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## **Beyond universals and particulars in language**

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## Beyond universals and particulars in language

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In his target article “General linguistics must be based on universals (or nonconventional aspects of language)”, Martin Haspelmath invites us to reconsider the distinction between general linguistics and the linguistics of a particular language. The distinction is clearly useful to demarcate foci of interest and job descriptions. Also, it helps clarify what we expect our theories and models to achieve in terms of data fit:

In general linguistics, we expect theories and models to capture something about the general nature of language. Now, since we can test the relevant hypotheses only in a relatively small sample of currently known languages, we want to avoid what statisticians call *overfitting* our particular sample. This means that we don’t expect models to perfectly fit every single language in this one sample; instead, we expect models to have good predictive performance in *any* sample we choose, allowing for random historical fluctuations and a healthy modicum of uncertainty.

From a language-particular study, by contrast, we expect theories and models to capture one specific language, from its most general regularities to its most specific exceptions. We can’t overfit at that level. Where we do want to avoid overfitting is at the level of the idiosyncrasies that characterize individual speakers/signers or individual utterances (or, say, individual glyph tokens when we want to generalize not over an entire language but only over its inscriptional record).

Beyond clarifying these differences, I don’t think the distinction between general and particular linguistics takes us much further. In important respects the two enterprises are heavily intertwined: Language-particular findings can generate hypotheses about the general nature of language (e.g. the discovery of free affix order in one language led to a learning-based hypothesis why most avoid it: Mansfield et al. 2020), and general linguistics obviously depends on samples of language-particular analyses.

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Haspelmath proposes that the distinction take us further nevertheless. The proposal rests on linking the distinction to two demands: general linguistics (1) “must study universals”, and (2) needs “comparative concepts” that are independent of the categories we need for describing particular languages. I am not convinced that these two demands are helpful.

## 1 Nonuniversals can teach us about the nature of human language

Tones and labiodentals are far from universal in language; they are not even universal tendencies. But in each case, their study has contributed to our understanding of the nature of language:

The presence of lexical tone has been linked to better pitch perception abilities in populations that preserve the ancestral variant of a certain gene (Dediu and Ladd 2007; Wong et al. 2020). Labiodentals have been shown to emerge only with bite configurations that arose from the spread of softer food in agricultural societies (Hockett 1985; Blasi et al. 2019; Everett and Chen 2021). Regardless of whether these findings stand the test of time, or need to be complemented or replaced by alternative theories (e.g. based on ambient humidity in the case of tone; Everett et al. 2015; Roberts 2018), it is clear that they tell us something about the nature of language, not something about a particular language. In both cases, we can even take the notion of “nature of language” quite literally since the findings are based on biological mechanisms that favor or disfavor a linguistic feature. As such, the findings contribute to evolutionary questions. They help us understand the time course and causal mechanisms of how the various components of human language evolved (tone earlier than labiodentals), specifically in what has been called the “Language Faculty in the Broad Sense” (Hauser et al. 2002; Moran and Bickel 2020).

One can of course recast these findings in the form of conditional universals (e.g. “for each language, if its speakers have mostly overbite and overjet tooth configuration, it is more likely to develop and maintain labiodental sounds”), but this would be something quite different from the language-internal Greenbergian or Chomskyan universals that Haspelmath discusses in the target article. The tone and labiodental results each rest jointly on experimental evidence for the proposed causal mechanisms and on statistical modeling of the linguistic distribution. These two enterprises use completely different vocabularies (“ASPM gene, Heschl’s gyrus, tooth-lip distance, zygomatic muscle effort, etc.” vs. “~, TBU, /f/, labiodental articulation, etc.”). By contrast, traditional conditional universals draw on the same linguistic vocabulary in both clauses of the conditional (Bickel 2015).

Perhaps, the first half of the research, the one on biological mechanisms falls under Haspelmath's "nonconventional aspects"<sup>1</sup> and therefore still qualifies as general linguistics in his view. But the second half, the one on predicted linguistic distributions, is not about "nonconventional aspects". And it isn't about universals.

