Historical linguistics and relationships among languages

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22.1 Introduction – ‘in forme of speche is change’

[S]o kann es in ihr [die Sprache], ebensowenig, als in den unaufhörlich fortflammenden Gedanken der Menchen selbst, einen Augenblick wahren Stillstandes geben. [There can never be in language, just as there can never be in the ceaselessly blazing thoughts of people, a moment of true standstill].

(Humboldt 1836: 184)

Over time all facets of the linguistic system will change, and sometimes spectacularly – as Humboldt described, there is never a moment of true standstill in language. To illustrate the extent to which English has changed in the course of its recorded history, consider the tenth-century leechdom (‘remedy’) for abdominal pain given in Figure 22.1. Underneath the original Anglo-Saxon (or Old English) text is a literal word-by-word translation, and a loose translation follows.¹

| Wiþ wambe wærce 7 rysel wærce þær þu geseo tord | against womb wark and belly pain when thou seest turd |
| wifel on eorpan up weorpan ymbfo hine mid twam handum mid | Old English | English |
| weevil on earth up throw catch him with two hands with |
| his geweorpe wafã mid pinum handum swipe 7 cweþ þriwa. | his throwing wave with thy hands strongly and say thrice. |
| Remedium facio ad ventris dolorem. | Remedium facio ad ventris dolorem. |
| Weorp þonne ofer bac þone wifel on wege behalad þæt þu ne | throw then over back the beetle on way take-care that you not |
| locige after. ponne monnes wambe wærce òppa rysel ymbfo mid | look after. the man’s womb pain or belly grasp with |
| pinum handum þa wambe him hib sona sel· XII monaþ þu | his hands the womb him is at-once well. 12 months thou |
| thy hands the womb him is at-once well. 12 months thou |
| meaht swa don after þam wifel. | have-power so to-do after the beetle. |

¹ Underneath the original Anglo-Saxon text is a literal word-by-word translation, and a loose translation follows.
For stomach ache and pain in the belly (fat); when you see a dung beetle in the earth throwing up (dung), catch him with your two hands along with his casting up (i.e. dung balls), wave him strongly with your hands, and say three times, ‘Remedium facio ad ventris dolorem’. Then throw the beetle over your back; take care you don’t look backwards. When a person’s stomach or belly (fat) is in pain, grasp the stomach with your hands, it will soon be well with (the person); for twelve months after the beetle (event) you shall have power so to do.

Figure 22.1  Tenth-century remedy for abdominal pain

Spelling, punctuation, letter shapes, conventions of word-division and paragraphing were very different at this time, although the leechdom as rendered here (for simplicity sake) has retained only some of the Anglo-Saxon conventions and is nowhere near the original manuscript version. The consonant symbol <þ> (called ‘thorn’) was from the futhorc or runic alphabet but was later replaced by French inspired <th>. The vowel symbol <æ> (called ‘ash’) came from the Latin script, although its name derives from the runic symbol for the same sound. Anglo-Saxon scribes used a number of abbreviations, one of which is shown here – the symbol 7 for ‘and’ (one of the Tironian nota ‘signs’, from the shorthand conventions developed by Cicero’s scribe Marcus Tiro). The raised dot <> indicates a pause (though this does not correspond to the modern comma or full-stop); punctuation was otherwise scanty.

Many of the words here have disappeared without a trace (e.g. rysel ‘belly’, weorpan ‘throw’, ymbfo ‘catch’, swiþe ‘quickly’, ne ‘not’, bìp ‘is’, wærce ‘pain’, sel ‘well’); some remain but are archaic (pu ‘thou’ and þinum ‘thy’). Others have changed meaning (wip ‘against’ > ‘alongside’; wambe ‘abdomen’ > ‘uterus’; sôn ‘immediately’ > ‘in a little while’; meaht ‘have power’ > ‘possibly will’; wifel ‘beetle of any kind’ > ‘specific beetle from the Curculionoidea family’).

The shape of even familiar words has altered significantly. Sounds have disappeared (the [w] in swa ‘so’ and twa ‘two’; the [m] in wambe ‘womb’), and many have changed their pronunciation (the <h> in meaht ‘might’ represented a velar fricative that either dropped out or became [f]). Also lost from the system was the front rounded vowel (represented here by <y> as in rysel) and the geminate (or long) consonants (shown as double letters as in monnes). Voicing was only contrastive for Old English stops and affricates, and voiced fricatives were confined to intervocalic positions (alternations such as wolf–wolves are relics of this original allophony); hence, wafa here was pronounced [wava], but there was no potential minimal pair akin to modern waver [weivə] and wafer [weifə].

There is much that is different in the grammar here. Constituent order in this remedy does not follow the fixed S(ubject)V(erb)O(bject) ordering of the modern language, and many structures no longer exist. The phrase him bìp sôn sel illustrates the so-called ‘impersonal construction’ (where dative subject pronouns expressed non-volitional activities; me thinks is left over from this system). The phrase ne locige shows an early pre-verbal negator. There are also many examples here of the inflectional richness that characterized the language at this time (e.g. pronouns him, hine; þu, þinum; nouns twam, handum; definite articles þone, þa, þam; verbs don, locige, bìp).

The developments illustrated by just this short text are considerable and involve the language at every level – orthography, phonology, morphology, syntax and lexicon (words and meanings). However, I should not give the impression that all linguistic elements are equally susceptible to innovation and replacement. Lexical components are the most volatile,
with vocabulary addition and loss being particularly rapid; however there are differences within the lexicon – culturally significant words far more prone to revitalization than basic vocabulary, which can endure over centuries. Words of high frequency are more prone to sound changes (of a reductive nature), but the most resistant to grammatical changes (of a levelling and regularizing nature); cf. Bybee (2003). In fact, grammatical aspects of the language (especially syntactic) exhibit the most stability of all. But as Janda and Joseph (2003: 88) remind us, if we are to truly understand change, it is just as important, and interesting, to consider those aspects of language that do not change as those that do. Nichols (2003) addresses precisely this question, examining in detail different kinds of stability and variability/renewal of linguistic elements over time.

