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Author's address: Cognitive and Linguistic Sciences, Brown University, Providence, RI 02912-1978, U.S.A.
E-mail: Philip_Lieberman@brown.edu
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Aditi Lahiri (ed.), *Analogy, levelling, markedness: principles of change in phonology and morphology* (Trends in Linguistics: Studies and Monographs **127**). Berlin: Mouton de Gruyter, 2000. Pp. viii + 385.

Reviewed by PATRICK HONEYBONE, Edge Hill College of Higher Education

This welcome volume illustrates once more how important historical data can be in linguistic argumentation and how exciting work on the diachronic innovation of linguistic phenomena can be. Several of the volume's twelve chapters address key issues in contemporary linguistic theory and the light that diachronic data can shed on them; others make original contributions to our understanding of the innovation and diachrony of specific linguistic phenomena. The volume is multi-authored and contains eleven original articles and an introduction, which I refer to here as chapters 1 to 12.

The introductory chapter 1, written by the editor, is an interesting piece, if something of a missed opportunity. It does not summarize the following chapters or explain how they connect with each other or in what way they engage with the notions of analogy and markedness. In fact, the volume is not completely coherent in terms of the theoretical issues or the types of data discussed, and several of the papers do not obviously deal with analogical change or even with notions of markedness. Given the nature of the introduction, the only real way to discover this is to read through all the articles. This is, indeed, no bad thing to do, but it is likely that different readers will be interested in different articles, as should become clear from the chapter descriptions below.

The introduction provides a brief historical overview of the notions of 'analogy' and 'markedness', tracing the former through usages in other

disciplines up to its seventeenth century usage in linguistics and its later famous exploitation by the neogrammarians in attempts to explain non-regular linguistic change. Putative universals of directionality in analogy are discussed, along with the work of Kiparsky (e.g. 1968), who first proposed a generative understanding of analogy as grammar simplification. Given that the chapters are predominantly generative, it is not surprising that Kiparsky's influence is visible in much of the book; this is also reflected in the volume's dedication to him.

The eleven main articles are loosely grouped by their sequencing. Chapter 2 is Paul Kiparsky's 'Analogy as optimization: "exceptions" to Sievers' Law in Gothic', chapter 3 is B. Elan Dresher's 'Analogical levelling of vowel length in West Germanic', 4 is Aditi Lahiri's 'Hierarchical restructuring in the creation of verbal morphology in Bengali and Germanic: evidence from phonology', 5 is Renate Raffelsiefen's 'Constraints on schwa apocope in Middle High German', 6 is Frans Plank's 'Morphological re-activation and phonological alternations: evidence for voiceless restructuring in German', 7 is Wolfgang Ullrich Wurzel's 'Inflectional systems and markedness', 8 is Carlos Gussenhoven's 'On the origin and development of the Central Franconian tone contrast', 9 is Tomas Riad's 'The origin of Danish *stød*', 10 is Paula Fikkert's 'Prosodic variation in "Lutgart"', 11 is Haike Jacobs' 'The revenge of the uneven trochee: Latin main stress, metrical constituency, stress-related phenomena and OT' and 12 is Richard M. Hogg's 'On the (non-)existence of High Vowel Deletion'.

In chapter 2, Kiparsky discusses analogical levelling in Gothic nominal and verbal inflectional morphology, taking an essentially OT perspective for his elegant analysis. However, crucial use is made of uniquely specified underlying representations ('inputs'), arguing against the standard OT notion of 'Richness of the Base'. Claiming that all of the discussed cases of levelling can be accounted for by changes to better satisfy one constraint (STEM-FORM, which militates against stems ending in a short vowel), he argues that (i) in line with his previous analyses of analogy as grammar change, all changes involve the simplification of the grammar, and not simple generalization from surface forms, and that (ii) this illustrates the potential of his model to predict the direction of change in that 'each reinforcement of STEM-FORM has a "snowball" effect which adds to the structural pressure for subsequent innovations' (40).

