The Handbook of Historical Linguistics, Volume II
The Handbook of Historical Linguistics
Volume II

Edited by

Richard D. Janda, Brian D. Joseph, and Barbara S. Vance

WILEY Blackwell
DEDICATION

To the memory and in honor of six predecessors — our former teachers or colleagues, authors whose works we consult, and/or sources of lasting inspiration:

Carolina Michaëlis de Vasconcelos
Mildred Katherine Pope
Emma Adelaide Hahn
Yakov Malkiel
Eric Pratt Hamp
Calvert Ward Watkins

Carolina Michaëlis de Vasconcelos (1851–1925) [Professor, University of Coimbra; recipient of honorary doctorates from the Universities of Hamburg and of Freiburg im Breisgau]

Mildred Katherine Pope (1872–1956) [Professor, University of Manchester; first of her gender to be a University Reader at Oxford and to be the recipient of an honorary doctorate in France]

Emma Adelaide Hahn (1893–1967) [first of her gender to be President of the Linguistic Society of America (LSA), 1946; lectured “forcefully” on Classics in a classic New York City accent]

Yakov Malkiel (1914–1998) [President of the LSA, 1965; born in Kiev and educated in Berlin]

Eric Pratt Hamp (1920–2019) [President of the LSA, 1971; born in London – the UK one]

Calvert Ward Watkins (1933–2013) [President of the LSA, 1988; wrote How to Kill a Dragon]

Swes leben ich lobe, des tôt den wil ich iemer klagen.
‘I will always lament the death of one whose life I praise.’
— Walther von der Vogelweide (ca. 1170 – ca. 1230); first line of a poem written in 1225 (numbered L85, 9 (p. 85, l. 9) in the edition of K. Lachmann (ed) 1827 (Die Gedichte Walthers von der Vogelweide. Berlin: Georg Reimer)
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Simon J. Greenhill is a senior scientist at the Max Planck Institute for the Science of Human History, Germany, and the ARC Centre of Excellence for the Dynamics of Language at Australian National University, Australia. His research investigates why and how people created the languages around us, and what they tell us about human prehistory.

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Giuseppe Longobardi is Anniversary Professor and Director of the International Research Centre for Linguistic History and Diversity at the University of York, UK.
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Betty S. Phillips is Emerita Professor of English Linguistics and recipient of the Theodore Dreiser Distinguished Research Award at Indiana State University, USA.
Her research has focused on the influence of word frequency on the lexical diffusion of sound change in English and its implications for theories of the lexicon.

Malcolm Ross is Emeritus Professor in Linguistics at the Australian National University, Australia, where he taught and researched from 1986 until his retirement in 2007. His main research interests are the histories of the Austronesian and Trans-New Guinea language families, language contact, and the methodologies of historical linguistics. He is co-editor with Andrew Pawley and Meredith Osmond of the volumes (five to date) of The lexicon of Proto Oceanic.

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Mónica Tamariz did her PhD (2005) and postgraduate work at the Centre for Language Evolution (Edinburgh), before joining Psychology at Heriot-Watt University, UK, as Assistant Professor. Her work on cultural evolution includes the influence of communicative usage and transmission to new learners on the structure of emergent languages, and the effect of cognitive biases on the spread of cultural variants in populations. She describes cultural evolution as a Darwinian process, or a complex adaptive system.

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1 Introduction: Some Things Old, Some Renewed, Some on Borrowing – Here, Previewed

RICHARD D. JANDA, BRIAN D. JOSEPH, AND BARBARA S. VANCE

In 2003, the *Handbook of Historical Linguistics (HoHL)* was issued by Blackwell, a respected publishing-house that was later incorporated into Wiley Publishers. That tome was edited by the two of us with J-initial (last) names. To judge from the reviews and from the responses to the issues discussed by its contributors, the volume was a success. In the past 15 years, the book has been widely referenced, with hundreds of citations currently noted in Google Scholar. It thus compares more than favorably, in terms of its reception, with other handbook-like treatments of historical linguistics, such as Jones (1993) or Bowern and Evans (2015) – though the latter has not been out for very long.