Dialects and languages do not change at a constant rate. As the overall history of English shows, there can be periods of speeding up and periods of slowing down. From the time of this Old English leechdom through to the eighteenth century, changes were complex and rapid. As a consequence, people in the 1700s could not read with ease the literature of three centuries early; the poetry of Geoffrey Chaucer presented difficulties, as it does today. And language from a still earlier time prompted even Chaucer to make the observation (in *Troilus and Criseyde* II, 22ff.) ‘[y]e knowe ek that in forme of speche is change’ (‘you know also that in (the) form of speech (there) is change’), noting the ‘wonder nyce and straunge’ (‘wonderfully curious and strange’) nature of early English words.² And yet, Modern English readers have little trouble reading texts of the 1700s; the language of Jonathan Swift or Jane Austen is stylistically different and has some unfamiliar-looking vocabulary, but it is recognizably Modern English. As Svartvik and Leech (2006: 191) observe, written texts might suggest very little has happened to the language over the last few hundred years. A number of factors have been putting the brakes on changes – among them, the introduction of the printing press, the knock-on effects of standardization and its linguistic straitjacketing, the establishment of reading and writing as educational necessities rather than optional extras. These have had the effect of slowing down changes, in some cases even reversing ones already well-entrenched; spelling pronunciations (such as *often*, *comrade*, *issue*), which restore sounds long abandoned by speakers, are examples of such rearward shifts. However, disrupting forces are at work, promising once more major episodes of change – English is now described as ‘one of the most hybrid and rapidly changing languages in the world’ (Graddol 2006: 116). The processes set in place by globalization, colloquialization, liberalization and the electronic revolution are releasing speech from the conservative forces of the literary standard and its prescriptive ethos. The written tail is no longer wagging the spoken dog, and features that have been lurking in the wings as variation now have a greater chance of taking hold and being embedded in the language system as actual change.

22.1.1 Investigating change

The branch of linguistics that explores the whys and wherefores of these sorts of changes is ‘historical linguistics’ or ‘historical and comparative linguistics’ (historical because it deals with the pasts of individual languages and comparative because it also compares these languages and looks at the relationship between them). The discipline is also known as ‘comparative philology’, though this label is now usually avoided because of the confusion with the more usual understanding of ‘philology’ as the scholarly study of literature.

It was the outstanding theoretical and methodological breakthroughs of the nineteenth century (notably, those of the Neogrammarians) that established ‘historical linguistics’ as a new discipline, as distinct from literary studies and philosophical enquiry. Scholars equated...
the study of language with a historical one, focusing their attention on linguistic change and on the genetic relationships between languages that arose as a consequence of change. It became the golden era of historical and comparative work, specifically the comparison of lexical items and morphology of different languages leading to the identification of law-like correspondences across languages (and within them), as well as the reconstruction of unattested ancestral forms (especially of the Indo-European linguistic family). The approach was an empirical one, more data-oriented than philosophical. This historical orientation dominated the scientific study of language until the early twentieth century, when Ferdinand de Saussure’s separation of synchronic (or static) and diachronic (or historical) perspectives shifted the bias to synchrony as the legitimate approach to language study.

With the establishment of the structuralist paradigm came a new way of thinking that challenged the Neogrammarian position. Structuralists (see Chapter 27) saw language as a highly organized system of interlinking elements, where everything was defined in terms of its relationship to everything else (*un système où tout se tient*). This view privileged the underlying structure of language (Saussure’s *langue*) above the actual use of language (Saussure’s *parole*) and so ignored precisely those speaker-oriented factors that held the key to understanding how and why linguistics changes take place (the social and behavioural aspects of language). For these linguists, there was a mystery (now referred to as the Saussurean Paradox). Clearly, a language changes, but if it is a highly structured system of sounds, words and grammatical forms, how can it change without completely disrupting this system? Saussure himself used the analogy of a chess game to illustrate the conundrum. How can players continue playing the game if the rules are constantly changing? In the same way, how can language continue to be an effective vehicle of communication if it is ceaselessly on the move? This was especially puzzling given the scale of some changes. Old English evolved into a completely different looking Modern English, and yet speakers continued to communicate successfully, even while these numerous changes were taking place.

But there is no paradox if the variation inherent in the social use of language is factored in as part of the system. Clearly, speakers have no trouble controlling variability and heterogeneity in language structure – it is simply part of their linguistic competence. Moreover, it has now been shown that this variability and heterogeneity is not random and can be studied in a systematic way. In his 1966 account of New York English, the American linguist William Labov investigated a number of sociolinguistic variables that were used within this speech community (e.g. post-vocalic /r/ in *beer* and *pork*, the pronunciation of /θ/, /ð/ in *thirty* and *this*, and of –*ing in *cooking* and *eating*) and showed for the first time that these differences could be quantified. His methods revealed that earlier views of language change had been incorrect. While not all variation leads to change, all change occurs in the presence of socially relevant variation, and it is directly observable. This different way of looking at language and language use sparked a whole new line of research into linguistic evolution. Variation and change were recognized as flip sides of the same coin – variation the synchronic aspect of change; change the diachronic aspect of variation. Sociolinguistics was, and remains, an immensely important field for the study of language change.

Since this shift in attitude, research in historical linguistics has become extensive and now encompasses a wide range of very different theoretical frameworks, notably Chomskyan linguistics and ‘universal grammar’, the Greenbergian approach and typological shifts, grammaticalization theory, theoretical phonology, contact linguistics, socio-historical linguistics (or historical sociolinguistics, see Chapter 17). In fact, historical linguistics draws on inspirations from every one of the major branches of synchronic linguistics – a
proper understanding of sound change is impossible without a knowledge of how sounds are articulated (phonetics), and so on. There have also been significant inputs from fields outside linguistics such as prehistory, philology, anthropology, psychology and sociology. With such spread as this, all this short chapter can hope to do is highlight some of the fundamental issues, methods and results that characterize this vast and very interdisciplinary field. Fortunately, with the new interest in historical linguistics has come a flourishing of comprehensive textbooks and handbooks with fuller accounts of the individual achievements of these discipline areas and their different perspectives on language change (for example, the collection of chapters in Joseph and Janda 2003).

22.2 Five questions for any theory of change

Any investigation of change in language has three obvious components:

- The ‘what’ of change – possible and impossible changes
- The ‘how’ of change – processes and mechanisms of change
- The ‘why’ of change – explanations for change.

At first linguists concentrated their endeavours on identifying and classifying the facts of language evolution. They concerned themselves with features that had changed in the past (in particular, sounds) and the processes by which these had changed; in other words, the ‘what’ and the ‘how’ of change. More recently, the focus of research has shifted more to explanation, and the internal and external forces that drive change. The main goals have become the collection of historical information, the discovery of common patterns of change and the testing of hypotheses about the causes of change. Ideally, these goals lay the foundation of a general theory of language evolution with a set of universal laws that regulate languages and compel them to proceed in particular directions.

Before turning to theoretical considerations, we need to consider some of the practical difficulties of doing historical linguistics, mostly arising from the lack of adequate documentation of earlier stages of languages. As Labov reminds us, ‘[H]istorical linguistics may be characterized as the art of making the best use of bad data’ (1982: 20). Even for well-recorded languages, empirical evidence can be lost, damaged, the scripts illegible and the orthography difficult. Such deficiencies will be problematic to a greater or lesser extent depending on the linguistic elements under investigation. Sounds can be listed and because of the finiteness of phonological inventories, descriptions can be gained of lost phonological systems sometimes on the basis of even a very limited corpus (though of course recovering spoken styles of the past from textual records comes with its own host of difficulties). In the case of grammatical studies, however, we are faced with thousands of different constructions and hundreds of different categories – the chance of accidental gaps and discontinuities in the data is very real. Moreover, grammatical structures are governed by both linguistic and extralinguistic factors, including the vagaries of style; hence, for a more accurate picture of the relative chronology of any changes, investigations of grammar ideally draw on text material that is as homogenous as possible over the time span selected (comparable genres, authors, even thematic material). Unfortunately, for most languages this is unattainable, and the conclusions we make regarding their early syntax are all the more uncertain for it. Gothic is a good illustration. Only a few documents of the language have survived, and all are translations. From these pieces much definitive work has been carried out on the phonological system, and further discoveries of fragments of Gothic have yielded more information on
the inflectional morphology and some new lexical items. However, little conclusive can be said about its grammatical system, especially syntax.

