having passed this property on to the preceding alveolar?

At issue here, as in the entire Abstractness controversy, is whether the features into which we analyze segments are the actual entities in terms of which the causal mechanism of phonology operates, or whether they simply provide descriptions of some of the circumstances under which the true causal mechanism may be activated. The former is the Abstractionist position. I strongly doubt its validity. But that is another story.

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Preliminaries to Linguistic Phonetics.


As has happened a number of times in linguistics, this book seems by its title to have been intended as a textbook, but is in fact a meaty outline of the ideas and some of the research of its author. Even so, the writing of this book by so distinguished a phonetician helps to fill a wide gap in the textbook literature. We have been lacking a book on phonetics set against a background of current knowledge of the production, acoustics, and perception of speech which takes cognizance of linguistic theory. Such a book ought to be central to the reading of a student of linguistics if he is to be able to examine phonological claims critically. Despite any reservations that I or other readers may feel, Ladefoged has taken an important step in this direction.\(^1\) My comments in this review are based not only on my own reading, but also on the reactions of a small graduate class in Linguistic Phonetics given by me at the University of Connecticut in the spring term of 1973.

After an "Introduction," the book is well organized into chapters on "The Phonation Process," "The Airstream Process," "The Oro-nasal Process," "Places of Articulation," "Manners of Articulation," "Secondary Articulation," "Vowels," and "Prosodic Features." These topics culminate in a chapter on "Feature Systems." Of course, in the analysis of a speech event, one would like to consider all of the foregoing aspects at once, yet this kind of juggling is patently impracticable in a pedagogical presentation. I believe that the author has handled the matter of cross-referencing and linking quite well. The Subject Index and Language Index help. I have no serious disagreement with Ladefoged's breakdown into chapters and have in fact stuck pretty close to his topics in giving my own course. At the same time, however, I should like to see the Introduction expanded into a theoretically oriented chapter on speech production. After all, this book is likely to be used by people who are not well acquainted with the literature on notions of source and filter, physiological constraints, perceptual constraints, and models of speech production and perception. The author could do an excellent job of providing a concise yet responsible statement of these matters that would raise the level of sophistication of the reader before letting him plunge into the central topics of the book. I also miss a short chapter on the nature, uses, and limitations of phonetic notation, especially since there has been a tendency in the recent literature to denigrate the worth of what the field ambitious in its scope. See my review in American Speech 39 (1964): 56–59.

\(^1\) Ladefoged's earlier textbook, *Elements of Acoustic Phonetics* (Chicago: University of Chicago Press, 1962) is not to be forgotten, although it was more of a primer and much less
phonetician who has not mastered the language can capture in his transcriptions.²

The author’s insistence on using no data that he himself has not obtained from informants is at the same time a virtue and a drawback. The virtue in this stand is that most readers will feel much confidence in Ladefoged’s acuity of observation and be somewhat less skeptical about his descriptive statements than they often are about phonetic statements in the phonological literature. I agree heartily that “...published phonetic descriptions are often impossible to interpret accurately” (p. 2). The drawback to this position is that despite the author’s wide experience of languages, the book is seriously deficient in materials that would enrich and greatly clarify many aspects of the main topics. In some instances, the phenomena under discussion are well attested in languages that are known to many potential readers but must not be mentioned because of Ladefoged’s rule. Surely there are some observers whom he trusts even in their work on languages with which he himself is not familiar! After all, most phonetic statements still derive from the state of the art as embodied in a particular fieldworker’s training and experience without the support of instrumental measurements and perceptual experiments. From this, it follows that it ill behooves the informed reader to accept uncritically the bolder assertions of the most astute observers, including Ladefoged.

The value of this volume, especially as a textbook, could be increased by an accompanying recording of all the contrasts described. This could be in the form of a plastic disk inserted in a pocket, as has been done in some recent issues of the Journal of the Acoustical Society of America. If this would raise the price of the book too much, the publisher could offer a disk or tape recording for sale separately. For the instructor who does not have access to all the necessary informants and cannot, alas, produce all the distinctions himself with equal facility, this would be a great boon.

By and large, even with a severely limited bibliography, the author draws upon a good sampling of sources, many of them from the experimental phonetic literature, to buttress points he makes. Here and there, however, the reader, beguiled by the generally responsible level of documentation, may allow an assertion that is poorly supported or even unsupported to slip by. On page 24, for example, we see that although most sounds that have been traditionally described as being fortis as opposed to lenis can be explained along other dimensions, “Pressure recordings indicate that the so-called strong consonants in Luganda are not only usually longer but also pronounced with greater pulmonic pressure than their weak counterparts...” In table 11 are given “Contrasts involving ‘strong’ (or ‘double’) consonants in Luganda.” The consonants shown are all voiceless stops. It is this kind of casual assertion that I find objectionable in a serious work. Does this mean that a properly controlled laboratory experiment has been run which yielded these results? If so, where is the reference to an article or paper in the public domain, or one in press, or at least one in preparation? What, then, can the expression “pressure recordings indicate” mean to the attentive reader? Without knowing the facts, I can only use my imagination and conjure up a situation that certainly exists from time to time in speech laboratories. A speaker of Language X

happens to be visiting my institution one day. He graciously consents to my strapping him down in a chair for twenty minutes or so before he leaves so that I can quickly probe into some feature I know to be of interest in his language. He leaves and I find myself with some sloppy and skimpy data that point waveringly in an interesting direction. Naturally, I feel free to chat informally with a colleague about these data, but would never consider freezing them in print without doing a follow-up study. Now investigators’ tastes may vary in such matters, but if my analogy hits the target, it is most reprehensible to mention such tentative findings in a book where so many readers are prone to accept this type of statement as evidence.

