Explaining language universals in diachronic perspective - 3

Sonia Cristofaro

Sorbonne Université

Some conclusions and prospects

Typology and diachrony (particularly grammaticalization studies): In principle, these are closely related domains:

- Typologists working within the functional-typological paradigm generally assume that recurrent cross-linguistic patterns (typological universals) are a result of specific historical processes that lead to these patterns being created, transmitted and conventionalized in the evolution of individual languages (as opposed to inbuilt constraints leading to online production of particular structures).

- The patterns captured by typological universal, then, emerge through **an evolutionary process** whereby particular grammatical configurations are recurrently selected over others from one language to another.

Some conclusions and prospects

'As traditionally understood, universals of language are cross-linguistic generalizations concerning synchronic grammars, and their explanations usually appeal to functional principles thought of in a synchronic domain. It sands to reason, however, than any synchronic pattern must have a diachronic dimension, since that pattern had to cme into being in some way ... That is, all explanations of synchronic universals must have a diachronic dimension ... the logical consequence is that the true universals of language are not synchronic patterns at all, but the mechanisms of change that create these patterns ... the grammars of individual languages are emergent from the processes of change that are operative in all languages at all times. In this view, the true universals of language are the mechanisms of change that propel the constant creation and re-creation of grammar.' (Bybee 2006: 178)

Some conclusions and prospects

- In principle, then, explanations of typological universals should be source-oriented, at least in the sense that they should refer to the actual diachronic processes that give rise to synchronic cross-linguistic patterns, rather than the patterns in themselves.

- In fact, typologists are aware of several possible historical origins for individual patterns (e.g. alignment, number, word order). Scholars of grammaticalization have highlighted that the development of grammatical categories follows similar pathways from one language to another, and research language change in classical historical linguistics is also often typologically oriented (see e.g. Harris and Campbell 1995).

Some conclusions and prospects

But the results of these two research traditions have not been really integrated:

- Evidence about (at least some of) the possible diachronic origins for particular universals usually plays no role in the explanation of these universals. Classical typological explanations are usually result-oriented, in the sense that they assume that particular grammatical patterns develop (or, possibly, are transmitted or retained) because their synchronic properties comply with some particular principle (usually principles of optimization of grammatical structure).

- Explanations of the development of grammatical structure in grammaticalization studies and studies of language change in general are usually source-oriented, but scholars working within these research tradition do not usually discuss the possible implications of their findings for (result-oriented) typological explanations of the same phenomena.

Some conclusions and prospects

Taking a source-oriented approach to typological universals (Cristofaro 2013, 2014, 2017, 2019): There are multiple factors that contribute to the synchronic picture, and we still have a poor understanding of many of these factors:

- The **development** of particular configurations:
  In order to account for why languages display certain grammatical configurations, look at the actual diachronic processes that give rise to that configuration from one language to another, not just the configuration in itself.

- The configurations can emerge through several independently motivated processes, so the effects and frequency of these various processes should in principle be disentangled and assessed separately in order to understand the nature of the configuration.

Some conclusions and prospects

- **Convergent evolution** (Blevins 2004):) different developmental pathways from different sources give superficially similar results (though note that this notion originates in biology, where it is assumed that an additional factor, natural selection, leads to differential transmission rates for particular traits due to their inherent properties and independently of their origins.

- *(Note, however, that this notion originates in biology, where it is assumed that an additional factor, natural selection, leads to differential transmission rates for particular traits due to their inherent properties and independently of their origins: in linguistics, we don't really have evidence about such factors).*

Some conclusions and prospects

RelN and GN:

- The co-occurrence may be motivated by the fact that these two orders were once and the same order
- Alternatively, the two orders may develop independently from multiple source constructions, and inherit the order of these constructions.
- In many cases, the order of the source cannot be explained by processing principles pertaining to the head-modifier structure of the resulting construction, because the source does not have this structure.

Some conclusions and prospects

The **relative frequency** of different configurations:

- **Differential development**: if particular configurations are motivated in terms of the properties of particular source constructions and developmental mechanisms, then the relative frequency of different configurations will reflect the relative frequency of the various source constructions and mechanisms that can give rise to the configuration. In principle, then, the relative frequency of each of these processes should then be assessed in order to account for the frequency differences between different configurations.

- **Differential transmission**: once some grammatical configuration has been created, there might be principles that favor or disfavor the transmission of that configuration over time independently of how it originated. The effects of these principles, should then also be assessed in order to account for the overall frequency of individual configurations.