In their seminal work *Empirical Foundations for a Theory of Language Change*, Weinreich *et al.* (1968) pose five interrelated problems that any explicit theory of language change must address.

1. The constraints problem (what determines the possible and impossible changes and directions of change).
2. The transition problem (how does change progress through the linguistic system).
3. The embedding problem (what is the linguistic and social context of language change).
4. The evaluation problem (what are the attitudes of a speech community towards a given change, and the effect of these attitudes on change).
5. The actuation problem (why do linguistic changes occur when they do and where they do).

### 22.2.1 Case study – diachronic aspects of English negation

At this point it is helpful to give an actual example, and since so much attention has been paid to sound change in the literature, I have chosen to highlight developments that have taken place in English negation. Of course these represent but one type of change and other types relate differently to these problems; however the various issues surrounding diachronic negation are enough to give some idea of how these five key questions drive research in historical linguistics (see Bauer 1994 for a discussion of other changes in English in the light of these questions).

First, a potted history of English negation. Old English (450–1100) could negate by placing a negative particle *ne* before the finite verb. Often this was supported by one or more additional negative words.

(1) Wiþ wif gemædlan geberge on neahtnestig rædices moran
    by day ne may you the madness bother

‘Against a woman’s mad behaviour: eat some radishes before breakfast [lit. during nightfasting] and that day the madness cannot bother you’ [tenth century].

(2) 7 he eaþelic nan ping forswoligon ne meag
    and he easily no thing swallow neg may

‘and he is not able easily to swallow anything’ [tenth century].

In Middle English (1100–1500) multiple negation was common, with two (often more) negators present. During this period *noght* (< *ne-a-wiht* ‘not-ever-anything’) emerged as the favoured reinforcer, and embracing negation *ne…noght* became the norm.

(3) bere nys nopynge pat so some smyteþ with grevaunce be
    there not-is nothing that so soon smites with grievance the

head opere be synwe as wyne

head or the sinews as wine
‘There isn’t anything which damages the head or the sinews as quickly as wine’ [fourteenth century]

(4) Of mete y sigge pat to hym that is of a hot and moist complexioun be no manere weye ne scholde noght be gessen flesh

‘Of food I say that those who are of a hot and moist complexion should in no kind of way be eating meat’ [fourteenth century].

By the end of the Middle English period, pre-verbal *ne* had disappeared and single post-verbal *noght/not* had established itself as the preferred negator (of course multiple negation remains robust in non-standard varieties today: *I never eat no dinner*).

(5) þe rede cale suffers noght þe wonde hele

‘the red kale doesn’t allow the wound to heal’ [fifteenth century].

In the course of the early Modern English period (1500–1800), the frequency of ‘do-support’ in negative clauses rose considerably, and by the nineteenth century it had stabilized as obligatory in all environments if no other auxiliary was present (*Drinke not above four times*).

(6) One and the same order of diet doth not promiscuously agree with all men. [sixteenth century].

In terms of the ‘constraints’ problem, we are potentially looking at various types of checks and controls here, such as those monitoring the direction of change, the source of new negators, as well as their placement. As the following account reveals, these constraints involve both diachronic aspects (i.e. negation across time), as well as synchronic aspects (i.e. ‘universals’ or (im)possible patterns of negation).

Jespersen (1917) suggested that the changes for English negation (common to all Germanic languages and also French) were cyclical in nature, and since then, most linguists have referred to this kind of negator renewal as ‘Jespersen’s Cycle’. Cross-linguistic studies show that the change is extensively attested and in a wide range of languages well beyond Germanic (and of course is potentially more widespread given that poorly documented examples of single negation could have evolved via precisely such a pattern of erosion and creation; see papers in Horn 2010). As a paradigm case of grammaticalization, Jespersen’s Cycle qualifies as a ‘natural’ or ‘normal’ change.

As confirmed by Willis et al. (2013: 13), the sources for new negative markers are relatively restricted. They outline three main options. Most commonly, negators arise from nominal minimizers, or what are sometimes termed ‘accusatives of smallest measure’ such as *not a bit/a drop/a step* and so on. Also widespread are inherently negative pronouns and adverbs such as *nothing, nowhere, never, at all*, and so on. A third option is similar to the first, except the strengthening marker is some sort of clause-final resumptive negator, such
as the simple interjection ‘no’ (e.g. I didn’t do it, no) or an ordinary sentential negator (e.g. I didn’t do it, not at all), which is then reanalysed as part of the clause.

In terms of positioning, these markers tend to precede the elements they negate, with pre-verbal as the norm for standard clausal negation. What has come to be known as the ‘Neg-first principle’ (Jespersen 1917: 5 and Hirt 1937: 73) receives strong support from empirical studies, such as Dahl’s 1979 survey of negation (around 81 per cent of his 240 languages had uninflecting negative particles before the verb, and the figure increases if cases of prefixal negation are included; see also Dahl 2010). Both Jespersen and Dahl suggest there is something natural about the pre-verbal placement of the negative particle with evidence from second-language learning and child language to support this (Dahl 1979: 96–7). Such constraints on the positioning of negation suggest that an innovation like post-sentential negation (‘What a totally amazing, excellent discovery… NOT!!’) is never likely to convert to a change.

The changes identified for English negation have occurred in many languages; they illustrate well-trodden paths of change, and yet they are not universal – nor would we expect them to be, for the simple reason that constraints have to be violable for language change to ever take place. In Germanic, naturally occurring Jespersen’s Cycle has resulted in a typologically aberrant situation that places the negator before the item in constituent negation but after the verb in sentence negation. Hence, we would predict subsequent changes to eradicate the inconsistency. Indeed, the Modern English system of negative auxiliaries (don’t, can’t, won’t etc.) restores the balance by once more ensuring that the negative element appears before the lexical verb (see Burridge 1993).

A more useful formulation of the ‘constraints’ problem is, as Labov (1982: 59) has suggested, to locate ‘general principles that influence the course of linguistic change without determining it absolutely’; in other words, to frame the problem in terms of natural tendencies rather than rigid laws. The etiology of innovation and change is usually complex, with all sorts of interfering psychological, physiological, linguistic, social and cultural pressures working to coerce a language in a particular direction – linguistic structures do not exist outside these forces, and they militate against the operation of regular and utterly predictable changes.