*HoHL* presents a fairly traditional vision of what the field of historical linguistics entails, with chapters on: language relatedness, the Comparative Method, internal reconstruction, sound change, analogy, morphological change, syntactic change, semantic change, language contact, sociohistorical linguistics, psycholinguistic factors language change, and the like. We reproduce the Table of Contents below.

Like any solid handbook, *HoHL* thoroughly covers – as is evident from Table 1.1 – the basic subfields of linguistics, though with an unusual twist. Namely, for several major topics, the volume eschews the usual monolithic way of proceeding – where only one chapter, with a single author, discusses, e.g., phonological change. Rather, *HoHL* adopts an approach that is sometimes dilithic (since two chapters, with one author each, present contrasting views of the Comparative Method, as also for analogy), sometimes trilithic (with three differing discussions of phonological change, as also for grammaticalization), and occasionally even tetralithic (with four partially opposed treatments of syntactic change); again, see Table 1.1. There were, of course, chapters that could have been commissioned but were not; any handbook covering a large area of study requires editorial choices regarding what to include and what to exclude, so as to offer a suitable overview but still maintain a manageable volume. Indeed, the original draft-proposal for *HoHL* included at least five additional chapters for which there simply turned out to be too little space. It was therefore gladdening when the two J-editors and an other-initialed colleague were approached by the publishers regarding the possibility of a follow-up edition.
The result is the present volume, a successor tome – *HoHL, Volume 2* (hereafter *HoHL2*) – whose chapters are totally different from those in the earlier book (although one chapter is an updated reprint from the diachronic section of another Blackwell *Handbook*). On the one hand, many of the chapters in *HoHL2* are devoted to new topics that either complement or supplement the contents of *HoHL Volume 1* (hereafter *HoHL1*). On the other hand, several chapters of *HoHL2* present arguably new perspectives on a set of topics which, while addressed in *HoHL1*, are both so broad and so central to the field that their alternative treatments in *HoHL2* are a virtual necessity. For example, the cumulative contribution of several studies involves a complete recasting of a crucial chapter – that explaining linguistic change – which represents the part of any historical handbook that is perennially in need of the most revis(it)ing over time. *HoHL2* further differs from its predecessor by not duplicating (either literally or in spirit) the latter’s long introductory discussion by the editors, which touched on overarching themes and

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in many ways was like a separate monograph. Instead, as readers can see here, we begin with this brief, more standard introduction, laying out the rationale for, as well as the nature of, this second volume, especially in comparison with the first.

By way of situating this *HoHL2* in a broader context of handbooks, and of clarifying its relation to the first volume, let us explain our strong conviction that just updating all the earlier chapters would not yield the best possible book. This is in large part because, within the spectrum of the essential issues in historical linguistics that are well covered in *HoHL1*, many have not changed substantially in the decade and a half since its publication. Furthermore, in a number of instances, *HoHL1* has the above-mentioned unique trait (here exemplified more concretely) of including multiple chapters on the same general diachronic topic — e.g., for sound-change *sensu lato*: one by Mark Hale on the Neogrammarian approach, one by Gregory Guy on the variationist approach, and one by Paul Kiparsky on the phonologically based approach. This feature arose from our desire to give readers a sense of those points on which there is the greatest amount of legitimate debate among diachronic linguists. The editors’ reasoning was that such a “debate in print” of various views would be a healthy way of reflecting not just the areas of contention in regard to the study of language change but, by implication as well, the points of general agreement. But, with those conflicting positions thoroughly aired in its predecessor, there is no need for including in *HoHL2* even echoes of all the scholarly back-and-forth on those particular competing viewpoints. Readers interested in observing scholarly disagreement on certain topics can still get an eyeful from the 2003 book.

