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166. Sound Change/Lautwandel

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1. Introduction

In Malcolm Bradbury's novel "Rates of Exchange", a British linguist named Dr Petworth visits the East European communist state of Slaka on a British Council tour. While he begins to learn the first fragments of the (obviously) weird language spoken there, he realises that from one day to the next 'they' have radically altered the language's phonology: what used to be a ginnitoniki is now a gunnutonukku, a SCH'VEP-PUU sign has replaced the older sign advertising SCH'VEPPI, and the 'thanks' of the waitress is now slubob instead of formerly slibob. A 'sound change' has affected all instances of /i/ and turned them into /u/. A couple of days later, the political leaders return to the old /i/, and all the speakers do so as well.

After some 150 years of intensive linguistic discussion and research on this issue, it is probably fair to say that, although linguists disagree on many aspects of how sound change comes into being and spreads in a community, they all agree that it does not take place in the Slaka way.

Despite this agreement, the assignment to write a handbook article about the sociolinguistics of completed phonological change is difficult on more than one account. The first and most obvious reason is that after 40 years of quantitative studies on on-going

sound change (as initiated by Labov in the 1960s), the common view before the advent of variational sociolinguistics can no longer be upheld that a (sociolinguistic) theory of language change could be developed on the basis of historical data alone. The research done by Labov and others has not only shown that sound change in progress can be observed (a position shared by the early neo-grammarians but later discarded), it has also been able to fill many gaps in our knowledge of how sound change originates and spreads in a community. One need not go back as far as the High German Sound Shift (which occurred in the first part of the first millenium A.D.) to realise that the available data on completed phonological change may be sufficient to describe it in structural terms (our knowledge about the history of the phonological systems of the European languages is remarkably comprehensive), but hardly in order to describe its sociolinguistic embedding. The strict separation of on-going (art. 165) and completed change therefore does not make much sense when it comes to developing a sociolinguistic theory of how phonological systems change. On the other hand, Labov's "uniformitarian principle" (which he borrowed from Osthoff/Brugmann 1876; cf. Labov 1994, 18ff) assumes a far-reaching or complete homology between the social mechanisms of present-day and old or ancient sound changes. This assumption is open to dispute, of course, particularly when it comes to the invariance of social structures and their relationship to linguistic change; apriori, there is no reason to assume that the social conditions under which, say, the High German Sound Shift occurred were sufficiently similar to those under which the Northern Cities Shift in American English is

taking place today to warrant the claim that the investigation of the latter reveals the (sociolinguistic) truth about the former.

Another reason for which the topic of this chapter is a difficult one, is that splitting off phonology from the rest of linguistic structure is in itself highly presupposing and reflects the neogrammarian conviction that sound change follows regularities different from those in grammar or lexicon (Haas 1998). Some scholars have taken a different position and have developed all-encompassing theories on language change in which a separate treatment of phonology would not be justified.

Finally, the discussion of completed sound change in sociolinguistic terms is handicapped by the fact that many of the older writings on the subject are not at all or only marginally interested in its social aspects, or they base their statements on pure speculation.

The following discussion has a clear empirical and theoretical bias towards (Middle & North) Europe, particularly Germany. The chapter is written in English since many publications are not easily accessible and have not been translated from German.

2. Methodological issues

The empirical basis of historical socio-phonology can be of four kinds, for each of which I will present examples below. The first possibility is to resort to historical grammars, dictionaries, or commentaries on/critiques of the (then) language use, i.e. on second-hand (proto-) linguistic descriptions. Obviously, the analysis cannot be better than these descriptions which may be prejudiced, flawed, contradictory, based on limited knowledge, or stated in an ambiguous way which does not translate easily into modern linguistic terminology. The second possibility for doing empirical research is to investigate historical text corpora. These are, of course, no phonetic transcriptions in the modern sense and therefore only indirectly reflect the sounds of the variety to be investigated. Also, sub-standard varieties are not usually written, and written language is often more conservative than spoken language which can make the chronology of a change hard to reconstruct. Both methods are additionally hampered by the fact that they only reflect linguistic features which are salient enough to have entered the consciousness of the observer or writer. As we shall see below, an important tradition of research on phonological change claims that sound change proceeds unconsciously, unintentionally and in minute steps. It goes without saying that such a scenario does not match with the two methodologies just mentioned.

