Paul Kiparsky

Lexical Syntax

Born in 1941 in Helsinki. PhD. in 1965 from the Massachussetts Institute of Technology, where he taught from 1965 to 1983. At Stanford University since 1984. Research in India 1968-69, and again 1976-77. Publications: *Pânini as a Variationist,* 1979; *Explanation in Phonology,* 1982; *Theoretical Problems in Pänini's Astädhyäyi,* 1982; *Rhythm and Meter* (with Youmans, G.), 1989. — Address: Department of Linguistics, Stanford University, Stanford, CA 94305 (USA).

The joint project which brought Manfred Bierwisch, Dieter Wunderlich and me together under the generous aegis of the Wissenschaftskolleg grew out of initially complementary concerns of ours: in the case of my two colleagues, primarily the formal analysis of word meanings, in mine, the structure of words and the organization of a language's vocabulary. We knew that from our different starting points we had come to similar conclusions, and that we were converging on a common research agenda. It was our good fortune to be granted an opportunity to make a substantial beginning on it, the results of which we hope to report in a joint volume.

To visualize the problem of formal grammar that is the common ground of much current linguistics, imagine a computer program G so clever that it can accurately distinguish correct German utterances from every other kind of text. Then imagine an even cleverer super-program UG which assembles G when fed enough random examples of German speech, and which performs equally well with English, New Perce, or any other of the world's five thousand languages. A child normally accomplishes just this staggering feat for its native language at any early age, and understanding how this is done would be a result of major interest for cognitive psychology. One of the goals of linguistics is, in effect, to design such a UG, or Universal Grammar. As linguists, we are interested in it for another reason as well: it is deeply intertwined with the problem of language universals. Comparative study of the languages of the world shows that they are built on uniform principles, and richly organized far beyond what would be required by communicative efficacy. The unifying assumption which provides a common answer to the two problems is this: language acquisition is possible because the child's evolving hypotheses are confined to a manageable search space amidst the vast logical space of possi-

bilities, a search space identical with the typological space within which human languages vary, and defined by an innate endowment. It is precisely this which constitutes UG.

The linguistic knowledge attained by a speaker goes well beyond what could be induced from direct experience, and is articulated in several distinct domains, including phonology, morphology, and syntax. Thus UG must be correspondingly rich. In the study of both acquisition and linguistic universals, it has proved a fruitful strategy to treat grammars as a system of separate modules, each with a core defined by fixing a set of *parameters.* Think of them as a checklist of "twenty questions", each with an expected answer which will be assumed to be true unless there is evidence to the contrary.

As currently articulated, this research program leads to the following dilemma. On the one hand, the study of acquisition and language universals both seem to require a complex and rich UG forming a system of interacting cognitive modules, specific to language and no other cognitive domain. But the more elaborate and specific we make UG, the harder it becomes to explain its evident genetic uniformity. Whereas complex functional systems (e.g. vision and the immune system) are fragile, language is robust, in the sense that under normal conditions all members of a speech community attain practically the same knowledge of their language. There are no known racial differences in linguistic endowment, and little evidence of heritable selective impairments of speech (such as linguistic analogs to color blindness or sickle cell anemia).

A UG rich enough to explain linguistic universals and acquisition yet general enough to be biologically plausible was one of the goals of our research this year. More specifically, our idea was that the theory of syntax can be greatly simplified by starting from the following theoretical premises: *(1)* semantic form (the interface of language with other cognitive systems) determines argument structure, and *(2)* morphology determines its syntactic realization. These assumptions imply that the structure of words and their meaning (the latter inferable in part without prior linguistic knowledge through non-linguistic communication) jointly provide the main foothold for the acquisition of the combinatorial regularities of language. In addition, we adopted a set of restrictive formal principles which we think underlie the organization of morphological systems, including markedness, feature hierarchies, unification and the "Elsewhere" principle, which says that each context licenses the most specific (most highly marked) morphological element compatible with it. The interplay of these constraints offers a new perspective on the organization of language in general, and on the learnability problem in particular.

The Kolleg provided a unique setting for exploring these ideas in joint

sessions full of intensive but constructive debate, regularly joined by colleagues from a research group at the *Akademie der Wissenschaften* (which metamorphosed into a Max Planck research group during our stay). Perhaps even more precious than the countless insights I gained through this interaction was to me the opportunity of *Einfühlung* into my colleagues' way of thinking, which I could hardly have gained any other way.

The tangible results of my stay include three chapters intended for our joint publication, plus a number of separate pieces on partly related themes.

One chapter develops a theory of structural case which supports a restrictive theory of syntactic licensing, accounts for the typological properties of case systems, and is compatible with our very strict morphological ground rules. The main idea is to decompose cases by two relational features defined directly on argument structure. The theory accounts properly for ergative case systems, and for morphological phenomena involving lexical case, syncretism, neutralization and patterns of interaction of split ergativity.

A second chapter develops the idea that the order of clausal arguments is a serialisation of the role hierarchy. This generalization is shown to hold even for a group of approximately 50 languages (ca. 1%) which superficially violate it. Combined with the theory of structural case, it predicts the attested patterns of interaction between inflection and word order, including two complexes of phenomena which have so far remained unaccounted for: *Freezing,* the fixing of word order under specific morphological conditions in languages that otherwise have free word order, and a class of *Case/Function Mismatches,* involving non-canonical alignment between case and grammatical function. The Freezing and Mismatch problems turn out to be closely related in a surprising way, and their solutions in the proposed framework are parallel.

In a third chapter I argue that the syntax of complex (derived) predicates is predictable from the principles which govern simple predicates. For example, passive and causative verbs work cross-linguistically exactly like simple verbs with the same argument structure. This result is quite unexpected from the perspective of many current theoretical approaches. I conclude by proposing a further generalization of it as a learnability constraint.

I also completed a monograph on pronominal reference, which presents a new theory of disjoint reference and extends binding theory to two hitherto problematic classes of pronominal elements: anaphors which cannot be locally bound, and pronouns which can be locally bound. It derives the basic cross-linguistic properties of anaphors, and correctly predicts the direction of historical change in binding properties.

In a completely different vein, a visit by Kristin Hanson (University of British Columbia) enabled us to continue our collaboration with two essays on metrics. One draws on recent insights in phonology to identify and explain the properties of a previously unrecognized type of metrical organization which is simultaneously quantitative, syllabic, and accentual, to our surprise quite widely attested even in English verse. The second builds on these findings to present a typology of meter and an analysis of the constraints which intrinsic linguistic form imposes on poetic artifice.

I would like to thank the staff of the Wissenschaftskolleg for their gracious and good-humored support, which did much to make my stay so productive and enjoyable. I am particularly grateful to Mr. Lindenberg for virtually recreating the computing environment of my home institution in Berlin.