Antisymmetry and Externalization

Richard S. Kayne
New York University

Linearising Constituents Across Domains 2020, Bled, Slovenia
October 16, 2020

1. Word Order

As Chomsky in his 2019 UCLA lectures has emphasized, one hears linear order, but not structure.

Despite this fact, the head parameter approach to word order has over the years taken it for granted that English-type VO sentences and Japanese-type OV sentences are showing us sisterhood relations, with VO and OV both corresponding to derivation-final head-complement configurations.

At the same time, everyone agrees with Pollock (1989) and others that French VO sentences, in particular those with a finite verb, involve V-raising. In which case, French VO does not correspond to a derivation-final sister relation. This leads to the following proposal:

(1) Neither VO nor OV ever reflects a derivation-final sister relation.

Whether verbs raise to one degree or another in all languages is not entirely clear. (Johnson (1991) has shown that they do even in English.) But the following conjecture related to (1) seems likely to turn out to be valid (and perhaps to be related to Kayne's (2005a, Appendix) Decompositionality principle):

(2) Arguments invariably raise at least once.

(I'm taking noun-incorporation, following Baker (1988), to involve movement.)

A further, more general conjecture is the following (which rests in part on Baker's (1988) UTAH principle):

(3) All word order differences are traceable back to movement differences.

a natural extension of which, as in Kayne (2019), is:

(4) All morpheme order differences are traceable back to movement differences.

For example, English reversative *un-*, as in *undo, unpack*, seems to have a suffixal counterpart in Bantu languages. From (4) it follows that English and the relevant Bantu languages must differ either in V(P)-movement or in the movement of this (counterpart of) *un*, or in both. (It would be challenging, but perhaps worthwhile, to consider the possibility that all parametric differences in syntax have something to do with word/morpheme order, and hence with movement.)

That V and O are never sisters derivation-finally leads one to wonder if they are ever even sisters derivation-initially, i.e. if they are ever merged with each other as head and complement. The small clause and ECM traditions say no for a certain class of apparent objects. Larson (1988) says no even for cases like *They put the book on the table*, for which he takes *the book* to be externally merged into a Spec position.

Although Japanese-type OV has (incorrectly) lent itself to the idea that O and V can be sisters even derivation-finally, that idea is immediately implausible for languages with canonical/neutral OXV order.

One case of OXV comes from languages of the sort studied by Dryer (1992), with ONegV as a possible canonical order (as in Korean). As noted by Whitman (2005), on the standard assumption that Neg is merged outside VP, and therefore above O, the pre-Neg position of O in SONegV sentences must have been produced by movement of O to the Spec of some higher head. In a SONegV sentence, O can clearly not be occupying the complement position of the pronounced V.

Whitman argues more specifically that SONegV is produced by remnant VP-movement. The verb moves out of the VP by head movement; subsequently the entire (verbless) VP containing O moves past Neg, much as in Nkemnji's (1992; 1995) analysis of one word order pattern in Nweh.

An alternative to remnant VP-movement for SOXV is to have O move past X by itself. Kandybowicz and Baker (2003) argue that both options are available. While remnant VP-movement is appropriate for Nweh and also for Lokąą, movement of O by itself is called for in Nupe.

The OAuxV order also found in Lokąą is a clear instance in which O cannot be in the complement position of V. (Such sentences are also found in (Dutch and) German in some cases, in particular in (embedded cases of) so-called IPP sentences - cf. Zwart (2007) a.o.)

There is also the case of Malayalam, in which objects must surface in a position preceding that of VP-external focus (i.e. OFocV), as emphasized by Jayaseelan (2001).

In Dutch and German, the infinitive marker must intervene between object and verb and so, too, must (abstracting away from V-2) what are called separable particles.