A third approach is to interpret modern geographical distributions of dialect as reflections of historical phonological changes. This method has the advantage of being based on large quantities of phonetic data which can be gathered with sufficient precision. The distributions can be compared to non-linguistic geographical parameters, both historical and modern. The disadvantage is that the assumption that no substantial changes have occurred since the sound change in question took place may not be warranted in many cases (see below, section 5).

A final method which is only just beginning to be used is to resort to corpora collected within the dialectological tradition over the past 100 years and compare them to the situation today. The time-depth of our available data collections is sufficient today to capture some instances of more recent, but completed phonological changes.

All methods run into increasing problems when it comes to the analysis of old or very old sound changes; the fourth method obviously is not applicable at all in this case.

3. The neogrammarian position

The two most fundamental issues which pervaded thinking about the social motivations of sound change before the mid-20th century are (i) whether sound change is without exception ("law-like" in the misleading terminology of the neo-grammarians) or the consequence of lexical diffusion and (ii) whether the spread of a linguistic innovation is a function of the intensity (frequency) of 'intercourse' (communicational contact, Verkehr) or rather of the social prestige of the carriers of the innovation. Obviously, the two questions are not entirely independent, and the answers are in neither case mutually exclusive. The first issue is not eo ipso a sociolinguistic one; however, the lexical diffusion position has come to be associated with a social/cultural explanation, and the 'sound law' position with a mechanistic, non-social one (an association which will be criticised below).

The first linguists who addressed this question in a serious way were the neogrammarians. Of all their writings, the single most important and influential monograph (although one which already reflects its mature stage) is arguably Hermann Paul's Principien der Sprachgeschichte (1st ed. 1880). Like any theory of phonological change, Paul has to address the question of how an innovation arises and how it spreads in the community until it finally becomes a complete language change. Regarding the reason for phonological innovations to occur in the first place, Paul argues for a certain underspecification in the mental storage of the articulatory gestures (Bewegungsbilder) attached to utterances, and an incomplete control of their execution by equally mentally stored acoustic images (Lautbilder, 55) of what other speakers say. Paul uses the picture of an archer who always slightly misses the target in shooting; in the same way, the (unconscious) aim of producing a certain sound or sound sequence is never fully realised. In order for a sound change to begin, the deviations from the target, which are an integral part of language and can never be suppressed, must be systematically biased in one direction (52f). The bias can be predicted by certain teleological principles (one may think of the ones proposed much later in Natural Phonology or, even more recently, in Optimality Theory), such as ease of articulation leading to assimilations. Sound change therefore is "langsam, ungewollt und unbewusst" ('slow, unintentional and unconscious', 1898, 29). It is worth noting, however, that Paul accepts the possibility of other types of sound change as well, which are not gradual, such as dissimilations and metatheses; they, too, have a 'natural' basis for him. Phonological innovation is always without exception (i.e., lexically and grammatically unrestricted).

The spread of an innovation (as well as its non-spread to a sub-area, which leads to dialect splitting – Sprachspaltung) is for Paul a function of 'intercourse' (Verkehr). Intercourse may be promoted or hindered by political and religious groupings (39). However, Paul offers no explanation for the fact that only in a small minority of cases, a 'natural' deviation from the phonological 'target' fails to be inhibited by the previously heard 'acoustic images' and can spread through the community until it becomes part of the established usage pattern

(Usus). Paul only points out that the sound change is complete once the next generation of speakers changes their 'articulatory images' accordingly (a topos found again in generative theories of language change). He seems to be aware of the problem and vaguely refers to the "mere play of chance" which can make a certain variant "preponderant" (57, translation P.A.).

Although Paul repeatedly stresses the importance of the individual speaker (whose mental activities - Seelenthätigkeit - for him are the locus of language change and the primary object of linguistic analysis), although he believes that variability is genuine and systematic, both in the individual and in the social group (55), and although he acknowledges the fact that it is through interaction between speakers that the language of an individual is "generated" (37), his theory remains (psycho-)mechanistic and non-social. The scenario he has in mind rests on the idealisation of non-nomadic tribes living in small social aggregates (migration leads to "mixing", which is to be sharply distinguished from endogenous change for him); the larger the territory occupied by a tribe, the more diversified its language becomes. Language history thus goes hand in hand with increasing areal divergence (45). In the background, the traditional Stammbaum (family tree) theory still lingers, in which convergence by language/dialect contact plays a minor role only.

