

1. Introduction: Key questions for historical phonology

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The Table of Contents is here: <http://www.lel.ed.ac.uk/homes/patrick/hphhndbk-toc.pdf>

Historical phonology is a broad field, and a deep one. Many perspectives, theories and methods have helped us to understand past phonological states and the ways that they can change, and serious still-consultable work on this has been going on for around two centuries, making historical phonology one of the oldest subfields of linguistics. Can any one volume hope to say something about *all* of this? The chapters gathered here showcase the richness of our field in new ways, a field thriving today in remarkable ways. The chapters consider both theory and methodology, and probe both classic problems and entirely new types of data (some of which would have been inconceivable a decade or two ago). We have been truly fortunate in being able to assemble the collection of scholars whose work is included here, from literal founders of modern historical phonology and the thinkers responsible for a number of influential frameworks to a cadre of young colleagues.

Reviewers often focus on the organization of chapters within a collected volume; that is, on the linear surface order. We apologize in advance to any such reviewer or even reader, and urge them to look for more abstract structure. To be sure, taxonomies reified in a table of contents are important, but few will read this volume through cover-to-cover. If you do — and we have, a couple of times, and with different iterations of chapters —, we hope you will discern the logic of the organization, but we also fervently hope that it will be obscured by the dark shadow of the dense and spaghetti-like networks of connections across chapters from the first chapter to the last. With this in mind, in this introduction, we draw out some overarching themes of the volume as a series of questions, and show how chapters from across the volume relate to them. We do this in place of the short summaries of chapters that typically make up an introduction in the hope that it will emphasise the interrelatedness of many issues that are discussed in several places in the volume. Chapter 2 provides the critical historical background to the volume and leads into chapter 3, which proffers a kind of introduction to the remaining chapters.

The many cross-references across individual chapters should help further to flag up connections and contradictions between chapters, and we encourage readers to consider more than only one chapter on any topic, where possible. Some views expressed in individual chapters are at odds with one another in their assumptions, working principles and analyses – not all chapters can be literally true, as some clearly contradict each other. This is utterly to be desired as it reflects the field, and should encourage readers to consider conflicting opinions on a issue, as described in this chapter or by following the in-chapter cross-references.

One way to approach a handbook like this would have been for us to have determined what views, approaches and theories we take to be right and to commission chapters on them and not commission chapters on views, approaches and theories that we did not think were right. For those who know the field, the foregoing or a glance at the table of contents makes plain that we did not adopt that approach. The volume has plenty of representation across generative, broadly ‘functionalist’, and various psychologically inspired frameworks, to give perhaps obvious examples. We have certainly implicitly sanctioned some perspectives and not others, based on what we take to be a broad and inclusive sense of what is viable, promising or plausible for moving the enterprise forward. We hope that one role of this volume will be to promote communication and connections across subfields that have often developed too much without connection.

More complex than Gaul, this book is divided into six parts. Part I, as well as this overview, offers a history of our field, focusing mainly on work during the nineteenth and twentieth centuries; many of the issues discussed in the past connect directly with a range of contemporary concerns. (Likewise, throughout you will see substantive reference made to the historical work of the giants on whose shoulders we stand; the depth of those connections might show that those in the historical sciences may be predisposed to engage with our own disciplinary history.) Part II considers the empirical basis of historical phonology, that is, the sources of evidence for phonological change, and the methodologies that are used to establish this basis and to interpret the evidence. Part III treats the basic types of change that have been recognized in the data which historical phonologists work to interpret, from segmental changes, through analogy, to changes in prosodic domains. Part IV discusses fundamental issues in understanding types of change that historical phonologists consider – issues which are often controversial, and which have implications for any theoretical interpretation of the data. Part V presents a set of theoretical frameworks widely used to analyse and understand phonological change. Every chapter in the volume is informed by particular theories of change, but this part of the book allows proponents of particular theoretical frameworks to explain how and why they believe them to offer insight in understanding what is possible in phonological change, and how change proceeds. Part VI focuses on exogenous and/or social factors in sound change, which are relevant to many chapters in earlier parts of the book but which also deserve a focus of their own. Some of the things covered here (second language acquisition, koineisation, loanword adaptation) proceed in rather different ways and have different impacts when compared to endogenous types of change, but they are all clearly relevant to our understanding of how the phonology of languages can change.

