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The Dialect Laboratory

Dialects as a testing ground for theories of language change

Edited by
Gunther De Vogelaer
Guido Seiler

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The dialect laboratory

Introductory remarks

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1. About this book

Much theorizing in language change research is made without taking into account dialect data. The present volume shows that the study of dialect variation has the potential to play a central role in the process of finding answers to the fundamental questions of theoretical historical linguistics. It includes contributions which relate a clearly formulated theoretical question of historical linguistic interest with a well-defined, solid empirical base. The volume discusses phenomena from different domains of grammar (phonology, morphology and syntax) and a wide variety of languages and language varieties in the light of several current theoretical frameworks.

Most of the papers in this book have been presented at a workshop on the theme 'Dialects as a testing ground for theories of language change' at the 'Methods in dialectology' XIII conference in Leeds, 2008. We think it is the right time for dialectologists to engage in debates on language change for a number of reasons: first, an increasing number of theoretically inspired linguists are turning their attention towards dialects. This increased interest is visible through the publication of a number of book volumes about the role of dialects for theoretical linguistics, focusing on, e.g. phonological theory (e.g. Hinskens, van Hout & Wetzels 1997), generative syntax (Barbiers, Cornips & van der Kleij 2002), and typology (Kortmann 2004). For historical linguistics and theories of language change, no comparable volume has appeared yet. Second, there are several large research projects on dialect variation being conducted in a number of European countries (see Barbiers, van der Ham, Koeneman & Lekakou 2008 for an overview; cf. also the recently launched website ⟨http://www.dialectsyntax.org/⟩), which equip the scientific community with a so far unseen wealth of empirically well-established data.

In our opinion, the study of dialect variation has indeed the potential, perhaps even the duty, to play a central role in the process of finding answers to

fundamental questions of theoretical historical linguistics. As compared to most cross-linguistic and diachronic data, dialect data are unusually high in resolution. As Moulton (1962: 25) puts it, dialect comparison can be seen as a thought experiment, as a laboratory, because genetically closely related varieties demonstrate the effects language change may have under subtly varying conditions: What happens when a particular innovation is adopted in several dialects where it meets similar but slightly different linguistic environments? In addition, dialects seem to be superior data to build a theory of linguistic change on, since dialects are relatively free of standardization and therefore more tolerant of variant competition in grammar. Furthermore, variants gradually spread not only on the temporal, but also on the spatial dimension. By a careful study of subtle dialect differences in space we might therefore expect to uncover the minimal differences of implementational steps that have taken place in the course of linguistic history.

The book aims at covering different domains of grammar, and wants to avoid a bias towards particularly well-studied languages. Although the volume has no particular theoretical orientation, it does intend to contribute to ongoing theoretical debates and discussions between linguists with a different theoretical background. All papers are written in an accessible way, so as to be understandable for readers not familiar with the relevant theoretical framework(s) or with the data discussed.

2. Contributions of dialect evidence to hypotheses of historical linguistics: A synopsis

2.1 Dialect evidence in the context of the Neogrammarian Hypothesis

Almost every survey on the historical development of early dialectology discusses its connection to the Neogrammarian Hypothesis (cf. e.g. Trudgill & Chambers 1998: 14; Murray 2010). And so do we. The affinity between the Neogrammarian project and dialectology seems to be so obvious that one might easily overlook that in fact the relationship is a much more difficult (and ambiguous) one than it seems at first glance. The debate centres itself around the question whether the results of early dialectology corroborate or falsify the Neogrammarian Hypothesis.

The term Neogrammarians (*Junggrammatiker*, literally 'young grammarians') refers to a group of brilliant historical-comparative linguists in Germany, especially in Leipzig, in the 1870s (Murray 2010: 70). Their rigorous methodology of comparative reconstruction is expressed in the so-called Neogrammarian Hypothesis (henceforth NH), claiming that sound change is, within a given community, and within a given phonetic environment, entirely regular, i.e. it admits no exceptions.