From regular sound change, Paul distinguishes analogical change on the basis of a synchronically regular phonological alternation (Lautwechsel) - he mentions overgeneralisations such as intrusive (epenthetic) consonants (as in engl. idea-r-of) - and language change by borrowing from another variety. He contends that it is always words that are borrowed, while sounds are rather substituted by those of the phonological system of the receiving variety (376). Lexical borrowing, unlike phonological change, is governed by the prestige of the source variety or its speakers, and can be intentional and conscious. Obviously, it is never gradual. In this sense, change by language contact is the opposite of regular, endogenous sound change. However, both change by analogy and by mixing are marginal in the Principien.

I have outlined Paul's approach in some detail even though it does not include a more than negligeable sociolinguistic component.

The reason is that most later approaches critically refer to his theory; this also applies to the variationalist-correlational approach in sociolinguistics which started out with an appraisal of Paul's *Principien* (by Uriel Weinreich; cf. Weinreich/Labov/Herzog 1968, 104–125) and has reached the point of an explicit rehabilitation of the neo-grammarian position today with Labov's *Principles of*

Linguistic Change (1994).

It should be mentioned at this point that Saussure's Cours, the "diachronic" part of which otherwise neatly summarises the neogrammarian position, only superficially appears to be more sociolinguistic than Paul. Saussure does introduce his two conflicting forces, la force d'intercourse and l'esprit de clocher (1916/1972, 281); for him, Paul's 'intercourse' - mechanistically leading to accommodation of the vis-a-vis' speech - is conterbalanced by an attitudinal factor of local belonging (identity). Saussure also seems to have realised that Paul's equation of spreading by 'intercourse' and endogenous change is based on his idealisation of the speech community as a self-contained social unit which has no contact with the neighbours. For Saussure, the propagation of a feature beyond the foyer d'innovation ('point of innovation') to the aires de contagion ('area of contagion') is a matter of borrowing (emprunt de phonème, 284) as well - the kind of borrowing explicitly marginalised by Paul. Consequently, borrowing within the speech community and across communities becomes almost undistinguishable, and the notion of 'spread by intercourse' takes on a somewhat different meaning of Paul's. On the other hand, Saussure's complete relegation of (regular) sound change to the realm of the parole, and his exclusion of the individual from linguistic analysis has, despite his acknowledging that the langue is a social phenomenon, hindered the incorporation of variability and change and its sociolinguistic explanation into linguistic theory.

Saussure's distinction between la force d'intercourse and l'esprit de clocher was taken up later by Andersen (1988) and rephrased as existing between exocentric and endocentric open vs. closed network communities, where the first distinction refers to attitudes, the second to communication. The exocentric open network, type of community is the more usual ("central") one; it is characterised by levelling and simplification

since it is open to borrowing. The endocentric/closed network type is more "peripheral", and characterised by the accretion of elaborate low-level phonetic rules which can finally turn into complex phonological systems. Andersen argues that only endocentric communities are able to develop what he calls "exorbitant" (70) sound changes. His example is the epenthesis of non-etymological coda stops (as in Ripuarian German/Cologne tsigg ~ std. Germ. Zeit 'time'). Apart from the fact that what is an "exorbitant" feature may be difficult to judge, the argument is empirically weakened by the fact that although non-etymological coda stops occur in some rather peripheral dialects (Romantsch), the classification of the Ripuarian area and particularly of Cologne as peripheral runs counter to all evidence. See the comments on the High German Sound Shift below, which, contra Andersen 1988, 71, do not support his view.

4. The counter-argument: Hugo Schuchardt

When Saussure questioned the distinction between the spread of an endogenous sound change through 'intercourse' on the one hand, and borrowing on the other, he only echoed Hugo Schuchardt, the most outspoken opponent of the neo-grammarian position, who wrote in 1885 (1928, 60, translation P.A.):

"The influence of one dialect on the other, which, according to the neo-grammarians, can disturb a sound law without any exceptions, and the convergence of individual languages, which according to the same neo-grammarians makes sound laws without any exceptions possible, these processes of contrary effect are essentially the same, they are but different degrees of mixture."