Yet even *HoHL1*’s uniquely multiplex handling of core matters in diachrony left ample room for considering new approaches to those issues that have arisen out of the ferment of the past 15-plus years. This was the basis for our thinking that *HoHL2* must also include chapters that discuss how the study of linguistic change is illuminated by current views of crucial topics like acquisition, analogical morphosyntax, dialect convergence, language contact, phonetics, phonology, and phylogenetic divergence. In addition, we include here in *HoHL2* a range of topics that supplement the offerings in *HoHL1*, including Bayesian methods, corpus-based work, creoles, fieldwork-based studies, origin of language, sign languages, tonogenesis, and typology, all in relation to the study of diachrony, as well as the importance of not only theoretical but also field biology as a model for historical linguists.

The combination of new topics and new approaches in *HoHL2* has allowed for an expansion of its language coverage vis-à-vis the earlier volume. *HoHL1* came in for some criticism — unfairly, in our opinion — for being too centered on Indo-European languages (even though it includes chapters that are largely based on Australian languages, on Siouan, and on other American Indian families). *HoHL2* extends cross-linguistic coverage in two ways: (i) via the inclusion of Asian languages, in connection with the tonogenesis chapter (inasmuch as a large number of diachronic tonal studies have drawn on various languages of Asia, including many from the Chinese and Tibeto-Burman groups); and (ii) via the inclusion of a chapter on the diachrony of signed languages — to mention just two examples.

It should be noted also that, whereas *HoHL1* has (to repeat) no fewer than four chapters dealing with grammaticalization either primarily (those by Joan Bybee, Bernd Heine, and Elizabeth Traugott) or secondarily (that by Marianne Mithun), *HoHL2* has only one such chapter (that by Olga Fischer, though Joseph’s and Pat-El’s chapters are relevant here, too), and even that contribution devotes equal attention to analogy, as well as iconicity. This apparent reduction of phonetic and semantic bulk, so to speak, derives partly from the appearance in the intervening years of a massive handbook, Narrog and
Richard D. Janda, Brian D. Joseph, and Barbara S. Vance

Heine (2011), dealing with grammaticalization from just about every imaginable perspective; while admittedly issued by a different publisher, it is nonetheless already out and easily available to readers.

In light of this fact and of all the preceding, considerations, we felt – in proposing and structuring it – that HoHL2 could be capable of standing alone as an indispensable guide to historical linguistics while at the same time being an ideal companion to the existing Wiley handbook that bears on the same vast topic (HoHL1).

At this point, while a chapter-by-chapter summary of the contents of the present volume might be expected, we have decided to allow the HoHL2 Table of Contents (which precedes this introduction) and the following 23 substantive chapters to speak for themselves. We would still like to point out, though, that a comparison of the HoHL2 Table of Contents with that of HoHL1 in Table 1.1 shows that, while there is some overlap in topics between the two volumes (though with new authors), there is also a high degree of complementarity. We therefore hope not only that this second, complementary volume, HoHL2, will provide specialists with new tools and perspectives, but also, since many of the areas covered are the focus of most general courses on historical linguistics, that it can be used no less than HoHL1 as a text for advanced courses in the subject, for serious linguistics students interested in understanding the multi-dimensionality of the study of language change.

This is what we hope, but we do not dare to predict it. And yet, as a last introductory word on HoHL2, we should reveal that the volume’s twenty-fourth and final chapter centers on a set of bold predictions regarding language change over the course of the twenty-first century. We know of no other chapter, and therefore also of no other historical-linguistic handbook (or work of any genre), that makes and discusses in detail so large a number of highly specific predictions as to the future – first 40 and then 80 years from the present time – of a widely spoken language-variety. The goal of that discussion is to focus long-term attention on thirty ongoing and intriguing changes in the lexicon, phonology, morphology, and morphosyntax of North American English, whereby the risks of mispredicting are outweighed by the probability of deeper insights into linguistic diachrony. “Fools rush in”, wrote Alexander Pope (1688–1744) in his 1711 Essay on Criticism, “where angels dare to tread”. Yet we three editors, appealing to the better angels of our readers’ nature, do dare to predict that virtually all of them will find much that is insightful, intriguing, and/or revealing in HoHL2.