Any form that does not conform to the sound laws must be due either to internal analogy or to borrowing from other dialects/languages (Hock 1991, Chapter 3). Most later linguists agree in their appreciation of the Neogrammarians' invaluable contribution to the advancement of historical-comparative linguistics, especially with regard to methodology. However, we would like to emphasize yet another, even more general aspect: As far as we can see, the NH is the first strong, predictive, and thus possibly falsifiable hypothesis ever proposed in the development of our discipline. One might therefore say that it is an indispensable predecessor of theoretical linguistics as a whole.

Postulating a predictive theory about (a fraction of) the nature of language presupposes the assumption that there exists something like the *nature* of language. Virtually all linguists know how difficult it is to explain to a non-linguist that linguists study the structure of language not in order to achieve some other, non-linguistic goal, such as a better understanding of old texts, improving language skills, setting norms for spelling and pronunciation and the like, but rather in order to understand how language as a phenomenon in the real world actually works, which basic units languages consist of, what individual languages tell us about the general properties of human language etc. The concept of language as an autonomous object of rigorous scientific investigation implies, of course, that a linguist's approach is free from normative preconceptions.

It is precisely the Neogrammarians' overcoming of normative preconceptions that made dialects a fully legitimate object of linguistic study. As Murray (2010) points out, the importance that the Neogrammarians placed on the study of contemporary spoken dialects represents "the most dramatic departure from most past practice" (Murray 2010:71). The importance of this step has not been appreciated enough in the later linguistic community: To make a very strong point, we would like to claim that it is one of the major (though often ignored) breakthroughs in the development of modern descriptive linguistics. To put it differently: As soon as you take dialects seriously as fully articulated linguistic systems you have demonstrated that you are interested in language structure as such and not in the construction of or adherence to prescriptive norms.

Only the study of spontaneous spoken language may reveal the fundamental articulatory, auditory, psychological and social factors involved in sound change. The reasoning behind this statement is uniformitarianist (a principle originally borrowed from geology, viz. Hock 1991:630; Murray 2010:72): Those forces which are influential in the contemporary, observable world were influential in the past already. Applied to sound change it means that all historically remote sound change must be explainable in terms of general processes and constraints involved in natural speech, as it cannot be the case that in the past something supernatural might have occurred. Dialects give insights into how languages change, dialects

split, and sound change spreads (see Murray 2010: 73–78 for a detailed overview and remarks on criticisms formulated by Weinreich, Labov & Herzog 1968). Moreover, spoken dialects were seen as the more faithful outcomes of sound laws than written languages (Reiffenstein 1982: 24–25).

However, the relationship between dialectology and the NH is ambiguous. On the one hand, the Neogrammarian spirit was a fruitful environment for a boost of detailed dialect descriptions and surveys. On the other hand, dialect evidence has relentlessly shown how problematic the NH actually is once it is confronted with the entire complexity of real spoken data.

As for dialect descriptions, an explicit research program has been laid out by Wegener in 1880 (Reiffenstein 1982: 24; Murray 2010: 78), highlighting the importance of articulatory phonetics (as developed in detail by Sievers 1876) as well as dialectology's contribution to the identification of sound laws and their interactions with analogy (Reiffenstein 1982: 24). Although no public funding was made available for Wegener's proposal, in the following years and decades a great number of descriptions of individual dialects on a high level of methodological sophistication was published. The influence of the NH on early geolinguistic dialect surveys is less clear. Whereas it is often claimed that Georg Wenker conducted his questionnaire-based survey of the German empire (in different versions from 1876–1888, cf. Schrambke 2010: 89) in order to prove the correctness of the NH, Knoop, Putschke & Wiegand (1982: 51–52) argue that this is perhaps nothing more than a myth; rather, Wenker's original goal was to determine the position of dialect boundaries. The connection to the NH was made only later by Ferdinand Wrede, Wenker's successor. However, once this connection was established, dialect geography was seen as a testing ground for the NH *par excellence*. Also, the connection between dialect geography and the NH made it possible to integrate dialectology into a much broader theoretical context. The results of geolinguistic surveys appeared to be rather discouraging for the Neogrammarian position, though: For example, for the High German Consonant Shift of West-Germanic *p, *t, *k, Wenker's maps show a great amount of lexical variation with regard to the geographic spread of the shift, especially in Western areas (in the so-called Rhenish Fan). Many textbooks of historical linguists cite these facts as counterevidence against the NH, claiming that the Rhenish Fan is suggestive of another conception of sound change: every word has its history. Things are less clear, though; the NH states only that the *same* consonant in the *same* phonetic environment is expected to undergo the change at a given place. The fact that West-Germanic *p is unshifted in the word *pund* 'pound' but shifted in the word *schlafen* 'sleep' in West-Central German areas is not yet sufficient evidence for the claim of individual word histories, as the *p does *not* occur in identical phonetic environments. Problematic indeed is the spread of the shift in *beißen* 'bite' as opposed to *besser*