For Schuchardt, borrowing is the basis of all change (sound change or not), and language mixture occurs everywhere, even "in the most homogeneous speech community" (64). It originates from "conscious or half-conscious" imitations of speakers of prestige, and must be treated like a matter of fashion (Sache der Mode, 63f), i.e., it is subject to a sociological interpretation.

Schuchardt underlines the possibility of "phonological analogy"; a phonological change in a single word, or a regular change in a certain phonological environment in a group of words, diffuses through the lexicon

to other similar environments (rule generalisation). One of his examples is the diphthongisation of vulg.lat. /ɛː, ɔː/ to ital. ie, uo which he believes to have started with a rule of metaphony (/i, u/ in the following syllable triggers high onset of the vowel and consequently diphthongisation: vieni, buonu); the innovation then spread by semantic analogy to other forms in the paradigm (viene, buona) and finally by purely phonological analogy to semantically and grammatically unrelated words (pietra, ruota). Words like nove 'nine' (vs. nuovo 'new') would be lexical remnants that have not been reached by word-wise phonological analogy.

It is not clear from Schuchardt's writings whether he believed that this kind of lexical diffusion can replace the notion of sound change in toto. His reference to Trautmann's study on the wave-like spread of uvular /R/in Europe as an example of the appropriate way of approaching variation and change (63) suggests that his main point was rather that all sound change is subject to an explanation in terms of social prestige, be it regular or through lexical diffusion.

Trautmann's often cited study on the origin and spread of uvular /R/ in Europe (1880) reconstructs the transition on the basis of contemporary testimonies within a prestige model of language change. He identifies the précieuses fashionable court ladies of the time before 1670 at Paris – as the inventors of the fricative, uvular /R/ and looks upon this "r gras" as part of their general predilection for artificiality in clothing, hairdressing and grooming, gardening – and lan-guage. Since he is convinced that "the German society of the 17th and first half of the 18th century was too stupid and too stiff to arrive at this ugly invention of the précieuses themselves, they must have introduced it from France" (translation P.A., 218). He finds evidence that uvular /R/ was first and occasionally used in the late 17th and early 18th century in Germany; it came to be fashionable in the higher social classes of the cities and from there continued to spread down the social

Both of Schuchardt's points – the claim that phonological change can be conscious and intentional and the claim that the spread of phonological innovations can proceed word by word and eventually gain generality by analogy – were taken up later; Coseriu (1957; 1974) is an example for the first, Haas (1978) for the second.

Haas (1999) summarises a number of examples of recent but partly completed phonological change in the Swiss German dialects which support the

lexical diffusion model, based on the comparison of older and modern dialect corpora. For instance, a recent and still expanding innovation in these dialects is the vocalisation of /l/ in syllable coda position and in geminates (as in [sawts] = std. Salz 'salt') which has been diffused from the Oberaargau (Kanton Bern) to the whole of the western part of German-speaking Switzerland since the 19th century. Comparison between the Swiss German dialect atlas (SDS) and data collected 40 years later at the end of the 20th century shows that this feature has reached the Kanton of Fribourg as well, where it is almost exclusively used today. However, the vocalisation is clearly lexically conditioned, for it is much less frequent and still highly variable in loan words (fatal) or in geographical names (Basel). In addition to failing to meet the regularity criterion, the l-vocalisation is also socially meaningful and not automatic, as the city of Fribourg shows. Here, the innovation carries less prestige than in the sourrounding Kanton and is stigmatised as rural in the expanding German-speaking middle classes; as a consequence, it is even less frequent in the modern data than in those of the SDS.