NOTE

1 The chapter in question is the one by Joseph, on morphological change, which updates his overview of that subject in Zwicky and Spencer (1998) by adding both new content and new bibliographical references.

REFERENCES

Part I
Change Within and Across Core Components of Language
2 The Expanding Universe of the Study of Sound Change

FRANS HINSKENS

1 Introduction

The systematic study of sound change (henceforth SC) is over 150 years old. Typically, attention is focused on either the process of change, highlighting its origin and emergence, implementation, and spread, or on the results, i.e., the difference between before and after.

From either point of view, at least three different questions have been addressed (cf. Scheutz 2005: 1704):

• What: are phonological features, phonemes, morphemes, or words targeted?
• Why: does the SC result from internal dynamics or from extensive contact with a related dialect or another language?
• How: in what way does it spread, both internally (phonologically, grammatically, lexically) and externally, i.e., geographically, socially, stylistically?

Together, these dimensions result in a provisional scholarly typology (cf. Table 2.1). Dialectologists typically highlight the synchronic reflection of diachronic developments in geographical variation, whereas sociolinguists tend to zoom in on the spread of an ongoing SC over groups of speakers and style levels. By contrast, while phonetic attention goes either to relevant physical aspects of speech (articulation, acoustics) or to the role of the listener (perception, see section 5), phonology, especially in the stringently synchronic way it is practiced today, stresses psychological aspects.

For decades, the study of SC was the domain of what we would now call historical linguistics, with dialectology joining in after the 1880s, followed by early instrumental phonetics and structuralist phonology in the first half of the twentieth century. Labov (1963) added the sociolinguistic perspective, soon incorporating methods and insights from phonetics, phonology, historical linguistics, and dialectology. With ‘cognitivist’ approaches and newly emerging neurological approaches, the universe of the study of SC keeps expanding – ever more rapidly it seems.
This chapter ventures a rough and necessarily incomplete summary of the state of play by looking at SC from three dimensions: the language system (phonology and its interaction with morphology and the lexicon), society (with sociolinguistics and dialectology center-stage), and cognition (including phonetics and neuro-psychology). Each dimension is central in certain types of theory; each theory is reductionist in its own way. Each dimension has its own dedicated section (see sections 3–5), outlining the contours of some of the main proposals. These three sections are followed by the sketch of an integrated model (section 6). The overview starts with a brief description of the outlines of the formative period.

2 Early Scholarship and Some Later Modulations

During most of the nineteenth century, linguistics was historical comparativism, featuring famous scholars such as Rasmus Rask (who studied consonant correspondences of Old High German (OHG), Greek, and Latin – as stable systems – with strict systematicity), Franz Bopp (who compared inflectional morphology across Indo-European languages), and Jacob Grimm (diachronic comparison – to use an anachronistic label).

Two types of exceptions to the chain shift in the obstruent systems of the successors of Proto-Indo-European (PIE) obstruent systems, which has become known as Grimm’s Law, were accounted for by:

- Grassmann (1863), who showed that in case two neighboring syllables contained aspirated plosives or /h/, all but the last one dropped its aspiration, e.g., PIE *dhi-dhē-ti > Sanskrit da-dhā-ti, ‘places; puts’; and
- Verner (1876), who demonstrated that in Proto-Germanic, voiceless fricatives became voiced whenever they were in a voiced context and preceded by a syllable which, in PIE, was unaccented, e.g., PIE *sep’tm > Gothic sibun.

The generation of the Neogrammarians (who considered language as an organism, applying scientifically oriented methods) discovered that generally SC tends to be regular, which led them to hypothesize that SC is lexically exceptionless and grammatically blind. Osthoff and Brugmann’s (1878: xii) oft-cited dictum has it that “Every sound change, insofar as it operates mechanically, proceeds according to exceptionless laws, i.e., the direction of the sound shift is always the same for everybody belonging to a speech community, except where a dialect split occurs, and all
words in which the sound affected by the sound shift appears in the same context are affected by the change without exception.”

