a measurement. Then it collapses to a single state, the most probable, although others are possible too. Differently put, on the one hand we have stable physical entities whose interactions are, in themselves, perfectly deterministic and rule-based; and yet when that information is measured (thus becoming 'classical'), it literally collapses to one of the many possible states that it could have taken in a way that is probabilistic.

There is a sense in which a chain is like a wave-function, occurrences within it being all the possibilities the chain could collapse to. More generally, and on this model, one could think of an LF as a set of simultaneous derivational stages, or as carrying the probability of finding chain-links in these or the other positions, with interpretive consequences. Of course, to make the analogy concrete, and relevant, one needs *canonically conjugate variables* like momentum and position (in the case of particles). Possibly the duality imposed by the chain *reach* within a given LF —which is the basis of the preference phenomenon discussed here— as compared to the particular semantic interpretation that this, that, or the other collapsed *position* may have within those compatible with the LF, may well be the basis for the necessary 'canonical conjugation' (the quotes denoting still possible metaphoricality).

For what it's worth, the expression of 'positions to be interpreted' is configurationally simpler (lower in a dimensionality for unbounded linguistic representation) than that of 'chain relations to generate preference sets' (which seem higher in dimensionality, if nothing else because they presuppose the configurations and *whatever computes aggregative sets thereof*). If (i) notions of the higher dimensionality could be shown to be appropriately understood in some vectorial fashion, while (ii) objects of the lower dimensionality could be represented as scalars, and (iii) provided that relevant positional representations correspond *only to those comprising preference sets*,

and vice-versa, then it may not be unreasonable to speak, here too, of canonically conjugate variables.

One reason for optimism comes from the fact that, with little imaginative effort, an analogue of the quantum collapse emerges for the cases that occupy us, with pretty much the consequences we expect of such a bizarre mathematical assumption. After all, it remains a non-obvious fact that, out of  $n$  possible interpretations that the system affords, the grammar for some reason chooses precisely one in actual interpretive processes; not all, not a few, not even just pragmatically favorable ones, but exactly one.

Familiar functionalist considerations are of little help here, for they basically beg the question: they expect communication to maximize the informative character of the message. However, there clearly are circumstances in which ambiguity would be desirable—for instance in war, love or poetry—but even there one simply cannot simultaneously, and knowingly, collapse into various reasonable interpretations. It seems cognitively impossible, despite the fact that prior to the collapse we can determine particular preferences (or evaluating the situation in a grammatical judgment), which must range over various relevant options.

Now that is exactly what the extension of a quantum collapse to these domains would result in: it should disallow us to precisely ascertain both a preference (calculated over the reach of a chain) and an interpretation (established over a scopally clear position in the LF object). It's one or the other, not both. And so, from this perspective, interpreting a chain is pretty much akin to classically observing a quantum entity, thereby forcing it into one of its multiple states.

### Acknowledgements

Our appreciation goes to the late Joel Feigenbaum (who held similar ideas but did not live long enough to develop them), Massimo Piattelli-Palmarini, and especially Joshua Roebke, for helpful clarification. None of them, however, should be held responsible for any of our likely errors. We present this piece—still part of an on-going research—in honor of Professor Patxi Goenaga, the first generative grammarian in the Basque Country. His influence in an entire generation of linguists, who we consider both examples to follow and friends, is only second to his overall commitment to the defense of the Basque language.

### References

- Chomsky, N., 1995, *The minimalist program*, MIT Press.
- Hornstein, N., 1995, *Logical form: From GB to Minimalism*, Blackwell.
- Kitahara, H., 1996, "Raising Q without QR", In W. Abraham, S. Epstein, H. Thrainsson and J.-W. Zwart (eds.), *Minimal ideas*, John Benjamins.
- Pica, P. and W. Snyder, 1995, "Weak crossover, scope, and agreement in a minimalist framework", *Proceedings of WCCFL 13*.
- Snyder, W., 1994, "A psycholinguistic investigation of weak crossover, islands, and syntactic satiation effects", poster presented at the CUNY Sentence Processing Conference, CUNY Graduate Center, New York.