Particularly noteworthy in Schuchardt's tradition is Leo Spitzer's (1943) proposal to provide the missing link in Paul's argumentation and explain why sound change is sometimes inhibited by community norms and sometimes not. Against the mainstream opinion that sound change follows the principle of least effort, he argues that its basis is rather an "overemphasis on orthodox pronunciation" (Spitzer 1943, 423), an attempt to speak particularly clearly and distinctly. The origin of sound change is thus intentional - speakers want to conform to a norm - and not mechanical; but the linguistic effect is not intended, since the norm itself is not exactly known and the speaker overshoots the target. Spitzer's model in this sense clearly follows the 'invisible hand' explanation of change (the innovator is for him a "revolutionist malgré lui", 421). It is only consequential that he believes that phonological processes of strengthening of this type set in at times of normative insecurity, i.e. in "a state brought about, to some extent, by racial mixture, but mainly by conditions of cultural unrest" (422). One of his examples - at the time of the article an ongoing innovation - is Hitler's tendency to lower std. German /ɔ/ to /p/ / (as in Volksgenossen). Spitzer interprets it as an overavoidance of Hitler's native Austrian closed /o/ in the same position, "which betrays standard German while purporting to endorse it - and which ultimately reveals a cultural uncertainty"; if Hitler were to remain in power, so Spitzer continues, and remain a "national idol", "the levelling power of radio broadcasting would lead to his innovation becoming the phonological law for the whole of Germany; and such an innovation <...> would have been born out of a thwarted tendency toward conservatism" (423).

5. The contribution of dialect geography

Despite Schuchardt's critique the neogrammarian position gained the upper hand, and a kind of working consensus was reached around 1900 in European historical linguistics and dialectology according to which regular sound change is mechanistic, physiological, gradual and not subject to sociological conditions such as prestige. Another type of sound change is opposed to this which is often called sound substitution (Lautersatz) and which is considered to be the consequence of mixing with neighbouring dialects; sound substitution is conscious, lexical, open to analogical generalisations and a function of prestige (see Seidelmann 1987 for a summary). As outlined above, the opposition between Lautwandel and Lautersatz is by no means indisputable; in fact, there is no compelling evidence why regular sound change should not be socially conditioned/controlled, nor why sound substitution should always be intentional/ conscious; as Paul himself points out, regular sound change may be non-gradual, and at least for him, all sound change is "psychological" (since it involves mental "movement and sound images").

In dialectology, it was the ingenious but little known Swabian dialectologist Karl Haag who first noticed this inconsistency. He pointed out that "waves" of regular sound change nowadays often are of exogenous origin, and that they spread in a socially meaningful way (starting in the "tonangebenden Kreisen", the socially leading circles; cf. Haag 1929/30, 21 for a late summary of his position). The spread of uvular /R/ mentioned above is a case in point. Seidelmann (1992) takes this model one step further and argues for a four-fold distinction of endogenous/exogenous sound change/sound substitution. Endogenous sound substitution equals Paul's phonological analogy, exogenous sound substitution lexical re-allocation through borrowing. Endogenous sound change is neo-grammarian sound change sensu stricto, exogenous sound change is borrowing of a phonological rule; it can lead to compromise (intermediate) forms and/or phonetic approximations.

It was also at the beginning of the 20th century that the first large dialect atlas projects began to show results, and this opened up an entirely new way of investigating historical sound change on the basis of modern geographical distributions (isoglosses). The proponents of the new methodology vigorously proclaimed the beginning of a new era: "The times are gone when it was believed that the language history of a region could be created primarily from the written and printed tradition of its language", Theodor Frings begins his Rheinische Sprachgeschichte (1922, translation P.A.), one of the first studies of this kind. The new method made it possible to address the two fundamental questions raised earlier ('sound law' vs. lexical diffusion; 'intercourse' vs. prestige) in a new fashion.

With regard to the first, inspection of the maps showed that isoglosses reflecting the same phonological change did not completely coincide when they were investigated in different lexical contexts (even when the phonological context was kept constant). Prima facie, this provided evidence for Schuchardt's conviction that "every word has its own history" (Spitzer 1943, 415) and for the idea that sound change is always sound substitution through borrowing (=lexical diffusion). For instance, Kloeke (1927) studied the geographical distributions of wgerm. /u:/ → /y:/ and consequent /y:/ → /øy/ in the Netherlands on the basis of the words muis ('mouse') and huis ('house'); he found a larger area for /y:/ (vs. /u:/ in huis), arguably the word more frequently used in out-group situations, and concludes that the new sound was copied word-wise from more prestigious speakers (presumably from Holland/Amsterdam).

