Introduction

Suzanne Kemmer and Keith Denning

The papers collected in this volume represent a broad selection of Joseph Greenberg's linguistic work spanning the last four decades. There already exists one collection of previously published articles, *Language, Culture, and Communication* (1971a), which contains some of Greenberg's contributions to sociolinguistics; in addition, a number of articles, at the time newly published, appeared in *Essays in Linguistics* (1957). However, there is a large body of his work that has never been collected. Some of this work is not easily accessible, such as articles that initially appeared in small specialist journals or in books that have since gone out of print. This book is intended to fill the need for a representative collection of Greenberg's writings.

Choosing from the wealth of material available was not an easy task. In making our selections, we attempted to strike a balance between judgments of intrinsic worth, on the one hand, and considerations external to the works themselves, on the other. The external criteria included such issues as availability, overlap with material in other articles reprinted here, representativeness of Greenberg's main currents of thought, impact on the field, and relevance to current work in linguistics. The overall goal was to bring together in convenient form a mix of classic, well-known studies and works that we feel deserve wider recognition.

Inevitably, our choices to some extent also reflect our own personal scholarly interests. We are both diachronic typologists; but Denning's work concentrates on phonology and African historical linguistics, while Kemmer focuses on the semantics underlying grammatical categories.

The papers fall into a number of areas, not all mutually exclusive but nevertheless useful to distinguish. We have divided the book into the following parts: (I) typology and language universals; (II) studies in languages

of Africa and the Near East; (III) verse prosody; (IV) psycholinguistics, and (V) linguistic models and linguistic explanation. In what follows, we offer remarks on some of the leading ideas in each part, historical observations where relevant, and a few notes on the choice of inclusions.

The first and largest of the five parts contains work on typology and language universals. Greenberg's impact on the field of typology and universals research has been immense. He was the first American linguist to recognize the importance of studying universals and to promote research in that area. He organized the Dobbs Ferry Conference on Language Universals (April 1961), which took place at a time when prevailing attitudes among American linguists were decidedly anti-universalistic.¹ The outcome of this conference was the volume *Universals of Language* (Greenberg 1963a), the first important milestone of universals research. Greenberg also provided the main impetus for the Stanford Project on Language Universals (1967–76), which he and Charles Ferguson jointly directed. The research results of this project appeared in *Working Papers on Language Universals* (1969–76) and the four volumes of *Universals in Human Language* (Greenberg et al. 1978). The project provided the training grounds for a large number of American universals researchers, as well as sparking a parallel project in Cologne that continues to thrive. In addition, typological research in the Soviet Union has been heavily influenced by Greenberg. The influence of Greenberg's approach to typology/universals can be clearly seen in the following books: Uspenskii 1968, Li 1975, Juilland 1976, W. Lehmann 1978, Comrie 1981, Mallinson and Blake 1981, Hawkins 1983, Seiler 1983, Givón 1984, Maddieson 1984, C. Lehmann 1984, Solntseva 1985, Stassen 1985, Ruhlen (forthcoming), and works that have appeared in the Benjamins series *Typological Studies in Language*, e.g. Craig 1985.

Part I contains what we consider the best of Greenberg's articles in this field, excluding, however, several papers that appeared in *Universals of Human Language*. The reason for the omission of these articles is that they are easily available and in some cases overlap considerably with some less well-known papers that we wished to include. We did, however, choose to reprint two papers from *Universals of Human Language*, namely "How Does a Language Acquire Gender Markers?" and "Generalizations About Numeral Systems," since both of these papers constitute major breakthroughs in the areas that they treat.

One notable characteristic of the work in this part is the integration of typological investigation with research on language universals. These two

¹For the historical context of the Dobbs Ferry Conference, see Ferguson 1978. Of historical as well as theoretical interest is the "Memorandum Concerning Language Universals" (Greenberg, Osgood, and Jenkins 1963, written for presentation at the conference in 1961).

areas of endeavor were once thought to have rather opposite goals (viz., typology: the discovery of the differences among languages; universals: the study of what languages have in common). Greenberg's approach, however, shows how typological comparison can be used as a powerful tool for the discovery of universals. The two *Universals* papers are paradigmatic examples of this technique.