Dresher's chapter 3 takes an anti-OT rule-based approach to the much-debated case of Open Syllable Lengthening (OSL) in Middle English (MEOSL), also addressing cases of OSL in Middle Dutch and Middle High German. Dresher argues that the new orthodoxy on MEOSL (following Minkova 1982, who proposed that there was in fact no OSL, but that it was rather a case of compensatory lengthening) is mistaken. He argues that the kinds of word counts used by Minkova are severely flawed as they do not take into account the paradigmatic alternations that the words belonged to.

Instead, he argues that analogy should be reinstated as a crucial part of the understanding of MEOSL and that the type of analogy which occurred in this case is predicted precisely to be as random in terms of directionality as he shows it to be (the length of the vowel levels unpredictably to that of the singular or plural).

The editor's own contribution, chapter 4, is an important discussion of patterns in grammaticalization, focusing on two cases where auxiliary verbs have diachronically fused to lexical verbs to create new affixes. The case-studies involve the creation of the progressive and perfect in Bengali and of the weak-verb dental preterite in Germanic; their importance lies in the fact that Lahiri shows them to be cases where the ex-auxiliary is not simply fused to the verb as one morpheme, but is analysed as two separate morphemes, with the original root of the auxiliary reanalysed as a class marker (MORPHEME$_1$) and its inflections as a separate inflectional suffix (MORPHEME$_2$). Intriguingly, Lahiri shows through the careful consideration of phonological processes (understood as ordered rules), which are known to occur within specific phonological domains, that the actual domain bracketing in these cases is [[ROOT + MORPHEME$_1$] + MORPHEME$_2$].

Raffelsiefen's chapter 5 argues that a constraint-based analysis of final schwa deletion in Middle High German is more insightful than previous rule-based analyses because it avoids the problems caused by the restrictions on the process due to lexical, semantic and inflectional-class membership criteria. One important aspect of her analysis is that the focus is changed from (i) the rule-based PROMOTION of an active process in certain environments to (ii) the INHIBITION of an entirely general process (formalized as *SCHWA) which is imposed by a set of constraints. Ranked in OT-style, Raffelsiefen has to formulate some of the constraints very precisely; one crucial constraint is LEVEL, which requires that '[a]ll stem consonants must occupy the same syllable position in each member of a paradigm' (137), where 'paradigm' is further restricted to the forms of one tense of a verb; the constraint will presumably need to be formulated more generally to do work in other cases of analogy. LEVEL can essentially be seen as an OT-ification of the neogrammarian position on analogy, much as LAZY (e.g. Kirchner 2000) names the age-old idea that change occurs when ease of articulation wins out over the preservation of inherited or underlying forms.

In an informal chapter 6, Plank discusses cases of the detachment of one member from an inflectional paradigm, such as German *weg* 'away', which separated off from the noun *Weg* 'way'. This case is quite well-known in generative historical phonology as its behaviour is instructive in the case of the loss of Final Obstruent Devoicing (FOD) in Germanic dialects. This is because, where FOD has been lost, no voicing surfaces finally in *weg*, as it has been detached from *Weg* (where voice does indeed surface in the final segment, as it was involved in morphonological alternations which are best analysed, in rule-based approaches, as deriving from an underlyingly voiced

obstruent). Plank presents some important novel evidence weighing on these cases from instances where words such as *weg* are semi-consciously re-inflected.

Wurzel's chapter 7 investigates synchronic German nominal inflection in detail. He presents an analysis of the patterns of inflection based on lexically specified marks and 'regular' Paradigm Structure Conditions, which dictate the type of inflection according to phonological, syntactic or semantic features. The discussion involves the notion of markedness, and Wurzel makes it clear that he considers this to be crucially linked to diachronic predictions in patterns of change; he further shows how his model predicts some of the types of changes which have occurred in the recent past in German nominal class affiliation.