The aspects ‘mechanical’ and ‘exceptionless’ (the ‘regularity hypothesis’) define the heuristic principle which crucially underlies the comparative method of historical reconstruction (which was also applied by Smith (1987) on the phoneme inventories of a range of Surinamese creole languages, and recently by Wester (2014) to test the genetic relationship within the Awyu-Dumut languages of Western Papua, Indonesia). In all cases the logic of the procedure is: (1) assume that the historical SCs of documented daughter languages have applied exceptionlessly, then (2) factor out these SCs – then we will arrive at the proto-language from which they developed.

The regularity hypothesis was seconded by lesser-known principles such as that stated thus by Sievers: “In most cases the simultaneous introduction of changes of two and more articulatory factors is not to be expected” (1876: 128 – my translation, FH). Compare this to Picard’s (1984: 18) much bolder, “Sound changes are always minimal, and so can involve no more than one basic phonetic property.”

The concept of the Lautgesetz or ‘sound law’ (Van Wijk 1903), “resulting from purely phonetic conditioning” (Hale 2003: 362), dated back from pre-Neogrammarian days; Schleicher (1861) already discussed “exceptionlessly applying laws” (my translation, FH). In the thinking of at least some Neogrammarians, the concept evolved further; in the fifth edition of his magnum opus, Paul (1880/1920) points out that a Lautgesetz should be understood as “a historical development which took place in a very specific period” (my translation, FH).

Bloomfield, the Neogrammarian non plus ultra, stated: “phonetic change is independent of non-phonetic factors such as the meaning, frequency, homonymy, or what not, of any particular form” (1933: 353–354).

Paul (1880/1920: 55) explained SC from the degrees of freedom of the Bewegungsgefühl (a mental image of the articulatory gesture, which he conceived of as a motor reflex) and a lack of control on the part of the Lautbild (a mental representation of the acoustic characteristics of a given segment). The Lautbild controls the Bewegungsgefühl which, according to Paul, is more important than Bequemlichkeit, roughly defined as ease of articulation. SC comes about in countless infinitesimal unconscious steps. Paul’s model presumes non-mobile, sedentary groups of speakers; mobility and migration lead to Mischung, dialect mixture.

The Neogrammarians distinguished between ‘mechanical’ and ‘minor’ sound change. “Of course we are speaking here always of mechanical sound change, not certain dissimilation phenomena and sound transfers (metatheses), which have their foundation in the characteristics of the words in which they occur” (Osthoff and Brugman 1878: xvi). “There are several other kinds of phonetic replacement which cannot properly be put on a level with ordinary sound-change: distant assimilation, metathesis, haplology” (Bloomfield 1933: 390–391). Paul states that these and other sporadic types of SC, including dissimilation, are not exceptionless and gradual. They tend to be abrupt and unlike regular SC they do not result in new segments but redistribute existing ones (Kiparsky’s 1988: 389–90 ‘structure preservation’). Section 5 below addresses the question of whether ‘minor’ SC is motivated by perception.

In the Neogrammarian model, the effects of the ‘sound laws’ or ‘rules’ can be obscured by competing SC (Wang 1969), including bleeding or counter-feeding rule orderings, analogy, or borrowing. An example of a bleeding ordering is Early Modern
Dutch /y:/ > /œy/, which did not take place before /r/, as in zuur ‘sour,’ duur ‘expensive,’ or muur ‘wall,’ as Dutch non-low long vowels change into centralizing diphthongs (VV̄) before tautosyllabic /r/. Examples of borrowing are Latin rosa, ‘rose,’ from an unknown source, or basis, ‘pedestal,’ from Greek, which did not undergo rhotacism (/s/>/z/>/r/), as they were borrowed after the SC had ceased to be productive, i.e., when the speakers ceased to apply the SC to new words. Other cases where SC does not appear to have applied exceptionlessly, since the ‘exceptions’ were created after the SC stopped being productive, are:

- the Latin degemination of /ss/ to /s/, which retrospectively obscured the working of rhotacism, making vīsus, ‘seen’ and causa, ‘cause’ into seemingly residual forms (Roberts 2012: 80); and
- the shift from PIE ‘free’ accent into Germanic initial syllable accent, which obscured the workings of Verner’s Law, thus making Gothic broθar ‘brother’ and fadar ‘father’ seemingly at odds with one another as to the outcome of PIE medial *t.