In terms of the ‘transition’ problem (how changes disperse through the linguistic system), we can view the remodelling of English negation as an orderly progression through three clearly identifiable (but over-lapping) stages:

(Stage 1) pre-verbal ne > (Stage 2) embracing ne-not > (Stage 3) post-verbal not

Grammatical changes are gradual and (like phonological shifts) subject to the same measured transmission. This progression did not affect all linguistic contexts at once, but (akin to ‘lexical diffusion’) spread gradually through the system. As is typically the case in syntactic change, subordinate clauses were conservative, preserving negative patterns long after they had been abandoned in main clauses (see Burridge 1993 for elaboration).

A crucial factor affecting transition is frequency. English (like its siblings) had in common a group of commonly used verbs with conservative patterns of negation; for example, phrases such as I know not and I think not existed well after dummy do had become a requirement. Many different aspects of our linguistic behaviour are shaped by repetition – paradoxically, the most frequent words and phrases are at the forefront of sound change but prove to be the least adventurous when it comes to grammatical change. Over time often-repeated structures become entrenched and therefore able to resist the generalizing forces outside; hence the conservative nature of these high-usage verbs (Bybee 2003).
More recent formulations of the ‘transition’ problem have built in the routes of linguistic variants through speech communities (also incorporating the puzzle of how all this happens without interfering with communication). To understand how these negative patterns were promoted and dispersed, we need to study the social lives of English speakers, in particular the relationships between individuals and their social networks. Relevant here is a cornerstone of linguistic methodology known as the ‘uniformitarian principle’: developments within languages are subject to the same factors and controls at all times, and hence we assume that the social structures that assist the transition of features through speech communities today were also around in the past. Indeed, the discipline of socio-historical linguistics rests on the viable application of sociolinguistic methods to historical situations (though of course it uses written data to do this). As the network studies of Lesley and James Milroy have shown, tight-knit communities with strong social networks and values are norm enforcers – speakers with few external contacts will identify with and orientate towards those they interact with most extensively. These networks correlate with conservative speech patterns and lack of innovation (quite simply, members won’t want to speak differently from their mates). On the other hand, where there is little social cohesion between members of the speech community, social networks are said to be loose; such networks are more typical of larger, often urban communities with many external contacts, and they are more open to innovation. People have ties to other groups, and changes are spread via the weak ties between them – these speakers are the conduits for change. Writing specifically on negation, Nevalainen (1998: 281) noted that ‘a Milroyan type of weak-ties network structure could well have been the means of spreading the loss of multiple negation’.

Closely related to this is the ‘embedding’ problem (i.e. the surrounding linguistic and social setting). The changes in negation occur in the context of long-term grammatical changes that have been taking place in the language. Crucial here is the notion of drift, the cumulative unconscious selection of variants that propels a language in a particular direction, or as Sapir originally put it, ‘[l]anguage moves down time in a current of its own making. It has drift’ (1921: 160). There is plenty of evidence to suggest that pre-verbal *ne* formed a unit with the finite verb; hence the transition from original *ne* to *ne-not* to *not* is also a transition from morphological negation to an adverbial system of negation, and therefore consistent with the drift towards increased analyticity, one of the drifts Sapir identified for English.

These changes have also taken place within another of Sapir’s drifts: the fixing of constituent order and shift from OV to VO structures. Burridge (1993) argued that the movement of the negative particle from the position before the finite verb to the position after the finite verb in Germanic languages was a consequence of the grammaticalization of word order patterns, particularly verb-second order for declarative main clauses. This is an illustration of where typological coherence has applied additional pressure for change to have a causal role in the shift to post-verbal negation.

Any account of the changes to English negation must take in how variants were embedded in the larger context of the speech community; it must also try to resurrect the social distribution of the various patterns and the motivations for spreading certain favoured patterns. Assuming the uniformitarian principle, we take for granted that the same dimensions of social structure relevant to linguistic change in the modern language (age, sex, social class, ethnicity, race) were important when these changes in negation were taking place – and that, like today, the innovative forms would have acquired some prestige before being transmitted to the community as a whole. Also relevant here is an observation made by a number of early linguists (such as Jespersen 1922: 259–61); namely, that periods of dramatic linguistic change appear to go hand in hand with social upheaval (epidemics, civil wars,
revolutions, economic crises). The Black Death in the fourteenth and fifteenth centuries coincided with major changes in English, including the transition from multiple to post-verbal negation. Social network theory can now make sense of this correlation. In some communities, the plague (made worse by subsequent epidemics) killed up to three-quarters of the population. It triggered mass emotional disorders (see Gordon 1959: 545–79), and would have torn even the densest of social networks apart. It is precisely at such tumultuous times that variants are able to take off, spread and eventually embed themselves as long-term changes in the language system.

In terms of the ‘evaluation problem’, it is usually the case that as soon as speakers become conscious of a linguistic change, the response is negative. For most speakers, change is only acceptable if it takes place in the distant past. The same people who are fascinated by the origins of words and the stories that lie behind the structures in their language typically condemn changes that are happening within their lifetime. This can have an effect on the propagation of a variant. Nevalainen (1998) looks at the stigma that attached to the use of multiple negation in the early modern period. These negative evaluations continue and may block another Jespersenian scenario from unfolding based on the pattern *You don’t know nothing*; more likely to take off are the less salient variants that can slip more easily under the prescriptive radar such as *never, at all, a bit* (as in *I don’t like him a bit*). However, prestige reversals do occur. Indeed, current pressures on the standard language as earlier described are endowing informal non-standard language with a cachet and respectability (see Crystal 2006 on the ‘new sociolinguistic climate’ that is seeing the re-evaluation and elevation of non-standard features). Non-standard variants, once condemned, now have a good chance of slipping out of the local context into a bigger arena; multiple negation/negative concord is now well on its way to being an established ‘vernacular universal’ (cf. Kortmann and Lunkenheimer (2013) list it as having 80 per cent attestation across seventy-six varieties of English worldwide). Moreover, with the increasing influence of newer varieties of English comes the diminishing clout of those from the so-called ‘inner circle’. Linguistic innovations (including some very ‘unEnglish-looking’ structures) are now being started and propagated by second-language speakers, as well as foreign-language and creole speakers (e.g. the current role of rapping).