'better', with unshifted *bi:ten* but shifted *besser* in a relatively small area West of Düsseldorf (⟨www.diwa.info⟩, maps 23, 189). Furthermore, as soon as a greater number of variables is considered, the picture results in a criss-crossing of isoglosses (Hock 1991:446). This complex picture is supplemented by various lexical borrowings in different directions, the result of which led to the "battle cry of dialectologists" (Hock 1991:446), namely that every word has its own history.

Dialect contact and analogy may obscure the results of regular sound change in such a dramatic way that Schuchardt (1885) concluded that the Neogrammarians' regularity hypothesis is misleading altogether, as it is often the case that sound change, analogy and the effects of contact cannot be distinguished empirically at all. In fact, Schuchardt anticipated a concept of sound change which is now known as lexical diffusion. Although there is overwhelming evidence for the obscuring effects of analogy and contact, one might say that Schuchardt's position is too harsh, as the Neogrammarians have never claimed that *all* sound change is the result of exceptionless sound laws, but only in the absence of analogy and contact.

In conclusion, there is no doubt that the NH and early dialectology inspired each other in a fruitful way. Somewhat paradoxically, this is even true for critical positions against the NH. For the reference point for e.g. Schuchardt's argumentation is, of course, still the NH. In other words: Even if one is about to falsify the NH using dialect data one has implicitly admitted already that dialects tell us *something* about the NH.

2.2 A structural dialectology *is* possible

In 1954, Uriel Weinreich raised the question as to whether a structural dialectology is possible (Weinreich 1954). Why was that an open question at the time? The relationship between dialectology and modern structural linguistics has been ambivalent, from the advent of structuralism (generally attributed to the publication of Ferdinand de Saussure's *Cours de linguistique générale* in 1916) until more recently. Due to the historical-comparative orientation of early 20th century dialectology, dialectologists did not see very much to gain from the application of the structuralist hypothesis to dialects (although early dialectology in the Neogrammarian spirit anticipates many of the ideas which have been elaborated only later, such as the reluctance against prescriptive preconceptions or ideas about the featural organization of phonological systems). Structuralist ideas were, at best, implicitly present. One relevant idea is primarily associated with Jules Gilliéron (see, e.g. Gilliéron & Roques 1912). It states that language change can be motivated by processes of homonymy avoidance. Gilliéron based himself on a number of coinciding lexical isoglosses describing a situation in which disturbing homonymy, such

as identical descendents of the nouns *gallus* 'rooster' and *cattus* 'cat', is avoided. Gilliéron's hypothesis is typically considered an early manifestation of functionalist accounts of language change, and it also clearly takes into account relationships between linguistic elements (lexemes), i.e. structure.