In retrospect, it is clear, however, that the 'ragged' character of isoglosses need not necessarily refute the neo-grammarian position. First of all, the factual degree of similarities in the atlas materials reflecting the same phonological change tends to be underestimated (cf. Labov's re-analysis of the SED data for ME \hat{u} and the Great Vowel Shift; Labov 1994, 472 ff). The tendency is due to the way in which dialect atlases tradi-

tionally are conceived and dialect maps drawn. Often, recent developments are not included at all. Formerly regular sound change may have become unproductive and dissolved by later borrowings from other areas, and from the overarching (regional) standard or regiolect. The older the phonological change, the less the present-day distribution can be expected to mirror exactly the state of the period in which the change occurred. An example is again the High German Sound Shift; while the traditional view assumes the spread of a regular sound change from the south (perhaps from the Alpine region where it may have originated as an instance of exogenous sound change through language contact), Vennemann (1992) argues that the modern geographical distribution of dialects is far too irregular to be due to a neo-grammarian sound change alone, and that the dominant assumption of a spread from the South of the Germanspeaking area (where the phonological change is most complete and affects all Germanic stops /p(p), t(t), k(k)/) to the North is implausible anyway since the dominant cultural influences at the time came from the (Franconian) North. His own model suggests that the regular sound change had already occurred before the Bavarian and Alemannic tribes settled in their early medieval homes and was 'pushed back' after their settlement in the present territories word by word from appr. the 6th century A.D. onwards through the influence of the dominant northern Francs.

With regard to the second question ('intercourse' vs. prestige), the use of dialect maps seemed first of all to suggest a mechanical explanation of the areal promotion of a phonological innovation in terms of faceto-face accommodation since isoglosses can easily be related to geographical (mountains or swamps inhibiting communication, rivers or roads favouring interactional interchange) and political borders (frontiers inhibiting exchange). However, the internal logic of the use of modern dialect geographical distributions for the reconstruction of historical changes is incompatible with the 'intercourse' model, since it is based on the premise that language change lags behind factual changes in communication patterns. According to this logic, geographical distributions must have remained intact over centuries after the old communication borders (Verkehrsgrenzen) disappeared, for

instance, because political frontiers dissolved or technical innovations made natural borders irrelevant. Historically interested dialectologists such as Frings assumed instead that "the frontiers of the smaller and larger territories, <...> the tricks of local politics as well as the political groupings governed by farsightedness, the policies of churches and the church, the movements of traffic, commerce, economy and cultural life in general <...>, all this lives and lived in the geographical groupings of words, stress patterns, sounds, forms, word formation elements and syntactic constructions" (Frings 1922, 2, translation P.A.); in short: that "the development of the linguistic isoglosses bows its head before each historical speciality" ("die sprachliche Linienentwicklung verneigt sich vor jeder geschichtlichen Eigenstellung", Frings 1922, 11). How could the whole of political-cultural history leave its imprint on language if language diversity was a mere function of communication? The obvious conclusion was that history leaves its traces in the mentality, the cultural memory, the ethno-dialectological representations of the population, which in turn determine their way of speaking. It is NOT a function of communication alone.

Another argument shows the inadequacy of an explanation exclusively in terms of 'intercourse' even more clearly: the absence of a natural or political border does not predict whether innovations will spread in one direction or the other; it only predicts some kind of instability (levelling?). In order to explain the direction of change, a prestige model is necessary (unless, of course, it can be predicted on structural grounds: simplified/less marked forms tend to 'win' in dialect contact/koineisation; cf. Andersen 1988).