In an important chapter 8, Gussenhoven investigates the remarkable rise of a lexical tone contrast and connected changes in the intonational systems of the Central Franconian area of the Dutch–German dialect continuum. He ties in the innovations, which he separates out into four separate neogrammarian-type post-lexical changes, with an articulated model of (either ergonomic or social) motivations for phonological change. The case of tonogenesis discussed involves the innovation of a highly marked feature, but Gussenhoven ingeniously argues that this can be understood as a compromise attempt to sound like a neighbouring speech community while at the same time maintaining a contrast in inflectional paradigms. The only thing lacking is evidence for the social motivation for the change – the unacknowledged problem being that it is difficult to reconstruct the social pressures which might have caused the speakers who innovated the tone contrast to want to sound like their neighbours.

Riad's chapter 9 deals with the intriguing development of *stød* in Standard Danish. He adopts the standard position that *stød* is a development of the forms of tonal accent which still exist in dialects of Swedish and Norwegian. He claims that *stød* is a basically predictable realization of a high followed by a low tone within the same syllable and traces this development and some related tonal phenomena in other Scandinavian dialects, arguing that the high-low sequences of tone, now realized as *stød*, derive from a set of reanalyses of the patterns of highs and lows which previously existed in the tone accent systems. He addresses issues of the chronology, sociology and geographical direction of some of the innovations that he discusses, showing how, in certain cases, the marked tonal accent was generalized at the expense of the unmarked.

In chapter 10, Fikkert argues for a particular description of the word stress system and certain other phonological features of Middle Dutch, using metrical and rhyme evidence from the lengthy poem *Sente Lutgart*, which Zonnefeld (e.g. 1998) has shown to be written in quite classical iambic tetrameter. Fikkert argues against Zonnefeld's own analysis to claim that *Lutgart* provides evidence that Middle Dutch word stress was considerably

different from that of Modern Dutch, and much closer to that of earlier stages of other West Germanic languages. Part of the evidence derives from a reconsideration of the dating of Open Syllable Lengthening in Dutch. Fikkert shows that certain cases of variability in the manuscript's metrical patterns are in fact predicted if typical Germanic foot structure (as described by, for example, Dresher & Lahiri 1991) is assumed and if OSL was not completed at the time that it was written.

Jacobs' chapter 11, a compact OT paper, shows how several problems which the author identifies in previous work, such as the analysis of Latin word stress in Prince & Smolensky (1993), can be straightforwardly solved if a small number of novel assumptions are made: these involve the reranking of the constraints used, so as to allow a type of foot previously disallowed, and a simplification in the formulation of a constraint. The key problems are that the previous analyses predict impossible stress systems and fail to account for all occurrences of related phonological processes.

In the final chapter, Hogg thoughtfully considers some generally overlooked aspects of High Vowel Deletion in Old English, something which has frequently been discussed in anglicist and theoretical literature. He shows that the process as it is generally conceived not only involves a clear example of opacity, but that the opacity is actually created by the very operation of the process. Hogg also shows how certain previous analyses have, problematically, conflated data from several dialects and periods in the history of English. While ultimately non-committal as to the best analysis of the data, Hogg sketches aspects of an OT analysis, claiming that this may resolve some of the problems of rule-based analyses. He claims that the new analysis is superior as it involves cases where two candidates tie in terms of constraint violations on the OT tableaux which he presents, predicting that certain types of variation should exist in the forms found in manuscripts, and this variation is, indeed, attested. He does not consider the problems that have been recognized for such accounts of variation in OT, however, namely that it is almost inconceivable that two candidates could ever really tie if they are considered against all the (universal?) constraints in the hierarchy.

Any such multi-authored volume as this could be evaluated in its totality according to several criteria: whether it is coherent in terms of (i) the linguistic subdisciplines involved, (ii) the theoretical and data issues discussed and the theoretical viewpoints and frameworks represented, (iii) the languages covered; and as to whether it includes persuasive (iv) records of new data and/or (v) reinterpretations of old data. The volume holds up well against most of these criteria, if not quite consistently all.