Generally speaking, however, it takes until the 1950s until Weinreich (1954) concludes that a structural dialectology *is* indeed possible. We might look at the benefit of a collaboration of dialectology and structural linguistics from both sides. From the perspective of structural linguistics, dialects are just another class of natural languages (in the sense of *langue*, which can be paraphrased as competence grammar). Hypotheses about the internal organization of *langue* must be applicable to dialects, too, of course. On the other hand, Weinreich (1954) demonstrates that also the questions of classical dialect geography can be approached in a linguistically more meaningful fashion once concepts of structural linguistics are applied. Weinreich (1954: 392; cf. Barbiers 2010: 128) contrasts the ways isoglosses are identified if traditional-nonstructural vs. structural procedures are applied, using the hypothetical example of *man*: Whereas a traditional dialectological isogloss just separates different phonetic realizations of the vowel (e.g. [a] vs. [å]), structural dialectology takes into account the different values of the vowels in the respective phonological systems ([a] may represent /a/ in one dialect but /ă/ in another, [å] may represent /a/ or /o/, respectively). The same point can be illustrated using an example from German: Whereas most varieties of German have contrastive vowel length, Middle Bavarian displays vowel length differences which are merely allophonic, i.e. noncontrastive but predictable on the basis of the phonetic environment (Bavarian lengthens stressed vowels whenever the syllable is not closed by a geminate, cf. Seiler 2005). Thus, whereas the long vowels in words of the type 'CV̄CV are phonetically identical in Alemannic and Bavarian, their status in the respective phonological system is clearly different since 'CV̄CV contrasts with 'CV̆CV in Alemannic but not in Bavarian. The crucial difference between Alemannic and Bavarian with regard to quantity systems remains obscure as long as no structuralist analysis is performed.

Whereas the advent of structural linguistics has significantly enriched the technical toolkit for *synchronic* dialect descriptions, it is not quite clear at first glance to what degree this is true for the explanation of *change* as well. Most notably, however, Moulton has made explicit what the potential of dialect evidence is for the explanation of the direction of change: in his study of the so-called Eastern-Swiss vowel split (Moulton 1962), he demonstrates how micro-comparative dialectal evidence may contribute to the identification of more general, structure-driven patterns of change. The argument can be summarized as follows: After the application of primary and secondary umlaut, the High Alemannic vowel inventory was out of balance, as four heights of short front vowels (i, e, ɛ, æ) contrasted with only

three heights of short back vowels (u, o, ɑ). Balance was reintroduced by either a merger of /ɛ/ and /æ/, or by a split of /o/ into /o/ and /ɔ/. The reasoning behind this analysis is the idea of phonological space: a position in the vowel inventory which is empty, i.e. where otherwise relevant distinctive features are not employed, is either eliminated or filled with a new vowel. Moulton (1968) concludes:

> Linguistics is not, and cannot be, an 'experimental science'. We cannot, for example, design a language with four short vowels and fourteen long vowels, teach it to a community of speakers, hypothesize that after ten generations the number of short and long vowels will be equal, and then sit back to see whether our hypothesis is confirmed. We cannot manipulate our materials in this way; we must take them pretty much as they come. Fortunately, however, these materials are so rich and varied that they provide us with an almost limitless number of permutations and combinations to work with. [...] Dialectology [...] is the only type of study that enables us to combine the three external dimensions relevant to human language: the dimensions of time, space, and social level. Second, it enables us to take a large but still manipulable body of data and to subject it to intensive study. It permits, if you will, a kind of micro-study in depth of data that are homogeneous enough to be cohesive, but also heterogeneous enough to be interesting and revealing. (Moulton 1968:460–461)

2.3 Sociolinguistics and change

The 1960s saw a number of innovations that were highly relevant for the study of dialects, both in a diachronic and synchronic perspective, but which at the same time confronted both dialectology and historical linguistics with a number of fundamental challenges. These challenges were most explicitly formulated by Weinreich, Labov & Herzog (1968) in the form of five problems, which will be discussed in depth below (Section 3). Methodologically, the apparent-time construct was spelled-out, most notably in Labov's early publications. The fact that the apparent-time method acknowledged the gradual nature of language change necessitated further methodological developments, including the emergence of quantitative methods of data analysis (as exemplified, for instance, by the development of the VARBRUL program, Cedergren & Sankoff 1974, Sankoff 1988). In addition, instead of focusing on geographical variation, the emergence of sociolinguistics shifted attention to hitherto understudied types of variation within communities, including parameters such as social class, gender and ethnicity.