In further support of the idea that O is derivation-finally never sister of V, we can note the existence of OVX languages, where O is a single object that moves up past V and where X corresponds to another constituent or to other constituents within VP; two instances of such languages are Bambara and Kpelle, as discussed by Koopman (1992) and Travis (1989). And as is often the case, a general characteristic of one language may be found to hold for "part" of another. Thus Ulster Irish infinitivals (cf. McCloskey and Sells (1988: 148)) look a bit like SOVX, as does Gwari (cf. Hyman and Magaji (1970: 92)) in at least some sentences with auxiliaries.

2. How not to study word order variation.

Greenberg (1966) has shown that studying word order variation pairwise is not sufficient. He found that if you look at pairs such as 'Dem N'/'N Dem' you find that both possibilities are attested cross-linguistically. And the same holds for 'Numeral N'/'N Numeral', as well as for 'Adj N'/'N Adj'. In other words, looking at these three pairs separately gives the initial impression that the language faculty is highly flexible.

Yet, as Greenberg showed in his Universal 20, if you examine combinations of all four of these categories together, the picture changes dramatically. A strong

asymmetry appears. If N is final, then the order of the other three is in fact fixed, and one has 'Dem Numeral Adj N'. Whereas if N is initial the order of the other three is not fixed; for details and theoretical underpinning, see Cinque (2005; 2020b).

As Cinque shows, this asymmetry between prenominal order and postnominal order fits directly into the antisymmetry proposal that I made in Kayne (1994), which has the property that such left-right (pre-N/post-N) asymmetries are expected.

As Cinque (2009) shows, such complex left-right asymmetries are in fact much more widely found than just in the case corresponding to Greenberg's Universal 20. As in Greenberg's case, these asymmetries come to the fore if one examines the relative order of sets, not just pairs, of elements (cf. also Pearson (2000)).

3. Antisymmetry

In general, empirical arguments that support antisymmetry rest on more than observations concerning the relative order of simple pairs of elements. Often, they involve cross-linguistic gaps (in the study of syntax, it is essential to see what is not there); on this empirical side, antisymmetry can be thought of as grouping together a substantial set of Greenbergian cross-linguistic generalizations and providing a single theoretical account for all of them.

As an initial example, we can take Cinque's (1977) demonstration that Italian has two distinct types of left-dislocation, one of which he calls "hanging topics." Hanging topics occur at the left-hand edge of the sentence. As far as I know, there has never been a claim to the effect that there exists something exactly comparable on the right-hand edge of the sentence in any language. (The core reason for the absence of right-hand hanging topics, from the perspective of antisymmetry, is the prohibition against right-hand specifiers.)

The other type of left dislocation that Italian has, namely CLLD, as discussed in more detail in Cinque (1990), does at first glance seem to have a right- hand counterpart, usually called (clitic) right-dislocation. Yet the pairing of CLLD and clitic right-dislocation (CLRD) is misleading. As argued by Cechetto (1999) for Italian and by Villalba (1999) for Catalan, there are sharp asymmetries within each of those two languages between CLLD and CLRD, which would be quite surprising if the linguistic universe were not antisymmetric. (The antisymmetric prohibition against right-hand specifiers forces a remnant movement analysis and/or a bi-clausal analysis of CLRD (cf. Kayne (1994: sect. 7.3)), but not of CLLD (cf. Ott (2014), at least not in the same way.)

Related to this asymmetry between CLLD and CLRD is, arguably, the fact that there are SVO languages (such as Haitian Creole and Gungbe) that seem to lack CLRD entirely, but apparently no SVO languages that lack left dislocation entirely. (Cf. Baker (2003: 111) on Kinande and Torrence (2005: 70, 73, 75) on Wolof. On a possible link to the position of D, cf. Kayne (2003: text to note 29).)

In a symmetric syntactic universe, one would have expected prenominal and post-nominal relatives to be similar, merely differing in their order with respect to the "head" of the relative. However, Downing (1978) and Keenan (1985) noted substantial differences. These can be stated as follows (setting aside correlatives, and keeping to relatives that are in their canonical position for the language in question):

(5) Prenominal relatives (as opposed to postnominal relatives) generally lack complementizers akin to English *that*.

