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PHONOLOGY
AN INTRODUCTION TO BASIC CONCEPTS

ROGER LASS
DEPARTMENT OF LINGUISTICS
UNIVERSITY OF CAPE TOWN
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We shall have to evolve
problem solvers galore –
since each problem we solve
creates ten problems more.

The road to wisdom? – Well, it’s plain
and simple to express:
Err and err and err again
but less and less and less.

Our choicest plans have fallen through,
our airiest castles tumbled over,
because of lines we neatly drew
and later neatly stumbled over.

Piet Hein, Runaway Runes:
Short Grooks, I (1968)
PREFACE

It is probably impossible to write a satisfactory textbook on a contentious and evolving subject like phonology. Certainly one that’s comprehensive, up-to-date, and accessible, and hits the right level without being patronizing. But I thought I’d try, even if I am bound to fail on some if not all of these desirable qualities. At this stage there seems to be a need for a book that is neither a history of phonology (like the indispensable Fischer-Jørgensen 1975, or the collection of papers in Makkai 1972a), nor an attempt to sell a particular school or orthodoxy. Rather one that offers a broad and eclectic coverage of the field, takes seriously a wide range of competing theories, analytical strategies, and notational systems, and depicts phonology as a discipline with historical continuity, not a series of ‘revolutions’. (There are plenty of the former on the market, from the fairly self-controlled to the blatantly evangelizing.)

I see phonology as a developing, essentially problem-centred discipline, growing through the interaction of complementary approaches with a complex mass of data. Much of yesterday’s theory and practice is silently incorporated into today’s, and this will continue as long as the subject does. There do not exist anything like full alternative phonological theories; we have a host of partial approaches, each of which does some things well, others badly, and still others not at all. I am suspicious of attempts to push any framework as THE theory; so almost everything, Prague phonology, American structuralism, prosodic analysis, generative phonology, gets a hearing, because all have something to offer, and all have their part to play in the continuing endeavour to understand how phonology works. My aim is to indicate where each approach works best, and the contribution each has made – and in many cases still can make.

This breaks down into two sub-aims: (a) to explore some important
Preface

aspects of the phenomenology of sound structure, by singling out what is most salient for particular theories; and (b) to introduce some characteristic modes of argument in phonology, and some major controversies. I have tried to be reasonably fair; but my selection is naturally personal, guided by my own interests and assumptions. I have undoubtedly judged some potentially rich approaches to be dead ends, and worried issues that have rolled over and died without my knowing. But my guiding principle has been theoretical pluralism: whenever I’m tempted to think I have the answer to something, I recall Popper’s dictum (1973): ‘Whenever a theory appears to you as the only possible one, take this as a sign that you have neither understood the theory nor the problem it was intended to solve.’

This will explain a curious feature of this book; a number of digressions into rather arcane matters in philosophy of science, like realism vs. instrumentalism, the status of theoretical constructs, etc. I think it’s good for students to be aware of such issues from the beginning, so that they see how difficult a discipline linguistics is, become a bit sceptical and suspicious of ‘strong’ claims, and so on. This kind of thing rarely appears (even superficially, as here) in linguistics texts; but it is an integral part of the way I teach, and therefore ought to be reflected here. The book can of course be read perfectly well without the digressions, and my generally ‘uncommitted’ stance might serve as a good take-off point for a theoretically committed teacher. But I have made no effort to hide my opinions, or to be uncontroversial.

A few general points on presentation and coverage. I have started off rather slowly, often labouring the (apparently) obvious, since in my experience if certain fundamental points aren’t hammered home in the beginning, nothing else ever gets clear. Hence the length of chapter 2, on phonemes, distinctiveness, redundancy, and the like. The density and complexity increase thereafter, but I have tried to lay the groundwork for each new development in what came before. The text as a whole is ‘introductory’, in that it presupposes very little linguistics – except for a good command of phonetic taxonomy. Maybe this is asking a lot, but lack of space precludes building in a phonetics text, and attempts I have seen to do this in phonology texts come off badly. Besides, this information can be obtained elsewhere. To help, I have included a complete list of phonetic symbols used, and keyed discussion of complex or exotic matters to standard sources.
Since my overall conception of the subject is not particularly ‘abstract’ or ‘cognitive’, but quite phonetic, this seemed the best way to proceed. The range of languages treated in detail is perhaps smaller than usual. This can be defended on the ground that if phonology is a ‘universal’ subject, it shouldn’t matter too much what the languages of exemplification are, as long as the typological range is fairly wide. And students seem to prefer getting into new areas through relatively familiar examples. Hence the emphasis on various forms of English. Also, I prefer where possible to talk about languages I know at first hand, which accounts for the preponderance of Germanic and Dravidian. In some areas (e.g. system typology) I’ve had to depend on others’ descriptions of languages I’ve never heard, and can only hope (fondly) that I have avoided any major howlers.

A word on bibliography and coverage. I have been selective and wide-ranging, but in no way comprehensive; everyone will find some favourites missing. As a matter of principle, I have normally excluded reference to ‘informal’ publications (working papers and the like); though I have mentioned a few unpublished PhD theses. I think that in general nothing in theoretical linguistics is of such pressing immediate importance that it has to be read fresh from the author’s pen or word-processor; at least not for the audience for this book, who can wait until work has undergone the kind of assessment and peer review that (ideally) precedes publication in books or established journals. Anything that goes out of date so fast that it must be read in pre-published form is either ephemeral, or so technical and near the frontiers of the discipline that it has no place in an undergraduate or beginning postgraduate course. We can always afford to wait till the dust has settled a bit.