Generally speaking, sociolinguistics was perceived as the emergence of a new discipline rather than as a continuation of traditional dialectology. While the 19th century dialectologists may be credited as being the first to release linguistics from its preoccupation with forms of language conforming to all sorts of prescriptive and normative pressure, their ways of handling variation were

felt inappropriate by most sociolinguists. In particular, the dialect maps that had typically served as the main source of information for traditional dialectologists were somewhat discredited, and considered to be overly simplified, monolithic representations of a more complex, socially layered reality. It took considerable time before dialectology's focus on geographical variation and the sociolinguistic study of variation could be reconciled; one crucial work in integrating these was Chambers & Trudgill (1980). The gist of the solution is basically to start conceiving of geography no longer as an independent parameter, but rather as the scene where interpersonal and social relations are acted out. Thus, the effects of geography on linguistic variation became to be seen primarily as social facts, whereas geography was integrated as a key feature determining people's identity (for discussion, see, e.g. Trudgill 1986 and Britain 2002 on the 'dialectology of mobility', and Horvath 2004, who speaks of a 'neo-dialectological' turn in sociolinguistics).

The concern of sociolinguistics is, of course, wider than issues of language change and mainly involves the interrelationship between language and people's identity. This is for instance made clear in Eckert's (2005) recognition of three waves of sociolinguistic studies, of which only the first wave primarily deals with questions related to diachrony. Nevertheless, throughout the history of sociolinguistics there have been many successful attempts to link findings from synchronic sociolinguistic research to historical data. One such link is established on the basis of research into processes of linguistic accommodation, where it has been claimed that the fact that speakers tend to adapt their language on the interlocutor (i.e. accommodation) can give rise to linguistic change (also termed 'long-term accommodation', see, e.g. Trudgill 1986). Another link between the social and the historical is observed when individuals' social network structure is correlated with the role of these individuals in processes of linguistic change, as exemplified in L. Milroy's (1987) Network Theory, which distinguishes open and closed (dense, multiplex) networks, and situates innovators in the periphery of networks, and early adapters in the centre. More recent examples of findings from sociolinguistics which are relevant for historical linguistics are discussed in Section 2.6.

Thus, while the field of sociolinguistics has moved beyond the study of language change, and could arguably be called a more prominent subdiscipline of linguistics than historical linguistics, important lessons have been and are to be learnt from this line of research. The most significant contribution of sociolinguistics to historical linguistics in general is probably that is has been demonstrated time and again that one cannot fully understand the emergence, spread and loss of a linguistic feature without taking into account social facts such as society structure, group identity, or social network. In our view, the methodological and theoretical implications of this finding remain underexplored until this very day, especially

within structuralist thinking, which still strongly tends to conceive of language change as taking place in a social vacuum.

2.4 The discovery of dialects by generative linguistics

Until the 1980s, generative linguistics remained innocent with regard to the study of dialect variation. The limited interest in dialects is usually explained by reference to Chomsky's famous quote on the *ideal* speaker-hearer as the primary object of investigation:

> Linguistic theory is concerned primarily with an ideal speaker-listener, in a completely homogeneous speech-communication, who know its (the speech community's) language perfectly and that it is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of this language in actual performance. (Chomsky 1965: 3)

It is surprising that it wasn't until the 1980s that generativists realized that dialects are, of course, competence grammars, too, and therefore a legitimate object of study. From a purely competence-oriented point of view, it is entirely irrelevant whether a grammar belongs to a more or less prestigious variety, or whether it is used by many or just a few speakers. As a matter of fact, in more recent generative work it is argued that dialects are even better natural languages to be studied in order to uncover the basic principles underlying the language faculty, if compared to codified standard languages, as dialects are more immune against arbitrary normative manipulations, more directly a result of first language acquisition and naturally occurring language change (Weiß 2001).

