

**Synchrony is determined by diachrony:  
diachronic pathways leading to constituency, word order correlations and scoping**  
J. Rijkhoff (Aarhus University, Denmark)

Greenberg (1969: 186) already wrote: “Synchronic regularities are merely the consequence of [diachronic] forces. It is not so much ... that ‘exceptions’ are explained historically, but that the true regularity is contained in the dynamic principles themselves.” More recent statements to the same effect can be found in e.g. Evans and Levinson (2009: 444-5) and Moravcsik (2013: ch.7).

This paper argues that various grammatical phenomena currently observed in languages across the globe (constituency, word order correlations, scoping) can be attributed to a single diachronic process in which speakers (as their languages become increasingly more hierarchically structured) attempt to place together what belongs together - a.k.a. ‘proximation’ in the wide sense. The synchronic result of this historical process was already captured in Behaghel’s FIRST LAW (1932: 4): *Das oberste Gesetz ist dieses, daß das geistig eng Zusammengehörige auch eng zusammengestellt wird* (‘The principal law is this: that what belongs together mentally is also placed close together’).

Several ordering principles can be formulated on the basis of Behaghel’s FIRST LAW, for example: (a) the PRINCIPLE OF DOMAIN INTEGRITY, (ii) the PRINCIPLE OF HEAD PROXIMITY and (iii) the PRINCIPLE OF SCOPE (Rijkhoff 2015). These synchronic principles are the reflection of three distinct historical processes: GROUPING (e.g. Lehmann 1974), PROXIMATION in the narrow sense (cf. Moravcsik 2013: 251f.), e.g. concerning head constituents V and N, and SCOPING, i.e. respecting scopal relations between modifiers in the process of ‘syntagmatic expansion’ or ‘syntagmatic extension’ (Anward 2000; Van de Velde 2009). In other words, these principles capture diachronic trends that all lead to synchronic patterns displaying instances of ‘iconicity of distance’ (Haiman 1983: 782; Croft 2008).

DOMAIN INTEGRITY accounts for the fact that over time appositional constituents may develop into hierarchical (‘integral’, ‘tight’) structures. This diachronic process has been documented for e.g. the Germanic languages, where noun phrases have steadily grown into syntactically more complex structures over the last millennia, providing slots for an increasing number of modifiers (Van de Velde 2009).

HEAD PROXIMITY explains several syntactic phenomena, including certain Greenbergian word order correlations. For example, the tendency for genitives and relative clauses to follow the head noun in VO languages and to precede the head noun in OV languages (Dryer 1992) can be seen as attempt to minimize the distance between the head of the clause and the head of the noun phrase, which apparently facilitates language processing (Clark & Clark 1977: 61; Frazier 1985: 146; cf. also Hawkins 1990).

The PRINCIPLE OF SCOPE accounts for ordering tendencies among NP-internal modifiers and adjuncts in the clause. For example, noun modifiers with narrow scope (which appear early in the NP in the process of syntagmatic extension) occur close to the head noun, whereas modifiers with wide scope (which appear at later stages in the process of syntagmatic extension) occur in the periphery of the noun phrase (Van de Velde 2009).

It will be argued that these three ordering principles are the formal manifestations of a single cognitive motivation that facilitates language processing: ICONICITY of distance.

## References

- Anward, J. 2000. A dynamic model of part-of-speech differentiation. In P.M. Vogel & B. Comrie (eds.), *Approaches to the Typology of Word Classes*. Berlin and New York: Mouton de Gruyter, 3-45.
- Behaghel, O. 1932. *Deutsche Syntax: eine geschichtliche Darstellung. Band IV: Wortstellung-Periodenbau*. Heidelberg: Carl Winter.

- Clark, H.H. & E.V. Clark. 1977. *Psychology and Language: An introduction to psycholinguistics*. New York: Harcourt Brace Jovanovich.
- Croft, W. 2008. On iconicity of distance. *Cognitive Linguistics* 19-1: 49-57.
- Dryer, M.S. 1992. The Greenbergian word order correlations. *Language* 68-1, 81-138.
- Evans, N. and S.C. Levinson. 2009. The myth of language universals: language diversity and its importance for cognitive science. *Behavioral and Brain Sciences* 32-5: 429-448.
- Frazier, L. 1985. Syntactic complexity. In D.R. Dowty et al. (eds.), *Natural Language Parsing: Psychological, computational, and theoretical perspectives*. Cambridge: Cambridge University Press, 129–189.
- Greenberg, J.H. 1969. Some methods of dynamic comparison in linguistics. In J. Puhvel (ed.), *Substance and Structure of Language*. Berkeley - Los Angeles: University of California Press, 147-203.
- Haiman, J. 1983. Iconic and economic motivation. *Language* 59: 781-819.
- Hawkins, J.A. 1990. A parsing theory of word order universals. *Linguistic Inquiry* 21: 223-261.
- Lehmann, W.P. 1974. *Proto-Indo-European Syntax*. Austin TX: University of Texas Press.
- Moravcsik, E.A. 2013. Chapter 7. Explaining cross-linguistic preferences. In E.A. Moravcsik, *Introducing Language Typology*. Cambridge: Cambridge University Press, 243-275.
- Rijkhoff, J. 2015. Word order. In James D. Wright (editor-in-chief), *International Encyclopedia of the Social & Behavioral Sciences (Second Edition)*, Volume 25. Oxford: Elsevier, 644–656.
- Van de Velde, F. 2009. The emergence of modification patterns in the Dutch noun phrase. *Linguistics* 47-4: 1021-1049.