Some conclusions and prospects

Does all this mean that principles related to the synchronic properties of particular patterns (particularly principles of optimization of linguistic structure, such as economy or processing ease) have no role in the shaping of these patterns?

- In theory, particular principles could provide an additional motivation for particular diachronic processes. For example, overt markers for less frequent categories or situations develop through several processes of reinterpretation of different source elements, but these processes could all somehow be additionally motivated by the relative need to give overt expession to those categories.
- The processes of reinterpretation leading to the development of particular word orders (NRel, NG) could additionally be motivated by the relative degree of processing ease of the resulting configurations.
- These assumptions, however, are not part of any standard account of the relevant processes in historical linguistics, and for most processes we do not have any kind of direct evidence for the relevant scenario.

Some conclusions and prospects

- Alternatively, particular principles could be responsible for differential transmission rates for particular grammatical configurations within a speech community depending on whether or not the configurations comply with the principle:
- For example, it could be the case that, while the development of overt marking for particular categories is independent of the relative frequency of those categories, overt marking for less frequent categories is more easily transmitted than overt marking for more frequent categories precisely because the latter are less in need of disambiguation (*note, however, that this predicts that configurations where more frequent and less frequent categories are both overtly marked should not occur, or be relatively rare, which is not the case*).
- Likewise, particular word orders could develop independently of the relative processing ease of the resulting syntactic configurations, but processing ease could lead to differential transmission rates for different word orders.

Some conclusions and prospects

- This would be the equivalent of the technical distinction between proximate vs. ultimate explanations in evolutionary biology: the development of particular traits is independent of the fact that those traits confer an evolutionary advantage to the organisms carrying them, but this provides the ultimate explanation for their distribution in a population.

- In evolutionary biology, however, this idea is based on the fact that particular traits are demonstrably adaptive to the environment, in the sense that they make it more likely for the organisms carrying them to survive and pass them on to their descendants.

- For languages, there is generally no comprehensive evidence that particular functional properties of grammatical constructions (e.g. the fact that they conform to a principle of economy) are adaptive, in the sense of these properties making it demonstrably more likely for the construction to be transmitted from one speaker to another.

- This is a crucial difference between linguistic evolution and biological evolution; while it can be the case that particular grammatical configurations can be adaptive, this cannot be established a priori based on the synchronic properties of the configuration, and should be verified empirically on a case-by-case basis.

Some conclusions and prospects

So what type of data do we need in a source oriented approach?

- a qualitative understanding of and data about the various processes that can give rise to particular synchronic configurations;
- data about the relative frequency of these processes;
- data about the factors involved in the transmission of particular configurations;
- not just
    - quantitative data about the cross-linguistic frequency of particular grammatical configurations in themselves, because these configurations can be a result of several distinct processes;
    - data about transition probabilities from one language state to another, because probabilities from one configuration to another may not be significant vis-a-vis the frequency of the various processes that can give rise to the configuration.

Blevins, J. (2004).
Evolutionary phonology: the emergence of sound patterns.
Cambridge: Cambridge University Press.

Bybee, J. (2006).
Language change and universals.
In R. Mairal and J. Gil (Eds.), *Linguistic Universals*, pp. 179–94.
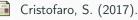Cambridge: Cambridge University Press.

Cristofaro, S. (2013).
The referential hierarchy: Reviewing the evidence in diachronic perspective.
In D. Bakker and M. Haspelmath (Eds.), *Languages across Boundaries: Studies in the Memory of Anna Siewierska*, pp. 69–93.
Berlin and New York: Mouton de Gruyter.

Cristofaro, S. (2014).
Competing motivations and diachrony: what evidence for what motivations?

In B. MacWhinney, A. Malchukov, and E. Moravcsik (Eds.),
Competing motivations in grammar and usage, pp. 282–98. Oxford:
Oxford University Press.

📄 Cristofaro, S. (2017).
**Implicational universals and dependencies between
grammatical phenomena.**
In N. Enfield (Ed.), *Dependencies in Language: On the Causal
Ontology of Linguistic Systems*, pp. 9–24. Berlin: Language Science
Press.

📄 Cristofaro, S. (2019).
**Taking diachronic evidence seriously: Result-oriented vs.
source-oriented explanations of typological universals.**
In K. Schmidtke-Bode, N. Levshina, S. M. Michaelis, and I. A.
Seržant (Eds.), *Explanation in typology: Diachronic sources,
functional motivations and the nature of the evidence*, pp. 25–46.
Berlin: Language Science Press.

📄 Harris, A. C. and L. Campbell (1995).

Historical syntax in cross-linguistic perspective.
Cambridge: Cambridge University Press.