Dialects are attractive for generative linguistics for at least three different reasons. First, as mentioned above, dialects are natural languages and therefore a legitimate empirical source for the assessment of hypotheses about the organization of the language faculty. In consequence, quite a few works have been published about the structure of individual dialects from a generative perspective (cf. for example Abraham & Bayer (eds.) 1993; Bayer 1984; Benincà (ed.) 1989; Haegeman 1992; Penner (ed.) (1995); van Riemsdijk 1989). The second interest is comparative. Barbiers (2010) describes the situation of the early 1990s as follows:

> [...] by comparing the grammars of different languages, a theory was developed to account for the attested variation between [...] languages (macrovariation). However, a theoretical and methodological apparatus for investigating intra-language variation (microvariation) was lacking. (Barbiers (2010: 129)

Kayne (2000: 5) compares the study of microvariation with a laboratory, thus he uses the same metaphor as Moulton (1962) did almost forty years earlier, a

laboratory "where one could do experiments with languages by altering minor properties of a language and observe which other properties change as a result of this" (Barbiers 2008: 4).

We believe it is rather naive to expect any linguistically relevant differences between macro- and microparameters. As for phonology, namely quantity systems in Fenno-Swedish dialects, Kiparsky (2008) suggests that cross-dialectal variation can be expressed by means of the same parameters that have been established to account for large-scale crosslinguistic variation already (cf. Seiler 2009 for a similar point with regard to quantity systems in German). As for syntax, Kayne (2005) admits that "whether microparameters in this sense [...] differ in any systematically interesting way from other parameters should be considered an open question" (Kayne 2005: 7; cf. Bayer & Brandner 2003 for a similar point). Also, we believe that a definition of microvariation as 'language-internal' variation is misleading (see Barbiers 2010: 129, citation above; cf. Seiler (2007) for an alternative definition of 'microvariation' as the smallest possible contrasts between grammars). For much of what is considered as 'language-internal' variation appears to be language-internal only if we understand 'language' as E-language, not as I-language. For example, Dutch (understood as E-language) admits five (out of six logically possible) orderings in three-verb clusters (Barbiers 2005). However, dialects differ in their choices of orderings in such a way that an individual dialect usually admits a smaller subset of the five orderings which are attested in the Dutch-speaking area as a whole. If a generative syntax is to be understood as a model of the I-language of a speaker we should refrain from constructing a Pan-Dutch grammar which generates all of the attested clusters since such a grammar overgenerates and is not an adequate model of any speaker's competence. Despite these issues, research into microvariation has sharpened the formal toolkit of generative linguistics in a significant way.

Apart from providing insight in natural language and allowing for comparative research, there is a third reason for generative linguistics to study dialects. Recently, generative linguistics has opened itself towards a deeper understanding of variation *within* a (I-)grammar (and not only *between* grammars). Although variant competition is not a dialect-specific phenomenon as such, dialects are a particularly relevant empirical source since competing variants are much more common than in standard languages where the codification process has tended to eliminate variant competition (Abraham 2009; Adger 2006; Barbiers 2005; Bresnan, Deo & Sharma 2007; Salzmann & Seiler 2010; Seiler 2004).

Simultaneously with the development of generative approaches to dialect grammar, generativists' interest in questions of language change has grown (Kroch 2000; Lightfoot 1991; Roberts 2007; cf. also Holt (ed.) (2003) for a collection of diachronic analyses from an Optimality-theoretic perspective). It is important to

note that the two lines of research, microvariation on the one hand and syntactic change on the other hand, have developed independently of each other, and, to our surprise, dialectal evidence has played only a very marginal role in much generative work on diachronic syntax so far. However, in more recent research on syntactic change dialectal evidence has considerably gained territory. It plays a crucial role in the argumentations by Abraham (2004), Axel & Weiß (2011), Jäger (2008), Breitbarth (2009), Fuß (2008).