The chapters in whole engage with a number of questions which are all central to our understanding of phonological change. Let us set out some of these questions – which help to define what historical phonology can and should do – and show how the chapters set about answering them. We refer to the chapters using the authors’ surnames in SMALL CAPITALS (and acknowledge that we do not list absolutely *every* connection with every chapter with regard to the points we discuss – a careful reader will discover many more).

How do we know there has been phonological change?

This is clearly crucial – how do we know what the data is for historical phonology? It is of major interest in its own right to understand the previous phonological states of individual languages, and all theoretical work needs to be sure that the data it works with is sound. Many languages have long written histories, and these records can provide vital information on past phonological states, and hence the changes that have occurred between states; LASS, MINKOVA and UNGER all consider how we can interpret written sources (LASS and MINKOVA for alphabetic systems and UNGER some non-alphabetic systems). LAHIRI shows how dictionaries and similar resources from past stages of a language’s history can provide crucial evidence, and Minkova considers how verse can help, too. Since sound recording became available a century ago, this kind of data can also offer evidence for historical phonologists; MAGUIRE considers this. Contemporary spoken data can also offer crucial evidence for phonological change – especially for the investigation of change in progress – and can also allow us to consider how changes are taken up in communities; GORDON, JONES, D’ARCY and BOWIE & YAEGER-DROR all consider such data, in part how we can collect it, and in part how we can interpret it. YU considers some experimental methodologies which can be used to interpret and elicit data concerning which changes might have occurred in the history of languages. FOX discusses one of the other central sources of information about past phonological states: comparative and internal reconstruction, which is vital for languages without written records, and also often important where written records exist, but don’t provide enough detail. The study of phonological typology can provide a crucial control and encouragement for phonological reconstruction; KÜMMEL considers this. Developments in computing have opened up both new methodologies to investigate which changes might be expected, and how they might be expected to pattern; KESSLER considers how computational methods can contribute to our understanding of reconstruction and WEDEL considers the computational simulation of phonological change. This question is complicated by the point that it is not always clear when a *phonological* change has occurred, rather than a phonetic change (if such a distinction is allowed – questions below consider the nature of phonology): is *any* systematic modification of the signal a change that needs to be recognized as phonological, or do we only count as change things that have entered the grammar? One way of answering this is to consider what the smallest quantum of phonological change might be. SCHEER considers the extent to which we should allow for unattested intermediate stages in changes, which is one way of considering how small a change can be; another is to consider when the effects of phonetic biases become phonologised, which is something that BERMÚDEZ-OTERO addresses (see also below).

What motivates phonological change?

A fundamental distinction can be recognised between endogenous (or ‘internal’) motivations for change and exogenous (or ‘external’) motivations. Exogenous causes of phonological change seem intuitively to be expected (when speakers of different languages and dialects come into contact, the phonology of the lects that they speak can naturally be affected), but the ways they play out are complex; SCHREIER considers the ways in which new dialects of specific languages can emerge when speakers of ‘established’ dialects come into contact in large numbers; ECKMAN & IVERSON consider

the effect that second language acquisition can have on the phonology of a language; and UFFMANN considers how loanwords are adapted, or not, as they enter a new language. Endogenous causes for change are, if anything, even more complex, and are probably more controversial. Some argue that the acoustic confusability of sounds is central to such change, as in the Ohalaesque model that YU considers, something which is also assumed in part by BLEVINS and HALE, KISSOCK & REISS. Others, such as BYBEE and PHILLIPS, argue that articulation is the major driver of change; DONEGAN & NATHAN and BLEVINS argue that both articulation and perception are important, and BLEVINS argues for a role for other types of factors, too. Still others give a key role to phonological structure in guiding – ‘causing’ in some sense – phonological change; PURNELL & RAIMY consider how distinctive features (or ‘segmental structure’) might be implicated in phonological change, as does DRESHER, in part; MAILHAMMER, RESTLE & VENNEMANN argue that universal preference laws guide change, while SMITH & USSISHKIN argue that prosodic templates direct change. Somewhat differently from all this, but still part of endogenous change, analogy can cause changes in the phonology of languages; FERTIG considers how.

