★ EDITORIAL ★

Linguistic Universals as Human Universals — Divergent Views and Converging Evidence on Language Congruence and Diversity

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Introduction

Ping-pong is a game linguists are quite familiar with: "Experience […] leads to variation, within a fairly narrow range, as in the case of other subsystems of the human capacity and the organism generally" (Chomsky 2005: 6). For one school of thought, variation is a dwarf: Ping! — "The true picture is very different: [L]anguages differ so fundamentally from one another at every level of description (sound, grammar, lexicon, meaning) that it is very hard to find any single structural property they share" (Evans & Levinson 2009: 429). For other schools of thought, variation is a giant: Pong!

It is interesting to note that linguistics is not the only discipline that is frequented by discussions in line with the maxim: If you exaggerate your point, I overstate mine in the opposite direction. In the preface to his book about religious ideas, the French psychologist and anthropologist Pascal Boyer reports that his colleagues "all laughed heartily" when he told them about his project of a "general theory of religion, explained in terms of universal cognitive processes […] Indeed, in most academic institutions […] the project would have seemed crazy" (Boyer 1994: xv). And the anthropologist Donald Brown notes in his book on *Human Universals*: "Some anthropologists write about universals with little or no sense that they are controversial, but other anthropologists — some very prominent […] — maintain that universals have little significance if they exist at all" (Brown 1991: 54).

With this kind of problem in mind, a workshop was organized (initially by DZ, but with increasingly indispensable support from DP) around the theme 'Universals' at the 2008 annual meeting of the Deutsche Gesellschaft für Sprach-wissenschaft (German Linguistic Society) in Bamberg. Barring any background information, a linguistically trained audience would approach such a meeting with relatively clear presuppositions, for example anticipating a focus on cross-

linguistic data and on discussions of putative counterexamples to putative universals. What set this session apart from other, more linguistically focused workshops on universals was the desire to emphasize the big picture and hence to be both thematically and methodologically much more ecumenical, a desire reflected already in the workshop title, *Foundations of Language Comparison: Human Universals as Constraints on Language Diversity* (http://www.itl.uni-muenchen.de/forschung/tagungen/human_universals/index.html). The idea of the meeting was to find out about the underpinnings of linguistic universals — definitional universals ('What makes the cluster of phenomena defined by the/a notion of language coherent?') as well as empirical ones ('Which non-definitional features cluster around the definitional properties and why?') — by using insights from both within and beyond the field of linguistics in order to determine the place of linguistic universals among the human universals in view of ultimately explaining the former in terms of (some of) the latter. As it turned out, there was also a desire, at that point left unstated, to examine or connect with the research program of biolinguistics, broadly construed.

Since human universals concern both the human body with its brain and mind and the cultures and societies humans grow up and live in, contributions were invited from the following fields (in alphabetical order): anthropology, biology, cognitive science, linguistics, neuroscience, and sociology. Although the sought-after diversity was not entirely reached, the composition of the group of speakers was laudably varied. Apart from general considerations (Dietmar Zaefferer), the workshop included presentations on syntax proper (Boban Arsenijević & Wolfram Hinzen, Ljiljana Progovac, Joana Rosselló, and Hedde Zeiljstra), research in anthropology and theory of evolution (Christoph Antweiler and Peter Richardson), and experimental approaches (Tom Bever, Rainer Dietrich, Adriana Hanulíková, Jeff Lidz, Asifa Majid, Andrew Nevins, David Poeppel, Friedemann Pulvermüller, and Michael Ullman).[1] It goes without saying that such diversity also provides particular challenges to the audience and speakers.

What did we learn? The lectures and discussions highlighted, in a productive and provocative manner, the heterogeneity of the aspects of the workshop topic. That is to say, the research questions and tentative answers surrounding universals research in general are not much more heterogeneous than the concepts and methods of the biolinguistic enterprise in special. This is not completely unexpected, but such a workshop (and a selection of papers from such a workshop) can sensitize researchers from the different domains to some of the considerations central to neighboring disciplines. The fact that this group of scholars attended such a workshop to begin with underscores their willingness to learn about the conceptual architecture of related research areas and to entertain the benefits and limitations of interdisciplinary research.