A related theme recurring throughout Part I is the close connection between implicational universals and marking theory. Prague School scholars showed that asymmetry within categories is a pervasive phenomenon in human language; linguistic categories tend to have one member that stands out with respect to a particular cluster of properties. These properties together define markedness. In the course of exploring markedness in various linguistic domains, Greenberg substantially extended classical marking theory. Among other innovations, he was the first to point out the significance of diachronic processes to synchronic marking relations. Previously, the only application of marking theory to historical linguistics had been as a kind of touchstone for the plausibility of linguistic reconstructions. An extensive discussion of marking theory and some results of its application in the investigation of language universals are found in Greenberg's 1966 monograph *Language Universals, with Special Reference to Feature Hierarchies*. (For more recent contributions to marking theory following Greenberg's general approach, see Eckman, Moravcsik, and Wirth 1986.)

Aside from the major contributions to the field of typology and universals found in the work in this part, there are a number of ideas developed in these papers that are of more general applicability in other areas of linguistics. Here we will just mention a few.

One area of relevance to current work is Greenberg's attention to the semantic side of particular linguistic systems. His discussion of the semantics underlying numeral classifiers, gender markers, and deictic systems, for example, informed as it is by observation of recurrent typological patterns and diachronic developments, provides an excellent basis on which to build general theories of number, definiteness, deixis, and anaphora.

An important point regarding semantic change is found in "The First Person Dual Inclusive as an Ambiguous Category." Greenberg's analysis makes reference to a Gestalt-like shift of focus from one semantic property to another, thus highlighting the fact that semantic complexity can play a crucial role in language change. Furthermore, this paper illustrates the general point that typological change can be the result of a semantic change undergone by a particular element.

Applicable to current work in morphology is Greenberg's early paper "A Quantitative Approach to the Morphological Typology of Language." Here he presents a method of quantifying the traditional morphological typologies of

languages (isolating vs. agglutinative vs. inflective and synthetic vs. analytic). His numerical scales, particularly those for degree of synthesis and degree of fusion, are potentially of great empirical value for testing correlations with other typological properties. Despite the fact that morphological typology in the above sense has been out of fashion for the greater part of this century, there is a growing suspicion among some linguists that the morphological structure of the word is of fundamental importance to many aspects of linguistic structure (see for example Bybee 1985).

Part II represents Greenberg's substantial contributions to African and Near Eastern linguistics. Greenberg's influence on the field of African language studies is pervasive; most notably, his African language classification has become standard for the field. The works included in this section cover a number of areas, including classification, synchronic analysis of particular linguistic systems, areal linguistics, typology, language contact, and historical linguistics.

Many papers in this part are elegant, self-contained studies that deserve a wider audience than they initially received. One such is "Linguistic Evidence for the Influence of the Kanuri on the Hausa," which is a model of how to apply linguistic evidence to determine the direction of lexical borrowing. Two others of note are "The Origin of the Masai Passive" and "Nilo-Saharan Moveable *k*- as a Stage III Article." These will be of considerable interest to typologists as well as general historical linguists, since they illustrate recurrent diachronic processes that give rise to particular construction types. "The Labial Consonants of Proto-Afro-Asiatic" is a classic illustration of how a traditional problem becomes amenable to solution once reference is made to languages in a larger genetic grouping than had previously been perceived.

In addition to research papers, this part contains several reviews of books on African language classification. They were included not only because we found them entertaining (they contain some of Greenberg's most trenchant writing) but also because they set forth some basic principles of linguistic classification that may not have been fully appreciated by some stock specialists. We hope in particular that the fallacies regarding classification that these reviews expose (e.g., use of typological criteria in classification, the assumption that reconstructions are "proof" of genetic relationships, etc.) may not reemerge in future work in genetic classification.²

To aid the non-specialist reader in keeping track of the genetic relationships referred to in the articles and reviews in this part, we have included a map of the distribution of the major language families and subgroups in Africa. Since

²See Greenberg 1987, chap. 1, and Ruhlen 1987 for discussion of these fallacies and of the general principles of genetic classification.