An example of analogy is the change of OHG sluoh–sluogun (‘slew’ 3sg–3pl) into sluog–sluogun. Analogy has been assumed to restore paradigmatic regularity (and related morphological or morphophonological properties of lexical items), after it had become obscured by SC. Through the restoration of paradigmatic connections, analogy thus ensures conceptual relations.

As soon as a given SC has lost its productivity, the older products of the SC become isolated in the lexicon, as witnesses of processes that no longer exist. An example is the lengthening of the vowels of Dutch nouns such as schɔt–schɔtten, ‘shot(s),’ b[a]d–b[a]den, ‘bath(s),’ resulting from the fact that after suffixation of the plural schwa the coda consonant was resyllabified, which put the stem vowel in open position; in items such as m[ɔ]t–m[ɔ]tten, ‘moth(s),’ r[a]t–r[a]tten, ‘rat(s)’ the vowels were unaltered. The plural form of a word such as bisschɔp, ‘bishop,’ also underwent Open Syllable Lengthening: bisschɔpen, but analogical restructuring has reversed it into bisschɔppen. According to Sturtevant (1947: 109) “phonetic laws are regular but produce irregularities, analogic laws are irregular but produce regularities.”

Sometimes analogy continues an earlier SC. Pre-Latin intervocalic /s/>/z/>/r/, which applied in e.g., hono:sis > hono:zis > hono:ris, ‘honor’ (sg gen), flo:sis > flo:zis > flo:ris, ‘flower’ (sg gen), was an exceptionless and phonetically gradient SC. Later it also applied word-finally, as in honos > honor, but not in flos > *flor. Rule generalization, i.e., the extension of a rule’s original environment to other, similar environments, is often analyzed as analogy. Paul mentions overgeneralizations such as intrusive (epenthetic) consonants, as in English idea-r of. Another example is the non-standard German fricativization /g/ > /j/, originally only before palatal vowels:

(1a) giessen > [j]ießen ‘to pour’
geben > [j]eben ‘to give’

but later also before non-palatal vowels:

(1b) gabel > [j]abel ‘fork’
In contrast to the first meaning of the concept of analogy discussed above, in this second one, alternation does not necessarily play a role. Analogy as a notion thus has subtly different meanings: on the one hand it can refer to morphological mechanisms (in connection with paradigms and lexical sets, comparable to e.g., the regularization of verb conjugation from strong/irregular into weak); analogy in this sense applies phonetically abruptly and lexically gradually. On the other hand, it is sometimes applied in connection with phonologized SCs and subsequent phonological rule generalization. The latter sense, in which ‘analogy’ is used, is in turn related to the possible phonological consequences of borrowing (to be sketched in section 3), i.e., exogenous SC, adopted from other language varieties or languages.

2.1 Dialectology

Osthoff and Brugmann (1878: ix) stated that “In all living vernaculars, the dialect-specific sound realizations appear far more consistently throughout linguistic substance and in the speech of the members of the speech community” than in dead languages, which most linguists were working on in those days. In living vernaculars, “the consistency often applies in the finest nuances of the realization of speech sounds” (my translation, FH). This is a clear precursor of Labov’s (1972a) Vernacular Principle, saying that the vernacular, in which minimal attention is paid to speech, is the most regular in its structure and in its relation to the history of the language.

Regular SC occurring in one dialect, but not in a related dialect, can lead to the “tree-like branching off” (Joseph 2012: 415) of dialects and hence to divergence, a type of development which can easily be visualized in the family tree model. However, usually analogy, analogical rule generalization, and dialect borrowing eventually blur the clear-cut boundaries. As Paul put it, “Within the same dialect no inconsistencies develop, only as a result of dialect mixture or more precisely as a result of the borrowing of a word from a foreign dialect” (Paul 1880/1920: 72; my translation, FH).