As far as the substantive question is concerned, a good set of data might indeed show Ladefoged to be right; that is, the “strong” consonants of Luganda are pronounced with greater pulmonic pressure. If so, one would still want to know whether any consonants but voiceless stops share in this distinctive use of “heightened subglottal pressure” (p. 95). We are not told. When these word-initial stops, and perhaps other consonants, are embedded in running speech, is the relative duration of the closure or constriction a sufficient perceptual cue for discrimination? That is, before using pulmonic pressure as a basis for speculation about distinctive features (p. 92), one would want to be sure that the basic control mechanism is not simply a longer articulatory hold for the so-called strong consonants, with greater air pressure coming as a second-order effect. The text is misleading and provides no grounds for a reasonable discussion.³

Throughout the book, perhaps to justify its title, the author seems to try too hard to convince the reader that every phonetic datum offered is linguistically relevant. This sometimes leads to phonetic negligence and phonological fantasy. Let us consider an example from the chapter on the Oro-nasal Process. On pages 34–35 he states that there are clear contrasts between oral, lightly nasalized, and highly nasalized vowels in Chinantec. Indeed, he and William Wang have—somewhere, somehow—instrumentally verified these contrasts. But earlier (p. 33) Ladefoged has said, “There are probably no languages in which it is clearly necessary to recognize two degrees of velic opening in the underlying forms.” This forces him to say about Chinantec (p. 35), “It is possible that the underlying forms differ in the number of segments involved, so that the three-way contrasts . . . are really contrasts of the form a-ā-ān or a-an-ān, the final consonants not appearing in the phonetic output.” I find this kind of theory spinning in a vacuum out of place here. Let us rather hear more about the phonetic mechanisms used by the speakers of the language in making the three-way contrast in actual speech signals. Are there differences in the size of the velopharyngeal port? Or perhaps temporal differences in the opening of the port? As for the phonological speculations, let us have more lexical and morphophonemic data first. Does the one source cited on the language⁴ provide any evidence as a basis for these conjectures? Ladefoged does not say so.

In my view, such regrettable weaknesses

³ I am now collaborating with Jimmy G. Harris and Christopher Court in looking at Pattani Malay, a language of southern Thailand in which pairs of words appear to be minimally distinguished by “short” versus “long” initial con-

sons that include voiced and voiceless stops and affricates, as well as nasals, laterals, and voiceless fricatives.

as I have singled out are easily outweighed by the general usefulness, interest, and clarity of the work in hand. Indeed, in the final chapter, Feature Systems, the linguist finds an elegant array of all the features proposed, and for each one the maximum number of phonemic contrasts observed, together with a set of terms for use at the systematic phonetic level. For example, for Feature 2, Voice onset, three is the maximum number of contrasts, and the phonetic terms specified are “voicing throughout articulation, voicing during part of articulation, voicing starts immediately after, voicing starts shortly after, voicing starts considerably later” (p. 92). The author then goes on to compare his system with the well-known one of Chomsky and Halle.5

In conclusion, then, let me say that this book belongs in every linguist’s library, certainly in every phonologist’s library. Despite shortcomings, some of which may be inevitable in a slim volume of broad scope, the book should be listed among the required readings for all graduate students of linguistics.

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Although interest in the content and structure of folk classification can be traced back to the earliest beginnings of American anthropology, it is only within the last decade or so that the study of these systems has emerged as a viable “field of specialization” with its own set of methodological procedures, a body of explicit theory, and a growing number of articulate exponents. Harold Conklin has contributed in fundamental ways to the development of this field—known today by a variety of names, but most commonly as “ethnoscience” or “ethnographic semantics”—and is rightly regarded as one of its modern founders.

In 1955, Conklin began to assemble lists of references pertaining to the description and analysis of folk classifications for distribution to students and colleagues. He continued this work intermittently through 1971. Now the work is finished, and a full-size bibliography has been published. We should all be grateful—not only to Conklin himself who has performed an extremely valuable service in thoroughly excellent fashion—but also to the Department of Anthropology at Yale University which has somehow found it possible to make the volume available at the astonishingly low price of four U.S. dollars.

Conklin’s bibliography contains over five thousand entries and is arranged into ten sections. The first section (numbered 0) is devoted to works that discuss general principles of folk classification, key theoretical and analytical problems, and relevant issues in psychology, logic, mathematics, biosystematics, and other disciplines. The remaining nine sections are focused on more specific topics. Section 1 deals with kinship, section 2 with archaeology, and section 3 with social, economic, and technological classifications as well as cross-cultural typologies. Sections 4–6 are given over to studies concerned with classifications of biological phenomena—“Ethnobotany,” “Ethnozo-