The question of universals continues to offer a fertile ground for debate regarding the radically different explanatory attempts to derive the systematicity so ubiquitous in the human language system. One salient intellectual position in this debate can be seen in the recent work of Evans & Levinson (2009) mentioned above, whose research agenda is motivated by the desire to explain language

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[1]   For a short summary of all workshop presentations compare Zaefferer & Poeppel (2008).

universals from generic, nonspecific factors. Although they set out to show "how few and unprofound the universal characteristics of language are" (p. 429), they don't deny that "there are significant recurrent patterns in organization". However, their claim "that these are better explained as stable engineering solutions satisfying multiple design constraints, reflecting both cultural-historical factors and the constraints of human cognition" (p. 429) is at variance with core assumptions of the biolinguistic program, which represents a second, equally prominent position in the discussion.

Although the biolinguistic axiom that "nothing in language makes sense except in the context of the biology of grammar" (Boeckx & Grohmann 2007: 3) is not necessarily incompatible with explanations based on cultural-historical factors, given that culture and history need a biological basis to live on, such a view would trivialize the notion 'biolinguistics' (cf. Koster 2009: 92). According to a non-trivial interpretation of this notion, cultural-historical factors are not within the purview of the biology of grammar, and therefore their treatment on a par with the constraints of human cognition by Evans & Levinson must be viewed as a clear and important point of disagreement with biolinguistics.

A third source of hypotheses regarding universals can be seen as deriving from the experimental research programs that attempt to identify the psychological and neurobiological infrastructure that forms the basis for knowledge of language, acquisition, language comprehension and production, as well as the neurobiological implementation of language. This kind of research is neither committed to minimalist assumptions, nor does it exclude cultural-historical factors. One of the merits of the present volume, we submit, lies in the fact that a series of suggestions are made about the human language processing system that come directly from empirical research. As a cautionary remark we add that the universal invariance of psychological and neurobiological infrastructure is mostly taken for granted (as a laudable exception we mention studies reported by Lidz in this issue that were conducted in Mysore, India).

On the whole, the collection of arguments presented here puts forward at least three types of evidence for universals. First, cultural-historical explanations aiming at identifying universals that follow from very high level constraints which interact with very generic and high-level properties of the speaker/ listener. Second, considerations from the perspective of contemporary biolinguistics, where a cognitive science based analysis points to a highly restricted set of representations and computations that underlie linguistic competence and performance. Third, empirically identified properties of the human mind/brain that are made visible through experimental research.

The assumption that linguistic universals are human universals, which served as a backdrop for the Bamberg call for papers, is certainly rather innocent and unassailable if it is taken alone and by itself. Far less trivial is the related question of the domains where the properties of human languages are most noticeably correlated with non-linguistic properties of human beings: the domain of more or less clearly identifiable biological organs, the domain of historical-cultural artifacts, or both to an equally strong degree.

Similarly for the claim that genetic endowment, experience, and language-independent principles contribute to language development in the individual

(Chomsky 2005): Undeniable as this might be, it is rather controversial (i) what exactly the three factors consist of, (ii) how they interact in the individual, and (iii) how this interaction is modulated by the respective environment, especially the shared distributed mind the individual comes to participate in (Zaefferer 2007).

Against this backdrop it is curious (although by no means surprising) to note that the Bamberg workshop offered considerably more ideas about the constraints that might explain the congruence of human language and cognition than about the determinants of linguistic and cultural-historical diversity. This seems to reflect quite truthfully the distribution of forces in the current language-related scientific fields: Only Richardson & Boyd outline an explanation of why languages are not less diverse than they are, all other papers contribute more or less directly to answering the opposite question of why languages are not more diverse than they are (and nothing to the question why they don't coincide).

Another notable reflection of the thematic priorities in the current debate is the fact that none of the contributions challenged or even addressed the conjecture formulated by one of the guest editors (DZ) at the Bamberg meeting that the boundaries provided by biological constraints leave a tremendously vast space for variation that is used only to a minimal extent by existing and possibly evolving languages, and that therefore many interesting constraints cannot be in principle explained by anything close to biolinguistics in the non-trivial sense because they are consequences of cultural universals.

Returning to the research agendas that are represented in the present volume, an informal taxonomy suggests four flavors. One approach derives from traditional research in generative linguistics, enriched with experimental data. The conclusions of Lidz, as well as those of Nevins, can be characterized as such. The former illustrates his point with three case studies from syntax learning (on the basis of Germanic, Romance, and Dravidian language data) and the latter reports experiments designed to test phonological universals using artificial gram-mars. Both claim that their findings can only be explained by assuming a highly constrained hypothesis space (aka Universal Grammar[2]) that biases the learner towards the observed behavior.