(6) Prenominal relatives (as opposed to postnominal relatives) usually lack relative pronouns.

(7) Prenominal relatives (as opposed to postnominal relatives) tend to be non-finite.

These differences fed into the specific proposal in Kayne (1994) that prenominal relatives always originate postnominally (for an opposing view, see Cinque (2020a)). A piece of evidence in favor of such post-N origin comes from Kornfilt (2000), who observes that the Turkic languages Sakha and Uigur have prenominal relatives whose subjects trigger agreement such that the agreement morpheme actually appears following the "head" noun. She proposes that this agreement is produced via leftward movement of an originally postnominal relative containing a high Agr element that is stranded.

In an asymmetric syntactic universe, the following should turn out to be correct (as seems to be the case):

(8) No postnominal relatives ever have their subject determining agreement such that the agreement morpheme precedes the "head" noun.

A somewhat similar window on the architecture of the language faculty is provided by a type of coordination, as Zwart (2009) shows. According to Zwart, if one looks cross-linguistically at NP/DP-coordination counterparts of English *and*, and if one limits oneself to coordinations in which *and* appears only once, one finds that *and* and its counterparts invariably occur between the two conjuncts:

(9) a. NP and NP
b. *and NP NP
c. *NP NP and

Zwart draws the reasonable conclusion that this limitation to one possible order must be reflecting absence of movement. In antisymmetric terms, this seems to be telling us that *and* is a head, that the two conjuncts are specifier and complement of *and*, and that the order is as it is in (a) because S-H-C order is the only order made available by the language faculty.

The head status of *and* is also suggested by the apparent fact that the '*and* NP *and* NP' type of coordination (possible in French) is only found in languages that would otherwise informally be thought of as 'head-initial'; and by the related fact that the 'NP *and* NP *and*' type is only to be found in 'head-final' languages.

That coordination is, despite appearances, not symmetric would also appear to be supported by the following contrast involving the bound reading of *his*:

(10) ?Every little boy and his mother were at the party.

(11) *His mother and every little boy were at the party.

as well as by the Case discrepancies between first and second conjunct discussed by Johannessen (1998) (cf. perhaps first conjunct agreement in Arabic, as discussed by

Aoun et al. (2010, sects. 4.3, 4.4), and by the fact that one occasionally finds extraction of the first conjunct to be possible (cf. Kayne (1992)), but never extraction of the second conjunct.

In addition, we can note the following:

(12) They went to the store and bought food.

(13) They bought food and went to the store.

The first of these has a very natural interpretation that is temporally asymmetric, with the *going to the store* leading to the *buying of food*. That exact interpretation is absent from the second example, in a way that would be surprising if coordination were symmetric.

As a final example of the way in which antisymmetry 'shows through', let me mention some adverb facts. AuxV languages often allows intervening adverbs between Aux and V, as in English *John has recently seen Mary*, whereas VAux languages generally do not. In addition, there are VO languages (such as English) in which V and O cannot be separated by adverbs. What seems to be unattested, though, is an OV language that would systematically forbid its adverbs from intervening between O and V (in particular when O is definite). In a symmetric syntactic universe, these asymmetries concerning adverbs with respect to AuxV vs. VAux and with respect to VO vs. OV would be unexpected.

4. Externalization

In his recent work, Chomsky has suggested that linear order is not part of core syntax and that it comes into play only as the result of externalization. This differs from the position taken in Kayne (1994).

We can now ask to what extent antisymmetry in compatible with Chomsky's view of externalization.

One very general way to think of antisymmetry is in terms of trees and mirror-images, with antisymmetry holding that for every given pair of mirror-image trees, at most one can be well-formed. But more specifically, antisymmetry claims that linear order is dependent on structure; in particular for every projection, the mapping to linear order must invariably yield S-H-C.