The preceding four problems all contribute to the big problem of ‘actuation’. As Weinreich *et al.* originally expressed it (1968: 102): ‘Why do changes in a structural feature take place in a particular language at a given time, but not in other languages with the same feature, or in the same language at other times?’ In clarifying the actuation of the negation changes just outlined, linguists must account for why the Germanic languages, and also French, display such different chronologies. For the Scandinavian languages, ‘Jespersen’s Cycle’ was completed at a much earlier date; indeed there is evidence that languages underwent two negator renewals in a Jespersen-like progression: (1) reinforcement of *ne* with –*a/-at* (*ne* disappeared by the ninth century); and (ii) replacement of –*a/-at* by *eigi* (completed by the fourteenth century) (see Willis *et al.* 2013). In German, *nicht* had eliminated the old pre-verbal negative particle by 1300; in fact even in the thirteenth century, its distribution was limited to common-usage verbs and special constructions (cf. Paul 1959: 236–8). Texts examined here suggest that exclusive use of *not* was the norm in English by the mid-1400s (cf. also Jespersen 1917: 9). In Dutch the cycle was completed more slowly and there were dialect differences; by the mid-1600s, embracing negation had finally disappeared from Hollandish, but was still intact in Brabantish (only relics remain today). Only now is Modern French showing signs of losing pre-verbal *ne*. 
Language change is never one-dimensional and there would have been a network of different intersecting pressures that were influencing these languages at different times: psychological (the mental makeup of speakers), physiological (the production of language), systemic (the linguistic system with interacting components), social and political (the speech community and the individual, the socio-political environment), external (contact and borrowing) and so on. There are also human wildcard factors to consider; the cultural preoccupations of speakers can be powerful triggers for dramatic, and often unexpected changes. By no means am I suggesting here that change is random, like whims of fashion, but it is hugely complex, with contingent internal and external factors (systemic and speaker-oriented), snowballing effects and an element of chance. The most apt description is ‘chaotic’ (in its technical sense). Language is like climate and weather – not governed by deterministic law-like processes, but not frenzied or anarchic either. Chaos theory is all about the way order emerges from the complex interaction of factors. Analogous to the evolutionary processes of the ‘invisible hand’, language evolves through processes of interactive reinforcement – unplanned but purposeful (see Keller 1994).

### 22.3 Language families and establishing genetic relationships

The previous sections have focused on linguistic change. We now turn our attention to the question of genetic affinity and how we might uncover the linguistic relationships that arise as a consequence of change. To set the scene, consider the opening lines of a simple pea soup recipe in Modern English, Dutch and German, Table 22.1.

<table>
<thead>
<tr>
<th>English</th>
<th>Dutch</th>
<th>German</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soak the peas one night and cook them in the same water with the pork hocks, the salt, the pepper, the milk, the curry, the carrots, the chopped celery and the leeks.</td>
<td>Week de erwten een nacht en kook ze in hetzelfde water met de varkenskluiten, het zout, de peper, de melk, de kerrie, de wortelen, de gesneden selderie en de preien.</td>
<td>Weich die Erbsen ein Nacht und koch sie in demselben Wasser mit den Schweins-haxen, dem Salz, dem Pfeffer, der Milch, dem Curry, den Wurzeln, dem geschnittenen Sellerie und den Lauchen.</td>
</tr>
</tbody>
</table>

Clearly there are some remarkably similar words here:

- night–nacht–Nacht
- milk–melk–Milch
- water–water–Wasser
- pepper–peper–Pfeffer

The parallels in grammar are also striking:

- cook them in the same water with the pork hocks
  - kook ze in hetzelfde water met de varkenskluiten
  - koch sie in demselben Wasser mit den Schweinshaxen
This is of course not coincidental. English, Dutch and German are closely related languages, and these resemblances are due to the fact that they share a common ancestor – the same parent or proto-language, in this case, Proto-Germanic (assumed to have been spoken shortly before the Christian era, but no written evidence survives). The discrepancies between these three languages are due to changes that have occurred, including various sound changes (only some of which are revealed here by the spelling), grammatical changes (English and Dutch have been more or less stripped of the grammatical inflections still evident in German) and vocabulary renewals (such as English weak ‘to marinate in water’ replaced by soak).

The further back in time we go, the more changes we undo, and the closer the languages become. Consider a few lines of a comparable text from an earlier time, a fifteenth-century Dutch and English recipe for cherry pottage (literally, ‘take cherries and do out the stones and grind them well and do them in a pot. And add thereto sweet butter and white bread’), Table 22.2.

Table 22.2 Comparison of early English and early Dutch

<table>
<thead>
<tr>
<th>Early English</th>
<th>Early Dutch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tak cheryes and do out the stones and</td>
<td>Neemt kersen ende doet die steen uut ende</td>
</tr>
<tr>
<td>grynde hem wel and do hem in a pot.</td>
<td>grynde se wel ende doet se in eenen pot</td>
</tr>
<tr>
<td>And do therto swete botere and wyte bred.</td>
<td>Ende doet daertoe soete boter ende witte broot.</td>
</tr>
</tbody>
</table>

These languages have had less time to diverge and are strikingly similar; the minor differences include English tak (now more usual than nim ‘take’), and French chery (which had replaced original ciris, cyrs). Go back another 500 years and the ‘languages’ become mutually intelligible. Unfortunately, there is only one surviving fragment of original Old Dutch (from the eleventh century): Hebban olla uogola nestas hagunnan hinase hic eende thu wat unbindan we nu ‘have all birds begun nests except me and you; what are we waiting for now?’; but so similar is this text to English that it may even be a fragment of Anglo-Saxon.

Now consider Latvian and Hungarian versions of the pea soup recipe given earlier (Table 22.3).

Table 22.3 Comparison of Latvian and Hungarian

<table>
<thead>
<tr>
<th>Latvian</th>
<th>Hungarian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zirņus izmērcē vienu nakti un vāra tanī pašā</td>
<td>Áztasd be a borsót egy éjszakára, majd</td>
</tr>
<tr>
<td>ūdenī ar cūkas kājām, sāli, pipariem, pienu,</td>
<td>ugyanabban a vízben tedd fel főni. Add hozzá a</td>
</tr>
<tr>
<td>kariju, burkāniem un sakapātu seleriju un</td>
<td>csúlköt, a söt, a borsot, a tejet, a curryt, a</td>
</tr>
<tr>
<td>puraviem.</td>
<td>répát, a tejet, a felaprított zellert és a hagymát</td>
</tr>
</tbody>
</table>

Glancing at these, there is nothing to suggest either language is genetically related to English, and yet Latvian is a relative, but Hungarian is not. What confirms the relatedness of languages is not so much the similarities (which in the case of Latvian are not apparent), but more importantly the existence of systematic differences. To illustrate, consider some of the word comparisons from the pea soup recipes, Table 22.4.
Not only are the words strikingly similar, but the differences between them are systematic. We can find hundreds of such sets, all showing regular recurring correspondences in matching environments: orthographic German $<k>$ (initially) and $<ch>$ (finally) parallels Dutch and English $<k>$; German $<pf>$ (initially) and $<f>$ (medially) parallels Dutch and English $<p>$; German $<ss>$ (medially) and $<z>$ (finally) parallels Dutch and English $<t>$. Such word sets are known as ‘cognates’; words that are etymologically, or historically, related and therefore similar in form and in meaning. The sound correspondences they display are the fallout of a series of changes known as the ‘Second Germanic Consonant Shift’ (or ‘High German Consonant Shift’), assumed to have occurred between the sixth and ninth centuries. The phonemic correspondences can be shown as:

<table>
<thead>
<tr>
<th>English</th>
<th>Dutch</th>
<th>German</th>
</tr>
</thead>
<tbody>
<tr>
<td>weak (obsolete)</td>
<td>week</td>
<td>weich</td>
</tr>
<tr>
<td>cook</td>
<td>kook</td>
<td>koch</td>
</tr>
<tr>
<td>milk</td>
<td>melk</td>
<td>Milch</td>
</tr>
<tr>
<td>pepper</td>
<td>peper</td>
<td>Pfeffer</td>
</tr>
<tr>
<td>water</td>
<td>water</td>
<td>Wasser</td>
</tr>
<tr>
<td>salt</td>
<td>zout</td>
<td>Salz</td>
</tr>
</tbody>
</table>

These regular sound correspondences are strong evidence of a shared history i.e. they have evolved from the same language. On the basis of many more of these sorts of correspondence sets, we can establish the sound changes that have taken place and, via a technique called the ‘comparative method’, can even recreate the proto-words such as Proto-Germanic *meluks ‘milk’, with the asterisk indicating the form is hypothetical. (The reconstruction is based on the earliest possible attestations, such as Old English *meoluc and Gothic *miluks.)