What kinds of phonological change are possible?

What changes have been observed in the histories of languages? What can change into what? There has long been serious work on historical phonology (for two centuries at least, as MURRAY and SALMONS & HONEYBONE describe) and this has led to a good understanding of many possible pathways of phonological change. FERTIG’s discussion of analogy shows the kinds of change that this force tends to bring about; CSER offers a comprehensive overview of the types of (especially segmental) sound change that are commonly recognized; LAHIRI considers change in stress patterns (and its causes), and RATLIFF discusses change in tonal systems. Tones can emerge through the phonologization of phenomena which are connected to segmental phonology, and this process of phonologization is often, and unsurprisingly, seen as a central type of change in phonology; it is a hotly contested area, discussed here by KIPARSKY and HALE, KISSOCK & REISS; BERMÚDEZ-OTERO describes an articulated model which seeks to predict exactly which stages are possible in the phonologisation of phenomena, and what is possible in successive ‘rephonologisations’ as they change their status within the phonology of a language, eventually becoming lexicalised. SCHEER addresses a related aspect of what types of change are possible, tackling the notions of naturalness in change and the extent to which we can innovate ‘crazy’ phonological phenomena, which are synchronically real, but which bear little trace of naturalness.

What is the nature of phonology?

If we are to be able to say something about how phonology changes, we need an understanding of what phonology *is*. There is vast disagreement about this among theoretical phonologists, and that is reflected in this volume, too, as is to be expected – phonologists of all ilks are interested in phonological change, and historical phonology offers different kinds of arguments in favour of different types of phonological models. HALE, KISSOCK & REISS, for example, assume a radically internal phonology, autonomous from phonetics. BYBEE, for example, argues to the contrary that phonology is directly connected to phonetics and is only emergent from vast numbers of stored

exemplars of phonetic episodes. Between these two positions, a large number of views exist. On the formal side, phonology can be conceived of as a derivational entity best modelled using phonological rules, as DRESHER does, or as a constraint-based (Optimality Theoretic) grammar which might be monostratal, eschewing any derivation, as HOLT and UFFMANN consider, or as multistratal, retaining some derivationality, as KIPARSKY argues. Some formal models place considerable weight on the representations employed, as explored by PURNELL & RAIMY at the subsegmental level, and LAHIRI at the suprasegmental level. SCHEER considers both segmental and suprasegmental phonology (that is, everything below and everything above the skeleton), arguing that only the former allows ‘unnatural’ generalisations. DONEGAN & NATHAN argue that phonology has a natural part (driven by ‘processes’) and an unnatural part (driven by ‘rules’). On the more functionalist, reductionist side, BLEVINS argues that change itself can account for much (if not all) of what we recognise in synchronic grammars as recurrent phonological patterns, meaning that little or no autonomous phonology is necessary as explanations for these patterns and their distributions are external to the grammar itself. Several others are sympathetic to the exemplar and/or functionalist approach, including MAILHAMMER, RESTLE & VENNEMANN, MURRAY, PHILLIPS and WEDEL.

Apart from the above fundamental issues, we could ask many other questions of historical phonologists, and many are addressed in the volume. We consider just two more here, on both of which there is considerable disagreement.

Where does change occur?