2.5 Usage-based and evolutionary approaches

Following the emergence of the generativist paradigm, and partly also as a reaction to it, a number of linguistic frameworks emerged in which the central role of innate linguistic knowledge was questioned. Such frameworks come in different formats, many of them carrying a different name. In general, they have in common that they re-acknowledge learning through exposure as underlying the language acquisition process, and thereby subscribe to a vision of grammar that has been termed 'functional', 'emergent', 'evolutionary', 'Usage-Based' or 'cognitive'. While these terms are not exact synonyms, and each of these refers to a variety of approaches rather than to a consistent set of basic assumptions, we will consider these approaches to be highly comparable and accordingly use one term, viz. 'Usage-Based', to refer to them. Given the central role that is attributed to the linguistic input in the process of grammar formation, the fact that such Usage-Based approaches to language change have refrained from engaging in large-scale dialectological research is perhaps even more surprising than the neglect from the generative side. Indeed, within a Usage-Based conception of grammar it seems no longer warranted to conceive of language input as essentially homogeneous. Furthermore, Usage-Based approaches match the variationist paradigm in the adoption of stochastic models of grammar, and in the assumption that usage frequency is transmitted from generation to generation (see Phillips 2006 for discussion). Hence it seems as if Usage-Based grammar and variationist sociolinguistics bear a potential for being integrated into a unified approach, in which both linguistic and social factors can be given a role, and in which the effects of both types of factors can be compared (Phillips 2006; Clark & Trousdale 2010; cf. also Geeraerts, Kristiansen & Peirsman 2010 on cognitive sociolinguistics).

Especially in laboratory phonology, some degree of integration has been observed: in acquisition research, for instance, recent years have seen attempts towards more realistic modelling of language input and the mechanisms by which language learners draw a phonological system out of this, hence acknowledging the community rather than the individual as the locus of grammar formation, and also the (structured) heterogeneity of grammar. These attempts can be situated

both within the variationist community and outside, e.g. in evolutionary phonology or exemplar theory (e.g. Foulkes & Docherty 2006; Hay & Drager 2007). In (morpho-)syntax, the most explicit attempt to 'merge' functional and Usage-Based approaches with sociolinguistics is probably made by Croft (2000), who proposes an 'evolutionary' approach in which grammar operates on the basis of convention, and language users basically replicate 'utterances'. Of course Croft is neither the first nor the only one to draw a parallel between language change and evolution. In fact, this parallel may be thought of as emanating quite naturally from approaches in which grammar is seen as 'emergent' (Hopper 1987), in which the primacy of synchrony is challenged and grammar is (also) conceived as the product of highly complex diachronic processes (see Eckardt 2008 and Rosenbach 2008 for overviews, and Andersen 2005 for critical discussion). There seem to be very few attempts, however, of designing models of language change in which both linguistic and social factors are integrated, as Croft attempts. With respect to language change (or 'altered replication' in Croft's terms), a clear division of labour is proposed between functional and social factors: while the former underlie the emergence of linguistic innovations ('actuation'), the latter steer the acceptance by the community ('distribution', or, in Croft's terms, 'propagation'). This neat equation between actuation and functional motivations on the one hand, and diffusion and social motivations on the other, has been falsified, however (Seiler 2006; De Vogelaer 2006). In addition, it does not refer to geolinguistic variation, and hence it remains difficult to apply his framework on the patterns of geographical variation that have been detected during decades of dialectological research. Still, the mere fact that there is now serious work aiming at integrating findings from sociolinguistics in research on grammar change and vice versa, is an important development.

2.6 Dialects in an emerging sociolinguistic typology

In this section we will briefly discuss two lines of investigation in the emerging field of sociolinguistic typology, and we will propose a third one. The first line of investigation tries to relate structural properties of a language (in particular its degree of complexity) to properties of social structure of the community using this language. There has been a certain consensus among typologists that unmarked, preferred structures are expected to occur in all languages with equal probability in principle, whereby certain (even highly marked) typological features may cluster in geographically adjacent areas (and thus form a *sprachbund*). In serious modern linguistics there is no space for esoteric ideas about 'ecological' factors (climate and the like) which determine properties of linguistic structure. However, recent work suggests that typological features may also cluster in certain types of varieties,