Proto-words represent relationships between form and meaning that are carried into the daughter languages (if the items are retained), even where there has been drastic sound change. Thus an important premise of this method is that these changes are not capricious but regular. The absolute regularity of sound change, or what came to be known as the ‘regularity hypothesis’, was another major Neogrammarian doctrine. Accordingly, the sound system of any language, as it developed through time, was subject to the operation of Lautgesetze (sound laws), which were understood to be absolutely regular in their operation, except under the influences of non-phonetic factors such as analogy (where words deviated from the ‘proper’ patterns, as in grine changing to groin on analogy with loin). Since the nineteenth century, the principle of regular sound change has been a cornerstone of the comparative method, giving scholars proper license to compare and to reconstruct ancestral forms in this way.

Another cornerstone is the arbitrary nature of words. Excluding sound symbolic expressions (like English cockadoodledoo, German kikeriki and Japanese kokekokko), there is no natural or necessary connection between the shape of a word and its meaning, and this...
means we can rule out the possibility that these patterned regularities are fortuitous. What are the chances that speakers of different languages will independently arrive at the same or similar sound patterns to represent the same object or concept? Certainly, coincidental similarities occasionally arise (e.g. unrelated English day and Latin dies), but there are literally hundreds of these sets permeating the vocabulary of these languages, all showing the same systematic correspondences. This cannot be accidental.

We can also rule out borrowing as the cause of these word comparisons for the reason that they involve core vocabulary. Of course common-usage words are occasionally borrowed (as evident in the everyday nature of Norse loans in English), but the premise here is that basic (culturally neutral) words are more resistant to borrowing, and it is these that are trusted when it comes to establishing genetic relationships and reconstructing lost stages of languages. When loans do occur, they do need to be identified. Notice the recipe in Table 22.1 has English carrots (borrowed from French), although a little outside delving would uncover an English cognate to Dutch wortelen and German Wurzeln – the rare word wort (preserved in plant names like butterwort). English also has wurzel (short for mangel-wurzel), a kind of beetroot fed to cattle. If wurzel is cognate, then it goes against this sound change that predicts [t] not [z] in English (as in wort); but wurzel is an imposter, a borrowing from German. Loans such as this one can muddy the timeline of linguistic changes; in cases of extensive borrowing, they can have the effect of accelerating vocabulary differentiation between genetically related languages and can create a false impression of long divergences, in some cases even hiding genetic connections.

In addition to the comparative method, another way of ‘using the present to explain the past’ (now something of a Labov-inspired catchphrase in historical linguistics), is something called ‘internal reconstruction’. This is the technique whereby earlier forms of a language are inferred from material available from a synchronic description only. So whereas the comparative method leads us to a proto-language, internal reconstruction only throws up evidence of the earlier stages of a single language (e.g. Pre-Old English *fōti > Modern English feet). The basis of this method is that irregularities in the modern language (like foot–feet) are the fallout of changes, and that if we undo these we can get back to a more regular setup (aberrant forms like foot–feet are relics of an earlier pronunciation rule whereby the main vowel of the word assimilated to the high vowel of the lost plural ending). Internal reconstruction is a particularly valuable tool in cases where languages have no known siblings (language ‘isolates’ like Basque), and also for languages without well-documented histories. It is also usefully applied at the beginning of the comparative method to bring forms back to a shape that makes comparisons easier.

22.3.1 How do language families arise?

The concept of genetic relatedness between languages had been noted for a long time, but it was not until the activities of Sir William Jones (1746–1794) that the idea really took off.
During his famous lecture ‘The Third Anniversary Discourse, on the Hindus’, which he delivered to the Asiatick Society of Bengal on 2 February 1786, Jones argued that the classical languages Sanskrit, Ancient Greek and Latin were related; moreover, he postulated the existence of a proto-language as the parent of most of the languages of Europe, south-western Asia and northern India. Jones’ ideas were not new. Others too had noticed the similarities between these languages; even the notion of a shared linguistic source was not novel. However, what Jones was arguing for here was an ancestral language that ‘perhaps, no longer exists’; in other words, he was introducing the idea of a parent that was not an already extant language (such as Sanskrit) as others had assumed. While Jones did not found the comparative method, his words were certainly timely and, because of his considerable influence, he inspired others and thus contributed in some significant way to the growth of historical and comparative linguistics.

Jones’ ideas were enthusiastically embraced and before long the systematic study of language evolution and language relatedness was the main focus of scholarly activity. The work carried out by European linguists during the nineteenth century led to the classification of all the Indo-European languages into the sort of genealogical tree (for Germanic languages only) given here in Figure 22.3.

The comparative method (buttressed by grammatical and other evidence) has been used to classify the world’s languages into groups and subgroups. We now have numerous established language families in addition to Indo-European. These include (among many others): Austronesian (languages throughout the South Pacific, south-east Asia and into Madagascar); Sino-Tibetan (a large family of languages spoken throughout Asia, and includes the Chinese, Burmese and Tibetan languages); Finno-Ugric (a controversial language family assumed to include Hungarian as well as Finnish and Estonian); Uto-Aztecan (languages of western United States and Mexico); Pama-Nyungan (the major genetic grouping of Australian languages). The number of language families is a matter of hot debate, in particular how many of these families can be grouped into even larger ones.

![Family tree of Germanic languages](image-url)
Long-distance genetic relationships (taking in Nostratic and even Proto-World) have captured people’s imagination and the topic makes regular media appearances (you can find a discussion of this controversial aspect of the comparative method in Campbell 2003, and of the genetic grouping of the world’s languages in Comrie 2001).

To get an idea of how language families evolve, imagine the conditions that might have given rise to the Germanic group. Around the time 1500 BC, there was a population split and a group of speakers left the Indo-European homeland (possibly a northern temperate region; cf. Bynon 1977). All languages change, but they do not have to change the same way when they are in different places. In this case, the Germanic group developed a number of distinctive characteristics, which then set it apart from the other Indo-European groups. The most significant of these innovations was a collection of chain-reaction changes known as ‘Grimm’s Law’ (or the ‘First Germanic Consonant Shift’).