A second approach is advocated by researchers more closely aligned with the biolinguistic research program. The work of Arsenijević & Hinzen and that of Progovac can be seen in that light. The considerations made in that research tend to focus on work in syntax, and a critical hypothesis states, for example, that the key universal of the human linguistic system and a decisive step in its evolution is the operation of recursion, a recurring topic at the meeting. Interestingly, while conceding that recursion is present in language, Arsenijević & Hinzen claim that this is much less relevant than commonly assumed in that recursion in language is not truly causally efficacious. Drawing also on language evolution, Progovac proposes to take the early predecessors of modern syntax seriously and argues against treating Move as the default option. According to her proto-syntax

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[2]   It might be interesting for typologists to note that Nevins conceives of Universal Grammar as "a set of analytic biases that prefer certain language types over others" in his contribution to this issue.

scenario, syntax began with small clauses and subordination lacked the option of move, making Subjacency (restrictions of Move) the default. In decomposing syntax into its underlying evolutionary components she also addresses Poeppel's warning against the possibility of cross-sterilization between linguistics and the neurosciences by proposing neurobiological correlates of syntax.

As a third strand of investigations, psychologically and neurobiologically motivated research such as that described by Bever & Poeppel as well as by Pulvermüller aims to identify universals based on experimentation. Bever & Poeppel summarize an older idea whose time has come (back), the heuristic algorithm originally called Analysis by Synthesis. It is a 'recipe' for how perception might be organized, both across languages and across levels of linguistic representation. Pulvermüller, in his work, summarizes the state of his own cognitive neuroscience research with respect to the language-related brain regions, the time course of linguistic processes, the multimodal action-perception circuits and the prewired structural information.

Finally, a rather different perspective on human language universals comes from the high level considerations of anthropology and evolutionary biology, as exemplified by Richardson & Boyd. Taking as starting point cross-species comparison, they outline a possible scenario of why language in its uniquely human form might have evolved at all that emphasizes gene-culture coevolution in order to account for its tightly interwoven cultural and biological aspects without concealing that there is still considerable debate about the details of the division of labor between genes and culture in this process. They furthermore trace back the uniqueness of language to the uniqueness of human cooperation and they offer, unique themselves in this among the contributors, an answer to the question why languages are not less diverse than they are: The evolutionary advantage of diversity lies in limiting communication between people who cannot freely trust each other's truthfulness or who even with truthful messages would cause maladaptive behavior on the part of listeners. In other, slightly paradoxical, words, according to Richerson & Boyd an essential (and probably mostly culture-driven) universal property of languages consists in their tendency towards diversity.

Looking back, we feel that the contributions from different fields that constitute this volume give a realistic picture of the state of the knowledge in this domain. There is still much to be improved in order to get beyond bold exaggerations, blunt polemics, and mutual ignorance between the language-related sciences, because the danger of cross-sterilization is real and overcoming interdisciplinary barriers requires hard work, which to the detriment of the field is often not given proper credit. Still, we think that the experience with our workshop and with the long process of thoroughly reviewing and carefully revising its written outcome justifies our hope that the prospect is real that all participating disciplines will contribute to making the field move slowly but persistently forward towards an increasingly complete picture of the ways language universals relate to other human universals and general human diversity relates to linguistic diversity.

References

Boeckx, Cedric & Kleanthes K. Grohmann. 2007. The *Biolinguistics* manifesto. *Biolinguistics* 1, 1–8.

Boyer, Pascal. 1994. *The Naturalness of Religious Ideas. A Cognitive Theory of Religion.* Berkeley, CA: University of California Press.

Brown, Donald E. 1991. *Human Universals*. New York: McGraw-Hill.

Chomsky, Noam. 2005. Three factors in language design. *Linguistic Inquiry* 36, 1–22.

Evans, Nicholas & Stephen C. Levinson. 2009. The myth of language universals: Language diversity and its importance for cognitive science. *Behavioral and Brain Sciences* 32, 429–492.

Koster, Jan. 2009. Ceaseless, unpredictable creativity: Language as technology. *Biolinguistics* 3, 61–92.

Zaefferer, Dietmar. 2007. Language as mind sharing device: Mental and linguistic concepts in a general ontology of everday life. In Andrea Schalley & Dietmar Zaefferer (eds.), *Ontolinguistics: How Ontological Status Shapes the Linguistic Coding of Concepts*. Berlin: de Gruyter, 189–222.

Zaefferer, Dietmar & David Poeppel. 2008. Bericht der Arbeitsgruppe 2 "Foundations of Language Comparison: Human Universals as Constraints on Language Diversity" auf der 30. Jahrestagung der Deutschen Gesellschaft für Sprachwissenschaft in Bamberg, 26.–28. Februar 2008. *Mitteilungen der DGfS* 67, 36–39.

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