There has long been serious debate over the locus of phonological change – *speakers or listeners? children or adults?* In some sense, these two subquestions can be seen as linked: children are listeners in acquisition, and adults are (some of the) speakers. The two are separable, too, however. The first subquestion is relatable to the question of *what motivates phonological change?*, as discussed above. If change is largely driven by acoustics, then we would expect it to mainly occur in the listener, and if articulation drives change, then the speaker has a bigger role. The second subquestion is also hotly contested: HALE, KISSOCK & REISS assume that all change is inter-generational, due to reanalysis (or simply ‘analysis’) by children deriving a grammar which is different from a previous generation, adopting a position that we might call ‘acquisitionism’ – (essentially) all change occurs in acquisition; FOULKES & VIHMAN argue that what happens in first language acquisition is not like what we see in phonological change, and are thus ‘anti-acquisitionist’ in their argumentation, doubting the role of acquisition in change; BOWIE & YAEGER-DROR consider the evidence for life-span change which implies that at least some types of change are possible within adults. JONES and YU discuss the role of differences between individuals in change, placing an emphasis on the role of society in change, something which is also central to D’ARCY’s concerns. We could equally wonder whether it is right to consider that a change has occurred until it has spread through a community of speakers, or whether it is fair to consider only a change’s structural innovation.

Is phonological change exceptionless?

The tenet of exceptionlessness (or ‘regularity’) in change was famously defended as crucial by the neogrammarians, as MURRAY discusses, but was immediately contested,

and is still a subject of impassioned debate. Many argue that exceptionlessness is still necessary, both in order for us to be able to do reconstruction (see FOX), and in the light of certain theoretical models of phonology. Others argue that it is always a mirage and that all change is lexically gradual. The real debate now is not whether all change is exceptionless, but whether any change is, and if so, whether exceptionless changes also show other properties that distinguish them from lexically diffusing change. PHILLIPS argues against exceptionlessness, and others, such as BYBEE and WEDEL argue that frequency effects (of a type that are only possible if change is in principle not exceptionless) give us great insight into phonology; Blevins argues that a range of factors can inhibit changes, resulting in patterns that appear irregular. BERMÚDEZ-OTERO, on the other hand, argues that exceptionless, neogrammarian change is well attested, that frequency does not always have an effect, and that, when it does, this need not be taken to indicate the presence of fine phonetic detail in the lexicon. HALE, KISSOCK & REISS and SCHEER similarly see a clear role for exceptionlessness.

We hope that collecting the range of work found in this volume will encourage debate about these questions and will lead to answers, or at least progress. Historical phonology touches on a wide range of other areas of linguistics, and we see it as a meeting ground for all of them. Phonological theory, language variation and change, phonetically-oriented research and related laboratory-based work are often more connected in practice than many may realise or even want to acknowledge, and they are deeply tied to traditional concerns of linguistic reconstruction (and thus comparative linguistics) and even philology. We have striven here, among other things, to help along the acknowledgement of this and to foster better and closer integration of these areas. But above all, we hope that you can feel the stress of progress and excitement in historical phonology that is represented in these pages.

There are doubtless many idiosyncrasies about the volume that could be criticised, and no doubt will be – we have not attempted to normalise authors' transcription conventions, for example, and certain chapters were specifically requested to be short, while others are much longer. There is also a bias toward data from English. In part, this is driven by the field, both in terms of some huge areas of research today – like vocalic chain shifting – and in part by where the laboratory work is being done and where we have huge corpora and – quite simply – large numbers of people working on the history of the language. Wherever English is focused on, however, it is always a case study, to exemplify principles or possibilities, and there is also much in these pages on other Indo-European languages, East Asian languages, Semitic, Uralic, Austronesian as well as a number of typologically-oriented papers, where all the world's languages are relevant. In terms of phonological phenomena, there are also unsurprising biases – the most discussed topic is umlaut, which is considered in detail by KIPARSKY, DONEGAN & NATHAN and BYBEE, and also features in DRESHER, FOX, BERMÚDEZ-OTERO and SALMONS & HONEYBONE.

Overall, the volume is quite comprehensive in important ways. There are a few focuses that we have not been able to include, and this is partly because some authors had to drop out. This, and the fact that we then made efforts to recruit others, so that only few gaps remain (along with many other bumps along the road – many of which are sadly common in large edited projects) have meant that the volume has taken quite a while from its

initial conception to its appearance. We are grateful for everyone's patience; we owe a special debt of gratitude for this and many other things to John Davey of Oxford University Press, a figure of real significance in linguistics. We hope you will agree that it was worth the wait.