<table>
<thead>
<tr>
<th>PROTO-INDO-EUROPEAN</th>
<th>GERMANIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>(voiceless stops) p, t, k</td>
<td>became (voiceless fricatives) f, θ, x (h)</td>
</tr>
<tr>
<td>(voiced stops) b, d, g</td>
<td>became (voiceless stops) p, t, k</td>
</tr>
<tr>
<td>(breathy voiced stops) bh, dh, gh</td>
<td>became (voiced stops) b, d, g</td>
</tr>
</tbody>
</table>

In the following set of cognates, the Latin and Sanskrit represent the original sounds, and the Old English represents the Germanic innovations. The sound correspondences are given each time in bold, and the ancestral phonemes from which they derive are given in the first column.

<table>
<thead>
<tr>
<th>PROTO</th>
<th>LATIN</th>
<th>OLD ENGLISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>*p</td>
<td>piscis ‘fish’</td>
<td>fisc</td>
</tr>
<tr>
<td>*t</td>
<td>tres ‘three’</td>
<td>threo</td>
</tr>
<tr>
<td>*k</td>
<td>cord ‘heart’</td>
<td>heorte</td>
</tr>
<tr>
<td>*b</td>
<td>bursa ‘purse’</td>
<td>pursa</td>
</tr>
<tr>
<td>*d</td>
<td>dent- ‘tooth’</td>
<td>toth</td>
</tr>
<tr>
<td>*g</td>
<td>genus ‘race’</td>
<td>cynn ‘kin’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROTO</th>
<th>SANSKRIT</th>
<th>OLD ENGLISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>*bh</td>
<td>bhára-mi ‘I carry’</td>
<td>beran ‘bear’</td>
</tr>
<tr>
<td>*dh</td>
<td>bándhanam</td>
<td>bindan ‘bind’</td>
</tr>
<tr>
<td>*gh</td>
<td>ghánti ‘he strikes’</td>
<td>guth ‘battle’</td>
</tr>
</tbody>
</table>

There were many more sound changes than just the ones represented here and many grammatical changes, too; for example, Germanic developed a class of verbs indicating past with some sort of dental suffix (as in English chew–chewed). Further changes eventually split Germanic off from Indo-European. After this separation, the number of Germanic speakers increased in size and further population rifts spread the language geographically; the language changed in different ways in the different parts of Europe (e.g. various Germanic tribes went across to Britain in the mid-fifth century to form English), giving the three main nodes you can see on the tree in Figure 22.3 – North, East and West Germanic, with additional splits eventually sprouting all the modern groupings represented on the family tree. Once again, the magic combination of time, physical and social separation and the unrelenting processes of linguistic change caused single languages to split into dialects and ultimately distinct languages.
22.3.2 More insights from scholars of the nineteenth century

The nineteenth century represents a peak in the achievements of historical and comparative work, and it is fitting here to acknowledge some of those whose work contributed to the procedural advances in the comparative method.

It was the Danish linguist Rasmus Rask (1787–1832) who should probably be credited as being the true originator of the method, though writing in Danish meant that his pioneering ideas did not receive the wide attention they warranted. Rask was the first to set out the notion of principles, whereby languages could systematically be compared with respect to their vocabulary and sounds, thereby establishing genetic affinity (especially with the additional support of corresponding similarities in grammatical structures). But it is another from this time, Wilhelm von Humboldt (1767–1835), who is credited as offering ‘the most lucid explanation (and exemplification) of the basic principles of the comparative method’ (Davies 1998: 101); Humboldt’s contributions to the field include data-oriented investigations, priority to sounds and comparative evidence in establishing genetic affinity, and the actual reconstructions of the phonological shapes of morphs. The Grimm brothers, in particular Jacob Grimm (1785–1863), also made significant technical breakthroughs in this method. ‘Grimm’s Law’ has become celebrated in historical linguistics (though it is rather a misnomer – in Grimm’s work there is no mention of a law, only a Lautverschiebung (‘sound shift’)). Rasmus Rask had already uncovered the basis of the law, but it was Grimm’s all-encompassing conception of the shift as a unit that had such a significant impact on his contemporaries; hence, it was Grimm who became the PR person for the new methodology. Most importantly, he could account methodically for a considerable group of the Indo-European and Germanic consonants, showing how the parallel changes in the voiced and voiceless stops and fricatives retained the overall symmetry of the phonological system. Items not captured by his rules were considered exceptions and were made the object of research for the next half-century. For example, fine-tuning of Grimm’s Law by Hermann Grassmann (1809–1877) and Karl Verner (1846–1896) eventually eradicated Grimm’s residue and establishing the notion of exceptionless sound change.

A special place in this story are the so-called Neogrammarians, a group whose German nickname Junggrammatiker recognized their youth; two of the most famous were Hermann Osthoff (1847–1909) and Karl Brugmann (1849–1919). Like others before them, their view of language was historical, their methods included the systematic comparison of recorded word forms and their focus was on language change and on the genetic relationships between languages. Their position was, however, distinguished by the two major tenets already referred to, namely the ‘uniformitarian principle’ and ‘regularity hypothesis’ (die Ausnahmslosigkeit der Lautgesetze).

Among the later scholars of this period August Schleicher (1821–1868) stands out as having introduced techniques and fundamental methodological advances that went on to shape linguistic thinking in the twentieth century and beyond, especially with respect to the genealogical classification of languages. Schleicher was the first to attempt a systematic reconstruction of the sounds and forms of Indo-European; he is also credited with using the asterisk to indicate that they should be viewed as abstractions and not documented language material. While reconstruction was not new (both Grimm and Rask had provided reconstructed forms), Schleicher went to the lengths of recreating an actual proto-text, the ‘Fable of the Sheep and the Horses’. Though resoundingly condemned as flights of fancy, these reconstructions offered a more compelling demonstration of the comparative method at work. Schleicher is also known for his model of displaying languages, the Stammbaum or
family-tree model. He grouped existing languages together on the basis of lexical correspondences and the results of sound changes and captured the relationships in a model of language classification which, inspired by biological taxonomy, arranged them in a genealogical tree. Indeed, he is the first linguist to use tree structures as a way of graphically representing historical changes that, via a process of gradual divergence over time, eventually resulted in the formation of new languages.

However, a number of scholars were not convinced by the family-tree model as a way of describing the development of languages – not only did it fail to accommodate the fuzziness of language and dialect boundaries, it also could not capture the fact that languages (related or otherwise) may through contact continue to influence each other over time. Most notably, Johannes Schmidt (1843–1901) proposed what has now come to be known as the ‘wave model’ or ‘wave theory’ (*Wellentheorie*). He claimed correctly that sound laws were restricted spatially and in different ways. By showing that each sound law had its own territory, essentially what he was introducing here was the concept of the ‘isogloss’, the geographical line indicating the domain of a sound change (e.g. the boundary between High German *Apfel* ‘apple’ and Low German *Appel* caused by the Second Germanic Consonant Shift). This wave metaphor captured the fact that new features of a language could spread from a central point in continuously weakening concentric circles, like waves created when something is thrown into a body of water. Some of the Neogrammarians (including Brugmann) argued that the *Stammbaum* and *Wellen* models were compatible; Schmidt himself saw his model as supplementing the standard family tree, simply providing a more complicated version of the single splits offered by the *Stammbaum*. What Schmidt’s wave model of diffusion cannot capture, however, are sociolinguistic facts to do with spread and influence (‘transition’ and ‘embedding’ problems); for this we need to wait for the insights of dialectology and sociolinguistics.