(Somewhat less centrally, antisymmetry requires that there be only one Spec per projection, in a way that feeds into cartography work, as exemplified by Rizzi (1997) and Cinque (1999).)

It seems to me that in externalization terms one can, if one agrees that S-H-C is basically correct for any of the reasons given above, incorporate antisymmetry into the mapping from core syntax to PF.

The question remains as to why antisymmetry holds (in 1994 terms, why the LCA is a valid axiom). In Kayne (2011; 2019), I suggested that an answer to this question requires taking linear order to be part of core syntax, via a certain use of an alternative to standard Merge that was mentioned but not pursued in Chomsky (2008) (but cf. Chomsky (2019) on Pair-Merge, though his use of it is different from mine, as is Saito and Fukui's (1998), which retains a head parameter orientation), namely that Merge should always be taken to form the ordered pair <X,Y>, rather than the set {X,Y}.

Chomsky (2019) takes the opposite view, i.e. he takes the view that linear order is not at all part of core syntax, in part on the basis of the point that differences in linear order do not feed differences in semantic interpretation, which depends only on structure (and on lexical items and features).

But this point rests on the assumption, denied by antisymmetry, that linear order can vary independently of structure (as it can in the head parameter tradition). If, on the other hand, linear order is fully determined by hierarchical structure, then there is no reason to expect it to be able to make its own independent contribution to semantic interpretation. If so, then linear order can still be part of core syntax.

Another (long-standing) reason why Chomsky takes linear order not to be part of core syntax has to do with examples that show that internal merge cannot take the linearly closest auxiliary in English subject-aux inversion. Thus starting from:

(14) Somebody who is in Paris is on the phone.

one cannot conceivably derive:

(15) *Is somebody who in Paris is on the phone?

The question arises, though, as to whether this strong prohibition might derive from structural factors, e.g. from the general impossibility of extraction from within a subject phrase, or from within a relative clause. Such extraction, however, does not always yield an equally strong violation:

(16) ???What linguist has the sister of just published an important paper?

especially with parasitic gaps:

(17) ?What linguist has the sister of just criticized a book by?

One can, on the other hand, reach a violation as sharp as that in (15) if, instead of extracting an argument, as in (16) and (17), one tries to extract a non-argument such as an adverb. Thus, starting from:

(18) Somebody who was speaking loudly left very suddenly.

it is sharply impossible to derive:

(19) *How loudly did somebody who was speaking leave very suddenly?

and similarly even for parasitic gaps (where the notion of ‘closest’ is not relevant). For example, starting from:

(20) Somebody who was behaving badly was near somebody else who was behaving badly.

one cannot reach:

(21) *How badly was somebody who was behaving near somebody else who was behaving?

If (15) is sharply deviant for the same reason as (19) and (21), then (15) is compatible with taking linear order to be part of core syntax.

Chomsky (2019) also mentions work by Moro et al. (2003) showing that Broca’s area activation does not take place when subjects are presented with an ‘unreal’ language in which negation would be the third word in a sentence. This is obviously a telling argument, but I don’t think it bears directly on the question whether linear order is part of core syntax. Rather, what it shows, I think, is only that the language faculty doesn’t count numerically. Clearly it doesn’t count words in linear order. But it also doesn’t numerically count structural notions such as depth of embedding. As far as I know, no syntactic operation takes, or could possible take, as its goal a phrase that would be

exactly three nodes down from the (node immediately dominating the) probe. (Nor could a syntactic operation search for a phrase that is the third closest, structurally speaking.)

(In addition, it may well be the case that phonological operations cannot count numerically, either, if there are no phonological operations that would, say, impose harmony (cf. Nevins (2010)) along some dimension between two segments exactly three segments apart. If true, this is striking insofar as linear order must presumably be part of core phonology. (Chomsky's (2019) evolutionary point, based on Huybregts (2017), concerning the distinctive phonology of the San languages, is likely not to extend to syntax.))