Greenberg's African classification underwent various modifications over the years, particularly before 1963 when it reached its present degree of comprehensiveness, some references to the classification of particular languages and language groups in the papers included here are outdated.³ Rather than attempting to update such references, which are in all cases immaterial to the basic content of the articles, we refer the interested reader to Greenberg's major works on African linguistic classification (Greenberg 1955 and 1963b).

Part III includes three works on African verse prosody. These studies are notable for their originality and their synthesizing character, as they brought together a body of previously scattered observations. Two are in-depth analyses of particular prosodic systems, while the third, "A Survey of African Prosodic Systems," was the first general characterization of verse prosodic devices in African languages. Taken together, these studies have considerable significance for a general theory of verse prosody. In addition, they are important contributions to the study of the linguistic history of Africa (for example in their identification of native vs. Arabic-influenced poetic devices). Greenberg's results in this area reveal the great potential of the comparative study of verse prosody for historical investigation.

An area of research for which Greenberg is less well-known today is psycholinguistics. This was at one time one of his major research interests; in the early 1960's he was a member of the Social Science Research Council Committee on Linguistics and Psychology, which sponsored a large number of research projects over the years (see Osgood and Sebeok 1965). The first paper in Part IV, "Studies in the Psychological Correlates of the Sound System of American English," contains four reports of psycholinguistic experiments conducted by Greenberg and James J. Jenkins. These studies, which constitute the earliest psycholinguistic experiments by American psychologists and linguists working in collaboration, are concerned with a variety of phenomena, including the psychological distance of nonsense words from English norms; relationships between distinctive sounds in psychological space; and the application of the semantic differential to measure similarity between speech sounds. In addition, this part includes a paper that has never before appeared in print, "A Linguistic Approach to the Meaningfulness of Nonsense Syllables." This study presents a non-experimental, language-internal method of determining the proximity of nonsense syllables to English. The index of meaningfulness thus derived, it turns out, correlates highly with measures of psychological distance arrived

³The two main cases of outdated information are references in early papers to Songhai as an unaffiliated language (Songhai was later incorporated into Nilo-Saharan) and references to a Chari-Nile group of Niger-Congo (cf. footnote 4 in "Some Areal Characteristics of African languages" [in Part II below]).

at in previous experimental studies. The article, originally planned as a collaborative paper with Jenkins, was written in 1965 by Greenberg and has been revised for publication here. The types of empirical investigations represented by the work in this part have been the subject of renewed interest by a number of linguists and psychologists, and we hope that the articles included here will be a further stimulus to research in this area.

The papers in Part V deal with models and explanation. In these papers, linguistics is placed in the broader context of scientific endeavor as a whole. The comparisons between linguistics and other sciences that are drawn serve to illuminate particular historical trends in linguistics.

The promotion of physics as a “model science” for linguistics has become commonplace since the rise of the generative school. In “Types of Linguistic Models in Other Disciplines,” Greenberg shows that the direction of influence has flowed the other way, from linguistics to other disciplines, at various points in the nineteenth and twentieth centuries. In “On the ‘Language of Observation’ in Linguistics,” he calls attention to a level of scientific discourse that has not explicitly received recognition in linguistics, and points to ways this ‘language of observation’ can be utilized as a universal basis for comparable language descriptions. The remarks found in this paper on the essentially relative nature of observational and theoretical levels foreshadow the discussion of levels of explanation in “Rethinking Linguistics Diachronically” and “Two Approaches to Language Universals.” These papers should lay to rest the fallacious idea that it is possible or desirable to draw an absolute dichotomy between “description” and “explanation.”