This view finally gained the upper hand particularly in the so-called Marburg school of dialectology in Germany. Walther Mitzka argued as early as 1928 on the basis of his observations on dialect levelling in the then German province of East Prussia that it is the "feeling of superiority or inferiority" (1928, 56, translation P.A.) which is ultimately responsible for the spread of a dialect feature or its inhibition; 'intercourse' only protects low prestige areas and is a catalyst for the spread of features from high prestige areas. The speakers of the Low Prussian dialect who carry the prestige (Mehrwert) over the other dialects do so because they belong

to particular social classes in Mitzka's view, i.e. he explains prestige in socio-cultural and socio-economical terms (65). This is the position of the later text-books on dialectology as well (cf. Bach 31950, 65), although dialectologists at the time did not always resist the danger of resorting to some mysterious and entirely speculative Gruppensonderart ('special group character'; Moser 51965, 59) or "special mental attitude, special Weltbild, special way of being' (Bach 31950, 59, translation P.A.) in order to explain resistence to change, or dominance of one group over the other. Here, we find remnants of the ethno-cultural views of the early 19th century according to which it is the 'psychology' or 'nature' of a people which is responsible for phonological change. (An example is Jakob Grimm who argued that the High German Sound Shift was on the one hand "barbarious and a symptom of a lack of civilisation" (barbarei und verwilderung) which "more settled" people would abstain from, but that it was on the other hand a sign for the "enormous pro-gress (Vorschritt) and will to freedom of the Germans"; Grimm 1848 [1880, I, 292], translations P.A.).

The Deutsche Sprachatlas, founded by Wenker in 1876, spurred off a large amount of studies based on its maps and was in this sense much more influential than its followers. One of the most elaborate studies of this kind was Frings' joint research with the historians/folklorists Hermann Aubin and Josef Müller (Aubin/Frings/Müller 1928) in the Rhineland. The idea was to arrive at a "sociological" interpretation by integrating the results of dialect geography into "cultural historical geography" which would be an interdisciplinary attempt to arrive at a definition of "cultural landscapes" (cf. 21966, 96f). Nevertheless, Frings and his collaborators failed to develop a theory of cultural historical linguistics; the interpretations Frings offers refer arbitrarily to natural boundaries, territorial frontiers, routes of commerce, but also social classes and many other factors. Most of the evidence is based on highly metaphorical interpretations in which "waves" of innovations are said to "invade" and "conquer" new regions. The speakers themselves do not play a

One of the important sociolinguistic findings of geographical dialectology concerns the special role of the towns and cities. Although urban dialects with their internal social stratification were not within its field of interest (nor within the reach of its methodology), evidence from the maps made it clear that innovations often reach the towns and cities before they are accepted in their rural surroundings. Also, they may spread from city to city instead of following a simple wave-like pattern (a phenomenon sometimes called "city hopping" in the more recent literature; cf. Moser 51965, 62f for examples from the south of Germany). A good example of this type of research is Debus' 1962 study on the cities of Cologne, Dusseldorf, Kassel and Marburg.

6. The role of the standard variety (cf. art. 30)

The neo-grammarian model of sound change incorporated, in addition to endogenous developments, some kind of 'horizontal' contact between varieties. It did not, however, provide for any standard influence on the dialects. In fact, the whole dialectic between standard and dialects was explicitly excluded from consideration both by Hermann Paul and Ferdinand de Saussure.

Research on the sociolinguistic embedding of completed 'vertical' phonological change in the standard/dialect dimension necessitates taking into account social class structure, i.e. it calls for some consideration of the 'vertical' (hierarchical) structure of society as well. It was the folklorist Hans Naumann who formulated the first influential hypothesis on the relationship between social class and dialect/standard in the 1920s in Germany (see, e.g., Naumann 1925). His basic idea was that upper and lower classes relate to each other in terms of language just like in any other field (clothing, furniture, religion, literature, customs, mentality) and that in all these spheres, the upper classes exert an influence on the lower ones who imitate and adapt their achievements; Naumann speaks of "sunken (fallen) culture" (gesunkenes Kulturgut). Innovations (such as the High German Sound Shift) usually enter the repertoire of a speech community through the upper classes who borrow from some neighbouring high culture, and then descend towards the lower classes. In this process, they are changed according to their "primitive community culture". But the "uncontrolled" and "lax", as well as "loud" and "emo-

tional" (63) speech of the dialect speakers also makes them progress much faster than the standard varieties which are controlled by writing; as a purely spoken variety, the dialect tends to strengthen the stressed syllables and to weaken the unstressed syllables in a way unknown to the standard. These 'natural' changes from below can also enter the standard variety (change from below), however only in times of social unrest and political upheaval or even catastrophe (65f). In sum, Naumann believed that the popular language is not, as previously thought, more traditional or even archaic than the standard variety, but rather more innovative. The argument is problematic since it rests on an unwarranted equation of spoken/written language and dialect/standard, but it introduces the important idea that change from below is endogenous, spontaneous and regular, while change from above is prestigedriven and associated with borrowing

Modern, empirically founded studies on completed sound change in the standard/ dialect dimension usually refer to the spread of certain standard features into non-standard areas and social classes, i.e. on change from above.