That numerical counting (as opposed to the non-numerical calculation of closeness) is not countenanced by the language faculty is itself something that needs to be understood (in particular against the background of Chomsky's proposal that arithmetic is an offshoot of the language faculty), but its unavailability does not imply that linear order is not part of core syntax.

Returning to the question of semantic interpretation, where I have taken the position that even though linear order doesn't directly feed into it (since linear order is antisymmetrically determined by hierarchical structure), linear order is nonetheless part of core syntax, let me take all this to be part of a broader question, namely whether or not semantic interpretation must take into account all aspects of core syntax.

This broader question ties into one raised by Chomsky et al. (2019), who state that "Whether...semantically vacuous scrambling, extraposition, clitic movement etc., ...reflect narrow-syntactic computations or are part of the mapping to PHON...is an open question".

If (2), repeated here:

(22) Arguments invariably raise at least once.

is correct, then even arguments that appear in their canonical position in the language in question will have been moved there in what appears to be a semantically vacuous way (unless the semantics pays important attention to the link between even an argument in canonical position and its trace). (This is especially likely to be true for objects in the OXV and OVX languages discussed earlier.)

But what I'm really getting to is the fact that semantically vacuous syntactic operations can in principle also be diagnosed as being part of core syntax through their interactions with other syntactic operations. Take, for example, relative clause extraposition, which feels semantically neutral in pairs like:

(23) Somebody who I used to know in high school just walked in.

(24) Somebody just walked in who I used to know in high school.

Yet there is a restriction seen in:

(25) The only person who I liked in high school just walked in.

(26) *The only person just walked in who I liked in high school.

presumably due to a property of the scope of *only* that must be part of core syntax.

In a partially similar way, consider clitic movement, which in simple cases seems to have no semantic effect. Yet, as discussed by Rizzi (%%%), we have contrasts in French of the following sort:

(27) Combien (*en) ont lu ton livre? ('how-many (of-them) have read your book')

(28) Combien tu *(en) a lus? ('how-many you (of-them) have read')

When one fails to pronounce the noun that goes with *combien,* the clitic *en* is obligatorily present in the object case (28), yet impossible in the subject case (27). The obligatoriness in (28) tracks:

(29) Tu *(en) a lu beacoup. ('you (of-them) have read a-great-deal')

indicating that the movement of clitic *en* in (28) must be taking place prior to wh-movement. If so, then, since wh-movement is part of core syntax, so must be clitic movement (at least in this case), despite its semantic neutrality.

Finally, take verb raising of the Pollockian (1989) sort, which as Chomsky (2019) emphasizes is also semantically neutral. Yet Kayne (1991) showed there to be an effect of Romance (infinitival) verb raising on the syntax of PRO (in *if*-clauses).

5. Conclusion.

Antisymmetric linear order is arguably part of core syntax. The implications for externalization and for the evolution of the language faculty need to be looked into further.

References:

Aoun, J.E., E. Benmamoun and L. Choueiri (2010) *The Syntax of Arabic*, Cambridge University Press, Cambridge.

Baker, M.C. (1988) *Incorporation. A Theory of Grammatical Function Changing*, University of Chicago Press, Chicago, Ill.

Baker, M.C. (2003) "Agreement, dislocation, and partial configurationality," in A. Carnie, H,. Harley and M.A. Willie (eds.) *Formal Approaches to Function in Grammar,* John Benjamins, Amsterdam, 107-134.

Cecchetto, C. (1999) "A Comparative Analysis of Left and Right Dislocation in Romance," *Studia Linguistica*, 53, 40-67.

Chomsky, N. (2008) "On Phases," in R. Freidin, C.P. Otero and M.L. Zubizarreta (eds.) *Foundational Issues in Linguistic Theory*. *Essays in Honor of Jean-Roger Vergnaud*, MIT Press, Cambridge, Mass., 291-321.

Chomsky, N. (2019) "The UCLA Lectures" (lingbuzz/005485, 2020).

