

The language system is abstract, but cannot be fully understood without its social functions

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1. Studying language structure without abstractions and idealizations?

In "Abstractions and idealisations: the construction of modern linguistics", Martin Stokhof and Michiel van Lambalgen argue that generative linguistics of the Chomskyan type crucially works with idealizations (e.g. the ideal speaker-hearer), and that these make it difficult for linguists working in this tradition to subject their theories to empirical testing. Idealization is said to be crucially different from abstraction as practiced in the natural sciences, where some quantitative parameters are temporarily left aside. In idealization, they argue, qualitative parameters are ignored, and the motivation for this is primarily ideological, not practical as in the natural sciences.

They cite nongenerative approaches to language, such as cognitive linguistics and stochastic language processing studies, as examples of approaches without the same kinds of ideologically motivated idealizations that seem more promising.

For a linguist, this paper by two philosophers is not easy to understand, and there are a number of rather odd things about it. They may be forgiven for using the term "modern linguistics" in the sense of "generative linguistics of the Chomskyan type", not only because they explain this unusual terminology right at the outset, but also because it may be natural for a philosopher to perceive Chomskyan linguistics as "modern linguistics" tout court. Of all influential scholars that are generally regarded as "linguists", Chomsky is certainly the most philosophically (and least empirically) inclined, so it is unsurprising that his approach gets disproportionate attention from philosophers (even as his influence in linguistics is waning). Perhaps what is oddest about the paper is that the authors first describe generative linguistics as "one of the most remarkable and successful scientific innovations of the twentieth century" (seemingly echoing the rhetoric that one is used to from Chomskyan circles), but then go on to note problems, unfulfilled expectations, lack of unity, and finally they even ask whether generative linguistics is a "failed discipline". In the end, the critical tone of the paper seems to prevail, and it appears that they want to ascribe the apparent failure of generative linguistics to ideologically motivated idealizations, deriving from Chomsky's attitude of "scientistic naturalism, plain and simple".

But what is the problem with naturalism, and what is "scientism"? The latter is not explained, and the reason a naturalist approach to language cannot work, according to the authors, is that linguistics is dealing with a "hybrid ontology", phenomena that are both natural (physical, biological and psychological) and cultural (historical and social). This would explain that abstractions are not possible in linguistics, and that "attempts at abstraction result in idealisation", with all the negative consequences.

While they do not say so explicitly, it seems that the conclusion is that students of language should not use abstractions at all, but should study their observables in all their empirical messiness. Maybe this is something that some anti-Chomskyan linguists would actually argue for, out of frustration with the Chomskyan emphasis on abstract theory-building, but it would hardly be compatible with every scientist's goal of bringing order into the chaos of observable phenomena.

2. Unclear concepts

There are a number of basic concepts that are not clear in the target article. One is the concept of "natural" as opposed to "cultural". If human beings are conceived of as somehow standing outside of nature (perhaps created in a second act of creation, after nature was complete), then this is a reasonable opposition, but if human beings are part of nature (part of the same creation event, as in Genesis or in modern biology), then culture is of course just one aspect of nature, intriguing as it may be. It is conceivable that this particular aspect of nature requires a very special scientific approach, different from all other sciences. But this is extremely unlikely, because the non-cultural sciences are so diverse in themselves (astronomy and paleontology are not experimental, for example, and biological phylogeny and geology are eminently historical sciences).

Another unexplained concept is that of an "object of study". The authors talk as if there were a simple relationship between "the original, natural phenomenon" and the constructed object of study. But the perceivable phenomena are amorphous and endless, and the delimitation of an object of scientific study is always an abstraction or idealization, in any science. If a physicist studies radio waves and if a biologist studies the phylogeny of certain genera of snails, then they study natural phenomena, but how "original" are these? Not particularly original in the sense of being evident to the senses. It seems that "construction" happens at many different levels of scientific study, even rather basic ones. This is not surprising, as we know that "construction" in a very similar sense happens also in ordinary cognition: We are exposed to a wide variety of sensory stimuli, but our cognitive apparatus (probably aided by cultural presuppositions) sorts them into particular (abstract, idealized) categories.

3. Abstract structure in grammar

A simple dichotomy divides concepts into concrete, observable ones and abstract, explanatory ones. For example, one might say that the Latin word *uxori* ('to the wife') is a concrete concept (because it can be pronounced and heard), while the concepts "Dative" and "Singular" (required to describe the grammatical behaviour of the word) are abstract concepts, devised by grammarians to account for language structure. But of course the very notion of a word requires considerable abstraction (see Haspelmath 2011 for the serious problems that linguists have had with it), and if we are talking about a word type rather than a word token here, we are presupposing the abstract notion of the language system. The concepts "(Latin)

Dative” and “(Latin) Singular” may be more abstract, but they are less abstract than the concepts “(Latin) Case” and “(Latin) Number”, which are required for the scientific study of language structure as well. These concepts in turn are more concrete than the concepts “case in Universal Grammar” or “number as a comparative concept” (see Haspelmath 2010b for some discussion), another layer of explanatory concepts that most linguists feel are necessary.

