

Guglielmo Cinque, *Typological Studies: Word Order and Relative Clauses* (Routledge leading linguists), 2013. New York: Routledge . Pp. x + 390.

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Whoever might think that ‘language typology is language typology, generative grammar is generative grammar, and never the twain shall meet’ is forced to rethink this idea due to Cinque’s never-desisting efforts to show the contrary in the past decades. His latest book is a collection of 17 previously published papers and squibs, all related in one way or another to this general theme.

Interaction between formal grammar and typological linguistics is evidently fruitful in both ways. Cross-linguistic, comparative work provides clues concerning the range of possible language variation, which needs to be explained. Detailed, formal studies provide insights that lead to new and improved typological questions and classifications. When it is formulated in sufficiently general terms, most linguists will undoubtedly applaud a *formalism meets typology* program – but of course the devil is in the details. Ideally, linguistic theory should “simultaneously account for the in-depth properties of [a] phenomenon, and for its range of variation across languages” (159). Thus, abstract/formal analysis and the study of variation are “two sides of the same inquiry” (159). What Cinque shows in his work, is how one could give hands and feet to such a program. The importance of this for linguistics as a field can hardly be overestimated.

In his introduction to the book, Cinque adds a somewhat curious argument for assuming a Universal Grammar: “[...] for were we not to proceed as if there was such a common structure underlying all languages, we would risk not finding it if there is one (if there isn’t, we will simply not find it). In general, starting from the opposite assumption (that there is no common set of grammatical categories, operations and principles and that languages can differ arbitrarily and without limits), one is bound to be less demanding, possibly missing any underlying unity [...]” (1). And he compares it to *Pascal’s wager*, a ridiculous (if I may say so) philosophical argument from the 17th century in terms of ‘rational’ gain vs. loss considerations that concludes that one better (pretend to) believe in God – Whose existence cannot be proved or disproved –, just to be on the safe side in case He does exist. But I am more optimistic about linguistic research. So many detailed studies have led to the *Aha!*-experience: *There is a pattern here* (I’m freely quoting Rini Huijbregts). And if there are patterns, a formalism is needed to describe and ultimately explain them. That language is structured is an empirical fact, it has nothing to do with belief.

Whether we call some theory of syntax UG, and to what extent it is innate, those are issues that are in a way secondary to the general *formalism meets typology* program. So even the skeptic has every reason to go on reading.

Typological Studies consists of two parts, one on basic word order patterns, and one on properties of relative clauses more specifically. The book contains 17 chapters, corresponding to recently published papers, and a few older ones (all taken over essentially unmodified, with only a few minor corrections and bibliographic updates). These are preceded by a brief general Introduction, which includes a short summary of each chapter. In addition, there are no fewer than 72 pages of (inconveniently positioned) endnotes, an impressive 56-page bibliography, and (very helpful) separate indexes of authors, languages, and subjects of 23 pages in total.

Since it is not possible to discuss each chapter separately here due to space limitations, it seems useful to list their titles, which will give readers a good impression of the contents and scope of the book. I add the year of first publication to each chapter title, here:

Part 1: Word Order

1. Word Order Typology: A Change of Perspective (2013)
2. The Antisymmetric Program: Theoretical and Typological Implications (1996)
3. Greenberg's Universal 20 and the Semitic DP (2000)
4. Deriving Greenberg's Universal 20 and Its Exceptions (2005)
5. Again on Tense, Aspect, Mood Morpheme Order and the Mirror Principle (2013)
6. Mapping Spatial PPs (2010)
7. The Fundamental Left-Right Asymmetry of Natural Languages (2009)
8. Are all languages 'Numeral Classifier Languages'? (2006)
9. Greenberg's Universal 23 and SVO Languages (2011)

Part 2: Relative Clauses

10. On Keenan and Comrie's Primary Relativization Constraint (1981)
11. A Note on Verb/Object Order and Head/Relative Clause Order (2005)
12. A Note on Linguistic Theory and Typology (2007)
13. More on the Indefinite Character of the Head of Restrictive Relatives (2008)
14. Two Types of Nonrestrictive Relatives (2008)
15. Five Notes on Correlatives (2009)
16. On a Selective "Violation" of the Complex NP Constraint (2010)
17. On Double-Headed Relative Clauses (2011)

The order of the chapters seems to be deliberate, and we may assume that this is the best way to read through the whole text. However, nowhere is the structure of the book commented upon. There is no explanatory comment or annotation tying the chapters together, apart from a tiny passage in the

Introduction called “An overview of the main themes” (6). Several chapters (i.e., papers from different years) address the same particular topic, but it is left to the reader to find out how they relate to each other. Almost inevitably for a paper collection, some sections repeat material from previous chapters. This in itself is not necessarily a problem, but at the same time substantial parts of the text are quite dense, if not too dense. This is a serious drawback of the volume at issue, and it might have been avoided if the book had been designed more like a monograph.