“Rethinking Linguistics Diachronically” focuses on a matter of central concern to Greenberg: the reintegration of diachrony into general linguistic theory. In this paper it becomes clear why so much of Greenberg’s work in typology/universals is integrally diachronic. His view can be summed up as follows: However useful the distinction between synchrony and diachrony may be as a heuristic, the two are ultimately inseparable from the point of view of explanation—diachronic facts are indispensable to the understanding of synchronic phenomena, and vice versa. Implicit in this view is the assumption, repeatedly borne out by the findings of cross-linguistic research, that the same factors—semantic, pragmatic, cognitive, and, for phonology, articulatory, perceptual, and acoustic—underlie both synchronic typological patterns and the recurrent diachronic developments associated with them.

Perhaps one of the reasons that historical linguistics became ancillary to synchronic descriptive linguistics in this century was that it was felt to be overly particularistic and not amenable to generalization. Greenberg has often pointed out that there is no necessary incompatibility between historically oriented research and law-seeking scientific investigation in linguistics.

This is probably stated best in “Some Methods of Dynamic Comparison in Linguistics,” a paper from Part I: “There exists the possibility of a more comprehensive mode of diachronic comparison which shares with synchronic typology the attribute of generality. The individual items of such comparisons are not the cognate forms, but the changes themselves . . . occurring in historically independent cases, and hence subject to classification . . . and generalization” (p. 74).

“Two Approaches to Language Universals” (written nearly a decade ago but first published only recently) continues and extends the theme of the necessity for a broad conception of linguistic theory that embraces generalizations lying outside the realm of grammar. Here Greenberg warns against the prevailing tendency to arbitrarily limit the concerns of linguistics to the specific problems of synchronic grammatical theory. Of particular importance is the broadening of the notion of what constitutes explanation. Greenberg’s approach to explanation is far more eclectic than that found in current generative approaches. In his view, the search for explanations for many linguistic phenomena will ultimately take us outside the realm of linguistics proper and into cognitive and other domains.

One area of linguistic scholarship that is left unrepresented in this book is Greenberg’s work on language classification outside Africa. Greenberg has published important work on the classification of non-Austronesian languages of the Pacific (“The Indo-Pacific Hypothesis,” 1971) and the New World (*Language in the Americas*, 1987). In addition, he is currently at work on a book elaborating his hypothesis of the existence of a large language family that subsumes Indo-European, a number of major linguistic stocks in Asia, and Eskimo-Aleut (tentatively titled *Indo-European and Its Closest Relatives: The Eurasiatic Language Family*). We felt that his work on American Indian and on Eurasiatic is best left represented by complete book-length treatments, rather than partial explications in article form. “The Indo-Pacific Hypothesis” is not reprinted here because of its length and the fact that it consists mostly of citations of data, difficult to interpret for those not familiar with the languages treated.

A number of other areas of inquiry were also intentionally omitted. To keep this book to a reasonable size, we restricted ourselves to those of Greenberg’s writings that are most centrally concerned with language structure. Another volume could be filled with his writings on anthropology, culture history, macrosociolinguistics, and the philosophy of science, all attesting to the breadth of Greenberg’s interest and scholarship.

We have tried to keep editorial intrusion to a minimum, largely confining ourselves to correcting errors in the original published versions. Articles have in most respects been left in their original editorial format; in a few

cases, notes and bibliographic entries have been updated. We also made a few stylistic modifications in consultation with the author.

A full bibliography of Joseph Greenberg's work to date has been included at the end of this volume. Since Greenberg continues to be immensely productive, it will probably be somewhat out of date before this book appears. In looking forward to future work, we anticipate many more new and challenging ideas from one of the foremost linguistic scholars of the twentieth century.