Chomsky, N., Á.J. Gallego and D. Ott (2019) "Generative Grammar and the Faculty of Language: Insights, Questions, and Challenges," *Catalan Journal of Linguistics Special Issue*, 229-261.

Cinque, G. (1977) "The Movement Nature of Left Dislocation," *Linguistic Inquiry*, 8, 397-412.

Cinque, G. (1990) *Types of A'-Dependencies*, The MIT Press, Cambridge, Mass.

Cinque, G. (1999) *Adverbs and Functional Heads. A Cross-Linguistic Perspective*, Oxford University Press, New York.

Cinque, G. (2005) "Deriving Greenberg's Universal 20 and Its Exceptions," *Linguistic Inquiry*, 36, 315-332.

Cinque, G. (2009) "The Fundamental Left-Right Asymmetry of Natural Languages," in S. Scalise et al. (eds.) *Universals of Language Today*, Springer, 165-184.

Cinque, G. (2020a) *The Syntax of Relative Clauses. A Unified Analysis*, Cambridge University Press, Cambridge.

Cinque, G. (2020b) "Word order variation: towards a restrictive theory," ms., University of Venice.

Downing, B.T. (1978) “Some Universals of Relative Clause Structure,” in J.H. Greenberg (ed.) *Universals of Human Language. vol. 4. Syntax*, Stanford University Press, Stanford, 375-418.
Dryer, M.S. (1992) “The Greenbergian Word Order Correlations,” *Language* 68, 81-138.
Greenberg, J.H. (1966) “Some Universals of Grammar with Particular Reference to the Order of Meaningful Elements,” in J.H. Greenberg (ed.) *Universals of Language*, second edition, The MIT Press, Cambridge, Mass., 73-113.
Huybregts, M.A.C. (2017) “Phonemic clicks and the mapping asymmetry: How language emerged and speech developed,” *Neuroscience and Biobehavioral Reviews*, 81B, 279-294.
Hyman, L.M. and D.J. Magaji (1970) *Essentials of Gwari Grammar*, Institute of African Studies, University of Ibadan.
Jayaseelan, K.A. (2001) “IP-internal Topic and Focus Phrases,” *Studia Linguistica* 55, 39-75.
Johannessen, J.B. (1998) *Coordination*, Oxford University Press, New York.
Johnson, K. (1991) “Object Positions,” *Natural Language and Linguistic Theory*, 9, 577-636.
Kandybowicz, J. and M.C. Baker (2003) “On Directionality and the Structure of the Verb Phrase: Evidence from Nupe,” *Syntax* 6, 115-155.
Kayne, R.S. (1991) “Romance Clitics, Verb Movement and PRO,” *Linguistic Inquiry*, 22, 647-686 (reprinted in Kayne (2000)).
Kayne, R.S. (1992) “Italian Negative Infinitival Imperatives and Clitic Climbing”, in L. Tasmowski and A. Zribi-Hertz (eds.) *Hommages à Nicolas Ruwet*, Communication & Cognition, Ghent, 300-312 (reprinted in Kayne 2000).
Kayne, R.S. (1994) *The Antisymmetry of Syntax*, The MIT Press, Cambridge, Mass.
Kayne, R.S. (2000) *Parameters and Universals*, Oxford University Press, New York.
Kayne, R.S. (2003) “Some Remarks on Agreement and on Heavy-NP-Shift”, in M. Ukaji, M. Ike-Uchi and Y. Nishimara (eds.) *Current Issues in English Linguistics* (Special Publications of the English Linguistic Society of Japan, volume 2), Kaitakusha, Tokyo, 67-86 (reprinted in Kayne (2005b)).
Kayne, R.S. (2005a) “On the Syntax of Quantity in English”, in Kayne (2005b) (also in J. Bayer, T. Bhattacharya and M. T. Hany Babu (eds.), *Linguistic Theory and South-Asian Languages. Essays in Honour of K.A. Jayaseelan*, John Benjamins, Amsterdam.)
Kayne, R.S. (2005b) *Movement and Silence*, Oxford University Press, New York.
Kayne, R.S. (2011) “Why Are There No Directionality Parameters?” in M. Byram Washburn, K. McKinney-Bock, E. Varis, A. Sawyer and B. Tomaszewicz (eds.) *Proceedings of the 28th West Coast Conference on Formal Linguistics*, Cascadilla Proceedings Project, Somerville, MA, 1-23.
Kayne, R.S. (2019) “The Place of Linear Order in the Language Faculty”, *Linguistic Analysis*, 42.
Keenan, E.L. (1985) “Relative Clauses,” in T. Shopen (ed.) *Language Typology and Syntactic Description. Volume II. Complex constructions*, Cambridge University Press, Cambridge, 141-170.
Koopman, H. (1992) “On the Absence of Case Chains in Bambara,” *Natural Language and Linguistic Theory*, 10, 555-594.