Setting such practical shortcomings aside, we find that Cinque presents a wealth of interesting data and ideas. In what follows, I will discuss the two parts of the book in a little more detail.

The main theme of the first part is *asymmetry* – more specifically, asymmetries in word order distributions across languages. Cinque shows, citing a massive amount of typological information, that there are fundamental left-right asymmetries in natural language, not only at the level of the clause (see especially Chapter 5), but also at the level of the extended noun phrase (Chapters 3, 4, and somewhat related 8 and 9), and the extended adpositional phrase (Chapter 6). Put simply: VO behaves differently from OV, so the two are not simple mirror images of each other. Chapter 7 summarizes the enterprise. Chapter 1 is the most recent overview of Cinque’s theory, with some emphasis on ‘harmonic’ word order types, that is, the purely head-initial and head-final patterns. Chapter 2 is a favorable review of Kayne’s (1994) well-known Antisymmetric program, which serves as a theoretical baseline for Cinque. In effect, there is a universal phrase-structural order specifier-head-complement, so structures are always right-branching at the base. Consequently, every instance of attested complement-head word order must be the result of movement.

Building on insights that go back to Greenberg (1963), Cinque argues that there is empirical evidence for such asymmetries. Cross-linguistically, we find considerable word order variation, but certain patterns are consistently ruled out. Modifiers can either follow or precede a head. When they follow, they can also appear in reverse order, but when they precede the head, the order of modifiers is fixed. Among various other cases, this is so for demonstratives and numerals with respect to the noun, for adjectives with respect to the noun, for adverbs with respect to the main verb, for mood, tense and aspect with respect to the verb, etc. The overview on pages 96-99 is quite revealing.

Cinque proposes a parameterized system of (roll-up) movement to explain the data. To see this, consider the representation in (1) (mine), in which HP is the projection of the head (e.g., NP or VP), and MP₁ and MP₂ are projections of modifiers, which are in specifier positions.

- (1) a. $MP_1 MP_2 HP$ (base order)
 b. $\Rightarrow MP_1 \mathbf{HP} MP_2 _ \Rightarrow \mathbf{HP} MP_1 _ MP_2 _$ (no pied piping)
 c. $\Rightarrow MP_1 \mathbf{HP} MP_2 _ \Rightarrow [\mathbf{HP} MP_2 _] MP_1 _$ (pied piping, type *wh X*)
 d. $\Rightarrow [\mathbf{MP}_2 \mathbf{HP}] MP_1 _$ (pied piping, type *X wh*)
 e. * $\Rightarrow \mathbf{MP}_2 MP_1 _ HP$ (impossible)

The base order is (1a), which reflects semantic scope (Cinque confusingly calls this the “order of Merge”, ignoring that derivations may be bottom-up, and that movement is also Merge). In (1b), HP moves upward, leading to two possible word order variations. In (1c), HP pied pipes MP_2 after the first step, which results in the mirror image of the base order. If there are more modifiers, pied piping is iterated in a roll-up fashion. In (1d), HP pied pipes the preceding MP_2 (comparable to the situation in sentences like *[Pictures of who] did you see?*). The single permutation that is impossible, shown in (1e), cannot be derived, since the “engine of movement” is HP; therefore, MP_2 cannot move by itself.

Chapter 1 sketches an extension of the system, where Cinque takes into account not only modifiers, but also the heads of the main projection line within the clausal and nominal domain. The two perfect harmonic word order types (17, 18) are the following (representation slightly adapted):

- (2) Head-initial word order:
 a. $C^\circ Tns^\circ Asp^\circ \mathbf{V(P)} AdvP_{low} \dots AdvP_{high}$
 b. $Art^\circ Pl^\circ \mathbf{N(P)} AP_{low} \dots AP_{high} NumP DemP$
- (3) Head-final word order:
 a. $AdvP_{high} \dots AdvP_{low} \mathbf{V(P)} Asp^\circ Tns^\circ C^\circ$
 b. $DemP NumP AP_{high} \dots AP_{low} \mathbf{N(P)} Pl^\circ Art^\circ$