### 22.4 Where to from here?

Change schemas (like the one for negation outlined in §22.2) do not follow prescribed courses determined by exceptionless laws or principles, but it is possible to talk about preferred pathways of change – ‘gutters’ that channel language change, to use an image famously invoked by Kuryłowicz (1945: 37). Referring specifically to analogical change, Kuryłowicz likened these developments to episodes of rain. While we may not be able to predict when it will rain, or even if it will, once the rain has fallen, we know the direction the water will flow because of gutters, drainpipes and spouting. An important goal of historical linguistics is thus to gain a clearer picture of these ‘gutters of change’, in other words, to refine our notions of natural and unnatural change (à la the ‘constraints’ problem).

Hence, more work must be done logging and classifying the changes that have occurred within individual languages, especially those with well-documented histories. The good news is that advances in technology are making the job easier. We have no time machine to take us back through history, but vast improvements in corpus design are making available massive digitized collections of texts that are annotated and searchable, and historical evidence better suited to the study of language change is now more readily available. For example, the online transcripts of the Old Bailey (London’s central criminal court) offer as close to eighteenth and nineteenth century ‘verbatim’ vernacular texts as we can get; even taboo words (notoriously absent from other writing) make an appearance. These transcripts now reveal that as early as the 1700s *bugger* strengthened negative constructions; this is more than a century earlier than previously thought (*It cannot be helped now, I should not*)
care a b - dy b - gg - r if I was going to be hung up for it; see Musgrave and Burridge 2014 for details).

We are also getting better at the historical dimension of the relationship between language and society; in other words, in identifying how linguistic features are distributed socially, and how social factors operate in partnership with linguistic mechanisms of change (à la the ‘transition’ and ‘embedding’ problems). Trudgill (2011) offers a sociolinguistic typology based on a huge range of contexts and languages; he reveals the socio-cultural phenomena (e.g. social stability, size, contact, prestige, complexity and relative isolation of a speech community) that are critically linked to the relative stability/replacement of linguistic elements, the accelerating/decelerating stimuli for change, and other issues to do with transmission and diffusion. Whereas tight-knit communities have long been linked with linguistic stability, Trudgill shows that small speech communities with tight social networks ‘are more able, because of their network structures, to push through, enforce, and sustain linguistic changes which would have a much smaller chance of success in larger, more fluid communities – namely, changes of a relatively marked, complex type’ (p. 103). The closely integrated Anabaptist speech community of North America offers robust support of this in the form of rapid grammatical changes in Pennsylvania German (see Burridge 2014 for elaboration); it is clear that social context here has an accelerating influence.7

As Janda and Joseph (2003) conclude in their wonderfully wide-ranging overview of historical linguistics, it surely makes sense for historical linguists to study language evolution by focusing on changes currently in progress – ‘building up an inventory of well-studied present times which, as they accumulate into a store of well-studied pasts, will slowly but inevitably provide a more solid database for formulating and testing increasingly sophisticated hypotheses regarding language change’ (p. 128). For many of the world’s languages, this task is an urgent one. The majority remains undescribed, and many of them are endangered (Native American, Austronesian and Australian Aboriginal languages, to name just a few). When it comes to mining the linguistic diversity around the world, however, the discipline is being greatly assisted by advances in computing and technology. The developments within computer-mediated communication and improved possibilities for creating and disseminating high-quality recordings of language have made for vast improvements in corpus design. Many modern corpora aim now to be multimodal – so not simply text-based collections, but high-quality recordings, both audio and video. Ongoing breakthroughs in speech technology, machine translation and transcription, information extraction, text mining, voice recognition and voice translation software, recording and archiving technologies, software development for (field) linguists, to name just a few, are making easier the business of collecting, describing and cataloguing the behaviour of language elements. We have every reason to be optimistic about future research in historical linguistics. Like Tolkien’s cauldron, the story of language change continues to bubble – enriched, refined and enhanced by ongoing contributions from within linguistics and other fields, many of them disparate and far-flung.

Notes

1 This is part of a collection of Anglo-Saxon medical texts (or Lacnunga ‘remedies’ – the name given to this collection by its first editor, Oswald Cockayne 1865); these are vernacular texts dating from the tenth and eleventh centuries.

2 In his preface to Eneydos (1490), the printer William Caxton also observed how different and difficult early English was, describing it as ‘so rude and brood that I coude not wele vnderstande it’.

362
Examples here come from a range of Old and Middle English medical and medico-magic texts reproduced in Cockayne (1865), Furnivall (1868) and Sinclair (1938). These vernacular texts are products of an essentially oral culture, and resemble as closely as possible the spoken idiom of the time (see discussion in Burridge 1993).

Though the socio-cultural settings for English speakers 1,000 years ago and English speakers in the twenty-first century are clearly very different (universal literacy, standardization, mass media, e-communication), uniformitarianism assumes that changes today and those in the past are driven by the same sorts of mechanisms. The Neogrammarians borrowed this powerful dictum from geology and biology (see Janda and Joseph 2003: 27–31). Classicist Hermann Ostoff and Indo-Europeanist Karl Brugmann expressed it this way (1878: xiii): ‘the psychological and physiological nature of man as speaker must have been essentially identical at all epochs’ (Collinge’s translation 1995: 205).

Terttu Nevalainen and Helena Raumolin-Brunberg (2003) have used a corpus of correspondence (6,000 letters from 1417–1681) to reconstruct the social setting of late Middle English and early Modern English, crediting the success of a number of linguistic changes to the existence of weak ties in the population at crucial times.

Burridge (2015) argued that the predilection for dative and accusative participants in early Germanic was an enactment of prevailing thinking, specifically, beliefs about the human condition that emphasized its vulnerability to external forces. What contributed to the demise of impersonal constructions (of the me thinks type) was the emergence of a modern secular sense of identity – a world apart from earlier communal thought processes once so gripped by natural and supernatural outlooks.

Fast-speech phenomena arise from the reduced need for elaboration in these communities due to the considerable degree of shared ground. This leads to phonological reduction, which in turn feeds the development of new grammatical structures. The tendency for general reduction and omission of unstressed material is a striking feature of Pennsylvania German and, while this would be expected of a language that is spoken and has no written form, it is also the consequence of close integration. The speed of these changes is a by-product of the increased allowance for inference in this isolated and tight-knit community.

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K. Burridge


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