For this reason, I have had virtually nothing to say about metrical phonology (except indirectly, in discussing syllable structure), or about autosegmental phonology; this is not to be taken as a negative comment on these approaches, but a matter of not wanting to be so up-to-date that I have to get into controversial material still in the midst of extensive re-working. For this reason also I have omitted any systematic consideration of accent and tone; these topics are now so embroiled in the two approaches mentioned above that they ought to be postponed until a more advanced stage in the student’s career. They certainly require (or ought to) a solid background in more traditional kinds of phonology.
Preface

The only exception I have made with respect to ‘novel’ approaches is in devoting a chapter to dependency relations; the notions involved here are conceptually so different (and I think so important) as to be a necessary corrective to the paradigmatic or syntagmatic bias of other theory types.

Most importantly, however, students today lack, to put it crudely, a sense of the ‘classical’: I think that pre-generative (and certainly pre-metrical, autosegmental, natural) phonology is the ‘indispensable foundation’ for considering newer developments. Linguistics in my view is not a ‘science’ in the strict sense anyway, but at least as much a scholarly discipline, and nothing ever gets genuinely ‘superseded’. This book is an introduction, and presumably the interested student will read beyond it.

I am grateful to all those people who have read all or part of this text in draft and commented, often harshly: particularly Eugénie Henderson, John Laver, Nigel Love, Gill Brown, Heinz Giegerich, and Betsy Uldall. I am also grateful to Penny Carter and Cambridge University Press in general, for waiting patiently while I took an unconscionable time to finish. And perhaps most of all I owe a debt to my students at Edinburgh over the last few years, who were captive audiences for a lot of this material, and read drafts of some of the chapters. They taught me the valuable lesson that teaching is nearly impossible, and their questions and puzzles often helped me to formulate things more clearly; whether clearly enough is for the reader to judge.
TO THE STUDENT

Students often find phonology difficult. One reason, perhaps, is that compared with other branches of linguistics, like syntax or to some extent semantics, it’s rather ‘technical’: seemingly remote from our everyday experience of language, and requiring from the beginning command of another technical discipline – phonetics. Facts about syntax and meaning – and even some about phonetics – are more ‘available’ than the rather abstract but no less important matters that much of phonology is about. You can get a preliminary grasp of syntax, for instance, with little more equipment than an idea of sentence structure and some traditional grammatical terminology, elements of which are probably part of your general educational background. Everybody comes into linguistics knowing pretty much what nouns and verbs are; just nobody comes in knowing what stops and fricatives are. And even in phonetics, some of the facts are available at the beginning through rather simple observation (what is your tongue doing when you make a [t]?). However, you normally approach phonology pretty much cold, while at the same time needing a technical vocabulary and a set of concepts (place of articulation, state of the glottis, vowel height, etc.) that you’ve probably just learned, or are in the process of learning. It seems as if you have to superimpose one relatively new subject on another, almost from the start.

I’m afraid there’s no way out of this: phonology is about things that are basically phonetic (see §1.1 for details of the distinction between the two); it requires the concepts, terminology and notations of phonetics, in addition to erecting on top of this a whole new set of its own. In an ideal world, you’d not begin to do phonology until you had a solid background in all aspects of phonetics; but university
To the student

courses aren’t long enough for that, and things are usually studied in parallel that ought to go in sequence.

Nonetheless, I find it impossible to talk intelligently about phonology without presupposing a certain amount of phonetic knowledge; more as one gets deeper into things. As a teacher, I can get around this by providing verbal footnotes at the appropriate times, explanations or definitions of things I assume my own students, whose backgrounds I know, are unfamiliar with. And I have the advantage of feedback from a class as well. But in a book, written for a various and invisible audience, following all kinds of different courses, I don’t have this resource.

To cope with this inevitable problem I have tried to distinguish carefully between new material, which you’re not expected to know, and the background, ‘old’ material which you might be expected to know. Terminology and concepts that are specifically phonological or related to the contents of this book will be handled this way: the first occurrence of a new term will be in bold type, along with a definition or illustration. All major discussions involving this term will be listed in the index. So if in the course of reading you forget something, you should be able to recover the introductory treatment. If on the other hand you come across general phonetic concepts that are not explained and unfamiliar, the best thing to do is look them up in some reliable text. The phonetics text in this series (Laver: forthcoming) should be especially valuable, as the author and I have tried to key our books to each other. Other useful sources are Heffner (1950), Malmberg (1963), Abercrombie (1967), Brosnahan & Malmberg (1970), O’Connor (1973), and Ladefoged (1975). For unfamiliar phonetic and other symbols, see the appendix.

In order to make the text clearer and easier to follow, I have avoided footnotes, and kept the references to a minimum. But each chapter is followed by a section of notes and references, which gives the major bibliography and notes on issues of interest which are subsidiary to the main text. As a rough guide through the large amounts of literature cited, I use the following conventions: * marks works of importance that are either good introductory accounts of certain matters, or technical but relatively accessible; ** marks works that are important and rewarding, but difficult. I have tried not to star too many items, but this does not mean that the others aren’t worth reading.

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To the student

The notes also give sources for the more exotic linguistic examples; data not credited is either so familiar as not to need reference (English, French, German, Latin); or is based on my own work with the languages in question or data given to me by colleagues.

The notes and references are conceived so that the best way of using them is to read each section of the text first, and then the notes to that section, first for comment on the text, then further reading. I have tried to make the book as self-contained as possible, but it's always worth following up some of the professional literature, and looking at other textbook accounts of given material. No two writers, even of introductory texts, will present things in the same way, and differing approaches can be useful: successful grasp of material often seems to be a matter of getting on a writer’s wavelength, and we all have different ones.