## 2 Comparison is description

Consider phonological features. Yes, they are based on contrasts in a particular language, but a good description of, say, [+voiced] in English will give us a bit more than a few minimal pairs and a list of neutralization contexts. Unless one is stuck in the most austere structuralist cocoon, one wants to know the phonetic properties of [+voiced] and for each such property at least something about its realizations (e.g. mean and variance of VOT or postconsonantal  $F_0$ ). Further, one wants to know the range of contrasts and alternations that [+voiced] plays a role in, and ideally even what phonetic variation there is, for example, across places of articulation. But these are all the same questions that arise when we compare English [+voiced] to French [+voiced]: for example, they differ in VOT and in the number of contrasts they define. We ask the same questions and struggle with the same problems whether we describe a single phonological feature or compare such features within or across languages. This and similar points have been made many times, illustrated by examples from pretty much every corner of linguistics (Bickel 2007, 2010, 2011, 2015; Bickel and Nichols 2002; Dahl 2016; Forker 2016; Himmelmann 2021; Newmeyer 2010; Round and Corbett 2020).

Depending on the concrete research question, general linguistics will typically focus only on one property (e.g. postconsonantal  $F_0$  for studying general patterns of tonogenesis), while language-particular analyses will typically be interested in all of them, as bundles of properties (e.g. the bundle that characterizes [+voiced] English). If one wishes, one can of course call the specific properties "comparative concepts" and the language-particular bundles "categories". To some extent, this is just harmless terminology, which one might like or not.

But the distinction can in fact be harmful because it invites a general linguistics that is content with whatever property someone has picked before (often just for sheer practicality), without reflecting much on its relevance and status in actual, particular languages (Mithun 2016). Many linguists chide Greenbergian

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<sup>1</sup> I say "perhaps" because this notion is not sufficiently clear to me. Haspelmath mentions electrophysiological experiments, but any measurement there (e.g. an event-related potential) needs careful interpretation in terms of the socially learned linguistic structures that we target in a given experiment before it tells us anything about language.

word order typology for being “superficial”. On closer inspection, the underlying issue is not so much one of depth, but one of breadth: the Greenbergian typology focuses on only one specific property (e.g. only on the relative order of patient-like arguments and the verb in the most frequent declarative sentences; Dryer 2013), while we know that order can also depend on many other properties (e.g. whether the verb is realized in one position only or split into an inflectional and a lexical part). Progress in general linguistics profits from considering such additional properties, be it by conditioning on them in statistical models, or by sharpening one’s theory and hypotheses (e.g. by showing why only the lexical part of verbs matters for a specific hypothesis).

Rather than distinctions, we need a joint enterprise that constantly refines our metalanguages for both description and comparison. This enterprise is normal science, and so it will never end of course: we can (and should) always expand, improve, and revise metalanguages. For example, notions like “verb” deserve a much more fine-grained decomposition into their properties than is commonly assumed. Even seemingly simple notions like “patient-like argument” need constant critical revision, for example in the light of lexical variation. All this is key to progress as much in reference grammars as in comparative databases.

Metalanguages are underdetermined by the data (Chomsky 1975), and so there are many choices. When making choices I see much value in considering findings from neuroscience (Bornkessel and Schlesewsky 2006; Embick and Poeppel 2015; McCloy and Lee 2019) and from asking whether a given metalanguage makes it easier or harder to unravel the ontogeny (Tomasello 2003) and phylogeny (Townsend et al. 2018) of language. I also find it important that metalanguages evolve with the languages we describe and the patterns we discover (“auto-typologizing”, Bickel and Nichols 2002; Witzlack-Makarevich et al. 2021), and it is nice when they come with powerful computational tools (e.g. Zeman et al. 2020). Further, like Haspelmath, I favor metalanguages that are not stuck in parochial doctrines and arcane terminologies from the last century.

But all these choices matter regardless of whether a metalanguage is used for describing a particular language or for measuring differences within or between languages. Thus, the choices are orthogonal to the distinction between general and particular linguistics.

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