Twenty-six years after Gauchat’s Charmey study, Hermann (1929: 207–9; 1931: 34–35) established that the SC he investigated, the diphthongization of <ô̌> into <wô̌> in the reflexes of Latin items such as porta, corpus, and mortus, “does not apply to all words used by all individuals,” concluding that in linguistic change regularity is secondary. Thus, “Sound laws are the rustic rules of the linguistic weather” (Morf, quoted in Bach 1950: 78; my translations, FH).

Does dialect variation shoot down Neogrammian thinking? Not under a reasonable interpretation that the Neogrammarians themselves were aware of, namely that one has to situate SC in time and space, i.e., SCs are not “forever/everywhere” phenomena; they are localized, temporalized, and contextualized.

Schuchardt, the main contemporary critic of the Neogrammarians, pointed out that “the spatial and temporal relativity of sound laws is complicated” (1885: 58) and that “the relationship between sound laws and their external spread is unstable and random” (p. 59; my translation, FH). Finally, Schuchardt observed that it is not clear whether the formula “within the same dialect” holds a priori or rather a posteriori (1885: 59).

Bloomfield (1933: 480) claims that “The results of dialect geography tell us about linguistic borrowing.” Compare this to Auer (2005: 1722–1723): “the ‘ragged’ character
of isoglosses need not necessarily refute the neo-grammrian position […] Formerly regular sound change may have become unproductive and dissolved by later borrowings from other areas, and from the overarching (regional) standard or regiolect.”

As an empirical claim, the exceptionlessness of a given SC needs to be proven for every single case, but as a discovery procedure it is generally accepted. Or, as Kiparsky (1988: 370) put it: “the prevalence of language contact and diversity in no way disconfirms the exceptionlessness hypothesis, specifically not the causal claim which lies at the heart of it, namely that exceptions do not develop internally to a system but only through the interference between systems […] But […] it substantially insulates the exceptionlessness hypothesis from the actual data of change, and so makes it harder to put to an empirical test.”

3 Language Structure

SC originates either internally or externally. Searching for the origin is (sometimes implicitly) also searching for the cause – or the teleology.

With regard to internally driven, endogenous change (Moulton’s 1961 ‘Lautwandel durch innere Kausalität’), several taxonomies have been proposed. The one by Stampe (1972; cf. Kiparsky 1988) is a tripartition between prosodic processes (such as lengthening and epenthesis), strengthening (diphthongization, vowel, and consonant shift), and weakening processes (e.g., lenition, reduction, assimilation). Processes of different types can co-occur, such as deletion cum compensatory lengthening. Both phoneme split and merger are long-term consequences of phonetic change, just like assimilation and lenition. These types of processes, and also simplification (say, of consonant clusters), result from articulatory processes (cf. Recasens 2014) and they are thus essentially different from markedness-driven change, which is structurally determined. Here, too, different types can co-occur, as e.g., cluster simplification can serve prosodic structure.

Closely connected, though probably more theory-dependent, is teleology. Four of the better-known teleologies are:

• balance or harmony in the segment inventory. Paul (1880/1920) observed that “in the case of non-combinatorial, unconditioned SC the harmony of the sound system and the default setting [Indifferenzlage], a notion coined by Sievers, play a role” (my translation, FH). Connected views refer to the dispersion in segment space and to the maintenance of contrast (as in chain shifts – e.g., Moosmüller and Scheutz 2013 on Austrian German);

• the optimization of syllable structure, the universal dispreference for rising sonority across syllable boundaries (the Syllable Contact Law), motivating e.g., cluster simplification, such as the deletion of word-final /t,d/ after obstruents (WFTD) and intrusive stops (as in Greek anros > andros, ‘male person’);

• the disputed typological distinction between syllable- vs. stress-timed systems (Abercrombie 1967; Roach 1982; Dauer 1983) or syllable vs. word systems (Caro Reina and Szczepaniak (eds) 2014);