Kornfilt, J. (2000) “Locating Relative Agreement in Turkish and Turkic,” in A. Göksel and C. Kerslake (eds.) *Studies on Turkish and Turkic Languages*, Harrassowitz Verlag, Wiesbaden, 189-196.
Larson, R.K. (1988) “On the Double Object Construction,” *Linguistic Inquiry*, 19, 335-391.
McCloskey, J. and P. Sells (1988) “Control and A-Chains in Modern Irish,” *Natural Language and Linguistic Theory*, 6, 143-189.
Moro, A. et al. (2003) “Broca’s area and the language instinct,” *Nature Neuroscience*,
Nevins, A. (2010) *Locality in Vowel Harmony*, The MIT Press, Cambridge, Mass.
Nkemnji, M.A. (1992) *Issues in the Syntax of Negation in Nweh*, Master’s thesis, UCLA.
Nkemnji, M.A. (1995) *Heavy pied-piping in Nweh*, Doctoral dissertation, UCLA.
Ott, D. 2014. “An Ellipsis Approach to Contrastive Left-dislocation”, *Linguistic Inquiry,* 45, 269-303.
Pearson, M. (2000) “Two types of VO languages,” in P. Svenonius (ed.) *The Derivation of VO and OV*, John Benjamins, Amsterdam, 327-363.
Pollock, J.-Y. (1989) “Verb Movement, Universal Grammar, and the Structure of IP,” *Linguistic Inquiry*, 20, 365-424.
Rizzi, L. (1982) *Issues in Italian syntax*, Foris, Dordrecht.
Rizzi, L. (1997) “The fine structure of the left periphery,” in L. Haegeman (ed.) *Elements of Grammar. Handbook of Generative Syntax*, Kluwer, Dordrecht, 281-337.
Saito, M. and N. Fukui (1998) “Order in Phrase Structure and Movement,” *Linguistic Inquiry* 29, 439-474.
Torrence, Harold. (2005) *On the Distribution of Complementizers in Wolof*, Doctoral dissertation, UCLA.
Travis, L. (1989) “Parameters of Phrase Structure,” in A.S. Kroch and M.R. Baltin (eds.), *Alternative Conceptions of Phrase Structure*, University of Chicago Press, 263-279.
Villalba, X. (1999) “Right Dislocation is not Right Dislocation,” in O. Fullana and F. Roca (eds.) *Studies on the Syntax of Central Romance Languages. Proceedings of the III Symposium on the Syntax of Central Romance Languages*, Universitat de Girona, 227-241.
Whitman, J. (2005) “Preverbal Elements in Korean and Japanese,” in G. Cinque and R.S. Kayne (eds.) *Handbook of Comparative Syntax*, Oxford University Press, New York, 880-902.
Zwart, J.-W. (2007) “Some Notes on the Origin and Distribution of the IPP-effect,” *Groninger Arbeiten zur Germanistischen Linguistik,* 45, 77-99.
Zwart, J.-W. (2009) “Relevance of Typology to Minimalist Inquiry,” *Lingua*, 119, 1589-1606.