Thus, I fail to see that an approach to grammatical structure that makes no use of abstractions can work. It is conceivable that some applied fields such as computational natural language processing or language pedagogy can at some point eliminate abstract grammatical structure (reducing everything to storage and stochastic quantification), but this will never be possible for psycholinguistics (because the evidence for qualitative generalizations is overwhelming), and it is at present totally utopian for the study of linguistic diversity. At the very least, abstraction/idealization is not particularly original to generative linguistics, even if it may seem so to a philosopher reading Chomsky, whose rhetoric sometimes suggests regards himself as an innovative thinker on a par with Aristotle and Descartes. From the very beginning of the study of grammatical patterns, linguists have abstracted away from many of the incidental features of language use, focusing on the system. The beginnings of abstraction of this sort are evident in the Babylonian clay tablets with morphological paradigms from 1600 BCE, and they are fully present in Pāṇini’s teachings from the 4th century BCE and in Dionysius Thrax’s grammatical writings of the 2nd century BCE. Ferdinand de Saussure famously called the language system “langue” and contrasted it with language use (or “parole”), but this was merely a new pair of labels for a distinction that had been present implicitly all along. Chomsky’s “competence” is a cognitive version of “langue”, but it is not more idealized than the notion of language system that was presupposed over the more than two earlier millennia.

It is not clear to me either that the claimed difference between quantitative parameters (ignored by natural sciences in abstraction) and qualitative parameters (ignored by generative linguistics in idealization) is particularly relevant. It is true that structural linguists tend to put an emphasis on (typically binary) oppositions, but these are the abstract concepts of the theory, not the observables. Phoneticians and corpus linguists have always measured and counted, and the influences of these approaches on phonology and morphosyntax has been steadily growing in recent decades.

4. The social functions of the language system

Now does all of this mean that I think that generative linguistics is doing just fine, and that all the perceived problems and failures are just normal debates within a lively, healthy field of study? Not exactly, but I would not localize the problems in the approach to abstraction or idealization. This is not the place to elaborate on my views on generative linguistics (see, e.g. Haspelmath 2000, 2008, 2010a for more

details), but I would like to make two specific comments on points made by the authors.

First, the appearance of failure, or of currently increasing diversity of approaches (whereas "modern linguistics seemed to be heading towards a remarkable uniformity" at an earlier period), must be due, to a large extent, to the rhetoric and presentation style of generative grammar. Generative grammar contributed many novel ideas and perspectives, but contrary to its rhetoric, it never took a decisive step forward. Most of the central issues of the field were known to theoretical linguists in the earlier part of the 20th century and even before, and they are not likely to go away anytime soon. What happened was that since the 1960s, the field of grammar research expanded dramatically in Western countries, and there was a single scholar with enormous prestige (Noam A. Chomsky) whose main decisions tended to be followed by most others, thus giving the impression of uniformity. With this factor losing its influence, linguistics is now returning to a normal state of internal diversity.

Second, while I do not follow Stokhof and van Lambalgen with respect to their wholesale critique of abstraction and idealization in linguistics, they are absolutely right that generative linguistics has neglected "both the actual use of language as well as the context in which that actual use appears". Crucially, "language use has a social nature, in which communication plays a central role", and this has been simply left aside by generative grammarians. I am not sure, though, that this is a necessary consequence of the idealization of competence. I think it is a perfectly coherent position to follow the Chomskyan view with respect to descriptive adequacy, i.e. to set oneself the goal of characterizing a speaker-hearer's mental grammar or competence, without following him with respect to explanatory adequacy (i.e. the innate universal grammar that explains limits on possible grammars). In fact, this is what most cognitive linguists do: They try to describe the cognitive system for language (i.e. the speaker-hearers' competence), without assuming that it is autonomous or domain-specific, and without assuming that grammatical systems are constrained by a universal grammar. The constraints on possible grammars may well come (to some extent) from communicative, socially based regularities (such as economy of coding, i.e. short or zero coding for frequent expressions, Haspelmath 2008).

So why does communication and the social function of language play no role in generative linguistics? I have no good explanation for this, but since I do not see the connection as intrinsic, I do not think that a deeper explanation is necessary. Our colleague Noam A. Chomsky simply happens to lack an interest in the social function of language. He is a philosopher of the mind, and his interest in some aspects of language derives from this basic orientation. What drives him is the desire to understand Plato's problem ("Why do we know so much when we have so little evidence for it?"), and to understand the mind's place in the universe. This has led him to focus on a rather specific, narrow domain (recently called "faculty of language in the narrow sense"), disregarding many aspects of language that often

fascinate other linguists (such as "E-language", poetic language, and so on). It may not be too far-fetched to say that some of the problems of linguistics result from the misunderstanding that the Chomskyan approach is relevant to the whole field of linguistics, and that every linguist should take guidance from a single scholar.

As linguistics becomes a more normal, more horizontally than hierarchically structured field of study, this imbalance will gradually disappear. The resulting diversity of approaches may become even more confusing for philosophers of science, but the field of scientific study of language will be better off.

References

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