The over-arching generalization is that everything preceding the core reflects the basic scope, and everything following is in reverse order (18). This is also manifest in the distribution of arguments and other DPs in the clause (22, 24):

- (4) H-initial: $\dots \mathbf{V/N(P)} DP_{theme} DP_{goal} DP_{agent} DP_{manner} DP_{instrument} DP_{location} DP_{time}$
 H-final: $DP_{time} DP_{location} DP_{instrument} DP_{manner} DP_{agent} DP_{goal} DP_{theme} \mathbf{V/N(P)} \dots$

Evidently, Cinque presupposes an elaborate ‘cartography’ of the sentence, without much explanation. (The reader can be referred to Cinque & Rizzi (2010), for instance, for background information and further references.) All derivations proceed from the base order in (5) below (adapted from page

19). In addition, it is mentioned that DPs are generated above the core, as in the head-final surface order in (4) above (p. 22).

(5) Base order:

- a. C° AdvP_{epistemic} Mod° AdvP_{manner} **VP**
- b. D° NumP PI° AP **NP**

An important addition to the relatively simple picture in (1) above, is that after movement of, say, VP, a higher head in the structure can become the next “engine of the derivation”, triggering the next stage of roll-up movement (see pages 20-24 for illustrations). Unfortunately, the information presented in the book is incomplete, and I have to admit that I did not manage to reconstruct from the text all the necessary details for deriving the complete patterns. Many pieces of the puzzle are clear, but how do they all fit together?

What is quite interesting is that Cinque adds a theory of markedness to his analysis, suggesting that less harmonious derivations, though not impossible, are less likely to occur, and therefore the resulting word order patterns must be cross-linguistically rarer, which is indeed the case to a large extent. Needless to say, many questions remain to be addressed. But the general research program laid down by Cinque is certainly inspiring, and I must say that I find his ability to relate his theoretical ideas to data from hundreds of languages truly admirable.

The second part of the book, about Relative Clauses, is no less interesting, though somewhat less cohesive than the first part. Chapter 12 reiterates the relevance of the research program, highlighting some theoretical findings about relative clauses that should have repercussions for typological research in this area.

In Chapter 10, Cinque argues that Keenan & Comrie’s well-known Accessibility Hierarchy is not without exceptions, and that its general effects are an epiphenomenon of more basic, structural principles. Chapters 15 and 16 contain some notes on correlative constructions and potential extraction from relative clauses (which violates the complex NP constraint), respectively.

In Chapter 11, the author reviews the evidence concerning the position of relative clauses with respect to the head noun (prenominal or postnominal) and possible correlations with basic word order (VO/OV). He shows that the actual correlation is with the position of finite subordinate clauses. VO languages have postverbal complement clauses and postnominal relative clauses, whereas OV languages show a mixed pattern. As expected, almost all have prenominal relative clauses (as well as preverbal clauses with final complementizers). The “nonrigid” ones have postnominal relative clauses as

well, and this goes hand in hand with the presence of postverbal complement clauses and adverbial clauses (with initial complementizers). This is illustrated with data from about 45 languages.

In Chapter 13, we find a proposal for the derivation of restrictive relative clauses, which I guess may be considered a preview of Cinque's book in preparation, *A Unified Theory of Relative Clauses*. Some additional evidence is in Chapter 17 on double-headed relative clauses. Cinque combines features of both the raising and the matching theory, assuming a common base structure for any variant of relative clause, with subsequent diverging derivations. Although undoubtedly 'unification' is a respectable goal in linguistics or any science, one may wonder at what level it should be pursued. A construction-centered perspective may not necessarily be correct. Complexity and diversification are the result of the interaction of basic syntactic processes, and a similar semantics might arise via more than one route.

In Chapter 14, Cinque argues that there are two types of nonrestrictive relative clauses. Which one is available depends on the particular language. Moreover, he suggests that the old debate concerning the analysis of nonrestrictive relatives – are they syntactically integrated, or are they parentheticals? – is misguided, and that both theories may coexist, but apply to different data sets. Italian, unlike English, has both types, which use different relative elements (*il quale* vs. *che/cui*). Cinque provides a list of properties where they behave differently. However, I think a quick inspection of similar Dutch data immediately shows that the proposed bipartition cannot be cross-linguistically correct. Dutch has a variety of relative pronouns, whose behavior is somewhere in between the two Italian types. Evidently, this raises many empirical and theoretical questions. Importantly, then, Cinque's original research opens up new domains for inquiry.

References

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