In terms of (i), the mixture of articles on phonology, morphology and philology is neither disturbingly diverse, nor is it closely focused, especially given that a range of types of phonology are covered: segmental, low-level suprasegmental (e.g. stress) and high-level suprasegmental (e.g. intonation).

In connection with (ii), a range of issues crop up, including tonogenesis and tone-death, grammaticalization, the types of evidence available for diachronic linguistics and the correct ways to interpret them, the use of constraints versus the use of rules, markedness and the possible paths in the direction of analogy. Certain processes are addressed in more than one chapter, including High Vowel Deletion, Open Syllable Lengthening and Final Obstruent Devoicing. One key theoretical theme which emerges (very clearly in chapters 2, 3, 6 but also elsewhere) is a reinforcement of the importance of 'non-surface' (or 'non-output') levels in phonology. This focus on underlying representations/inputs and on lexical levels of the types used in Lexical Phonology runs counter to the mainstream of much current phonology, but finds reinforcement in other recent historical work, both within OT (e.g. Bermúdez-Otero 1999) and in non-OT work (e.g. McMahon 2000), all of which argues that some recognition of non-surface levels is necessary in order to make sense of phonology. In terms of (iii), the volume is in line with a great tradition of historical linguistics in having its focus distinctly on the Germanic languages. Indeed, the only real exceptions to this are the discussion of Bengali and Latin in chapters 4 and 11. The volume performs well on criteria (iv) and (v), with novel data (for example, in chapters 6 and 8) and credible novel analyses of well-known data in most of the other chapters.

Despite the coherence that some of these points provide, this is likely to be the kind of book that readers will consult if they know that a particular article is in it, rather than the kind that will be read from cover to cover. This impression is strengthened by the fact that, although there are several useful and extensive indexes, there is little cross-referencing between articles, even when they address similar points. A book like this will ultimately stand or fall on the value of its individual contributions, and several of those included here are compelling and important. Their intrinsic merit makes the book an important purchase for any research library, and several individual chapters should be required reading for linguists with interests in the points listed under (ii), in both historical and synchronic linguistics.

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Author's address: *Department of English Language and Literature, Edge Hill College of Higher Education, Ormskirk, Lancashire L39 4QP, U.K.*
E-mail: honeybop@edgehill.ac.uk

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Pieter Muysken, *Bilingual speech: a typology of code-mixing*. Cambridge: Cambridge University Press, 2000. Pp. xvi + 306.

Reviewed by SHANA POPLACK, University of Ottawa & JAMES A. WALKER, York University

In the contentious world of code-mixing (CM)[1] research, where most contributions are little more than attempts to discredit earlier work, and each successive model proclaims universal applicability to all existing and future bilingual data, Pieter Muysken's has always been the voice of reason. In contrast to the prevailing emphasis on the uniqueness of code-mixing theories, Muysken's efforts have been directed to understanding how they resemble each other, and where (and why) their predictions overlap. *Bilingual speech* is the culmination of over twenty years of such efforts to make sense of the diverse and often contradictory CM literature, viewed through the lens of a tripartite division of CM that Muysken views as his 'main contribution' (32): INSERTION of material from one language into structure from the other language, ALTERNATION between the structures of the two languages and CONGRUENT LEXICALIZATION (CL) of material from different lexicons into a shared grammatical structure.[2] The goal is modest (perhaps necessarily so, given the state of the field): to 'tie together a set of intermediary results rather than giving a conclusive account' (2).

In the first chapter, 'The study of code-mixing', Muysken provides an overview of research on language mixture. He argues that the various

[1] Muysken uses the term 'code-mixing' to refer to 'all cases where lexical items and grammatical features from two languages appear in one sentence' (1), restricting the term 'code-switching' to a subset of CM. For the purposes of this review, we follow Muysken's terminology.

[2] One of the dominant traditions in CM research distinguishes insertion from alternation, in contrast to unitary theories that attempt to provide a single analysis for all CM. The three-way division (and the phenomena to be included under each) is original to Muysken.