References Cited

- Bybee, Joan. 1985. *Morphology: A Study of the Relation between Meaning and Form*. Amsterdam and Philadelphia: John Benjamins.
- Comrie, Bernard. 1981. *Language Universals and Linguistic Typology*. Oxford: Basil Blackwell.
- Craig, Collette, ed. 1985. *Noun Classes and Categorization*. (Typological Studies in Language 7). Amsterdam and Philadelphia: John Benjamins.
- Eckman, Fred R., Edith A. Moravcsik, and Jessica R. Wirth, eds. 1986. *Markedness*. Proceedings of the Twelfth Annual Linguistics Symposium of the University of Wisconsin-Milwaukee 1983. New York: Plenum Press.
- Ferguson, Charles. 1978. "The historical background of universals research." In Greenberg et al. 1978, Vol. I.
- Givón, Talmy. 1984. *Syntax: A Functional-Typological Introduction*. Vol. I. Amsterdam and Philadelphia: John Benjamins.
- Greenberg, Joseph H. 1955. *Studies in African Linguistic Classification*. New Haven, Conn.: Compass Press.
- . 1957. *Essays in Linguistics*. Chicago: University of Chicago Press.
- . 1963a, ed. *Universals of Language*. Cambridge, Mass.: M.I.T. Press.
- . 1963b. *The Languages of Africa*. *International Journal of American Linguistics*, 29: 1, Part II. (Publication of the Indiana University Research Center in Anthropology, Folklore, and Linguistics 25.) Bloomington: Indiana University, and The Hague: Mouton.
- . 1966. *Language Universals, with Special Reference to Feature Hierarchies* (Janua Linguarum Series Minor 59). The Hague: Mouton.
- . 1971a. *Language, Culture, and Communication*. Essays by Joseph H. Greenberg. Selected and introduced by Anwar S. Dil. Stanford: Stanford University Press.
- . 1971b. "The Indo-Pacific hypothesis." *Current Trends in Linguistics* 8: 808–71.
- . 1987. *Language in the Americas*. Stanford: Stanford University Press.
- . Forthcoming. *Indo-European and Its Closest Relatives: The Eurasiatic Language Family*. Stanford: Stanford University Press.
- Greenberg, Joseph H., Charles Osgood, and James Jenkins. 1963. "Memorandum concerning language universals." In Greenberg 1963a.
- Greenberg, Joseph H., Charles A. Ferguson, and Edith A. Moravcsik, eds. 1978. *Universals of Human Language*. 4 vols. Stanford: Stanford University Press.
- Hawkins, John. 1983. *Word Order Universals*. New York: Academic Press.

- Juilland, Alphonse, ed. 1976. *Linguistic Studies Offered to Joseph Greenberg on the Occasion of His Sixtieth Birthday*. 3 vols. Saratoga, Cal.: Anna Libri.
- Lehmann, Christian. 1984. *Der Relativsatz: Typologie seiner Strukturen, Theorie seiner Funktionen, Kompendium seiner Grammatik*. (Language Universals Series 3.) Tübingen: Günter Narr.
- Lehmann, Winfred, ed. 1978. *Syntactic Typology. Studies in the Phenomenology of Language*. Austin: University of Texas Press.
- Li, Charles, ed. 1975. *Word Order and Word Order Change*. Austin: University of Texas Press.
- Maddieson, Ian. 1984. *Patterns of Sounds*. Cambridge: Cambridge University Press.
- Mallinson, Graham, and Barry Blake. 1981. *Language Typology: Crosslinguistic Studies in Syntax*. Amsterdam and New York: North Holland.
- Osgood, Charles E., and Thomas A. Sebeok, eds. 1965. *Psycholinguistics: A Survey of Theory and Research Problems*. Bloomington and London: Indiana University Press.
- Ruhlen, Merritt. 1987. *A Guide to the World's Languages*. Vol. I, Classification. Stanford: Stanford University Press.
- . Forthcoming. *A Guide to the World's Languages*. Vol. III, Language Universals. Stanford: Stanford University Press.
- Seiler, Hansjakob. 1983. *Possession as an Operational Dimension of Language*. (Language Universals Series vol. 2.) Tübingen: Günter Narr.
- Solntseva, Nina V. 1985. *Problemy Tipologii Izoliruiushchikh Iazykov* [Problems in the typology of isolating languages]. Moscow: Nauka.
- Stassen, Leon. 1985. *Comparison and Universal Grammar*. New York: Basil Blackwell.
- Uspenskii, Boris A. 1968. *Printsipy Strukturnoi Tipologii*. (Principles of Structural Typology.) (Janua Linguarum Series Minor 62.) The Hague, Paris: Mouton.