For instance Voitl (1988), reconstructs the recession of word-initial voicing in the dialects of Southern England (as in five, seven, thick) on the basis of data from the Survey of English Dialects (SED), a phenomenon he believes to have had its widest geographical extension in the Middle English period. He comes to the conclusion that the recession must have proceeded word by word in a process of lexical re-allocation (witness hypercorrect forms such as fessel for vessel). Voitl presumes that voicing became "a sign of social stigmatization by reference to the speech of the educated gentleman" (576, an explanation in terms of a prestige model) but that this did not occur before the 19th century, when mobility to and from London increased enormously (578 f, an explanation in terms of 'intercourse').

Mattheier (1981) investigates the replacement of word-initial /b/ by southern (High) German /p/ in the city of Cologne in the period from 1540–1650 on the basis of historical text corpora. Arguing in a prestige model of language change, he shows that the replacement is influenced by the text type and by the education of the writer. What is in need of an explanation is the fact that /b → p/ was not successful in Cologne after all, al-

though the High German forms began to overlay the older Low Franconian ones everywhere else in the language due to the prestige of the southern printers'/writers' varieties. According to Mattheier this explanation can be found in the fact that the low prestige, lower class Cologne dialect still had remnants of the older West Germanic /p/ in words not affected by the High German Sound Shift. Therefore, the new Southern forms would not have been as unambiguously prestigious as the other Southern innovations.

Mihm et al. (2000) present a similar corpus-based analysis of the replacement of Low German by High German sounds in the 14th to 16th century in council and court minutes and other municipal documents of various towns in the Rhine/Maas area. Their findings allow differentiation between various layers of phonological additions to the Low German repertoire. For instance, in the town of Ratingen, from 1375 up to 1600, the town scribes slowly progressed in their use of the prestigious, high-variety High German forms imported from Cologne (wgerm. /t/ realised as fricatives/affricates and wordfinal wgerm. /p/ as <f>). Mihm et al. suggest that the local upper class in Ratingen showed some orientation towards Cologne as the cultural and economic centre, but also remained loyal to the local, Low German speaking town population. Quite in contrast, the adoption of most other High German phonological features took place rapidly within 40 years in the final decades of the 16th century without the mediation of Cologne. At this time, the upper classes began to distance themselves linguistically from the lower classes (downward divergence); the ensuing devaluation of Low German has remained valid up to the present day. Also cf. Maas (1988) for an indepth analysis of the Northern German writing practices of individual scribes during the time of the adoption of High German as the standard variety.

The opposite case of a change from below gives rise to the question of which non-standard features may become acceptable in standard speech and which may not. Jahr (1988) argues that it is only urban non-standard features which can make their way into the standard variety. His example is the present-day Oslo city dialect (quasi the spoken standard) which has adopted velarised [†] (instead of [rl]) alternating with

retroflex [[] in the 1930s from the low-prestige East Oslo *urban* dialect; today, the spoken standard gradually replaces [‡] by retroflex [[], however, not after /a, ɔ/. The reason why this sound change is not generalised to this context is that the Oslo variety would then collapse with the /l/-system of the low prestige *rural* dialect of Østfold in the immediate surroundings.

7. Concluding remarks

Empirically well-founded sociolinguistic studies on historical sound change are still not very numerous. There are many well-known but little investigated issues, such as the case which comes closest to the Slaka example of section 1, i.e. that of phonological change due to language planning (but see Jahr 1989), and the interesting issue of the reversal of phonological changes such as 17^{th} century French $r \rightarrow z$, which were never completed.

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167. Grammatischer Wandel/Grammatical Change

- Wissenschaftstheoretische und methodische Vorbemerkungen
- 2. Definitionen
- 3. Grammatiksysteme
- 4. Sprachwandel
- 5. Grammatikwandel
- 6. Literatur (in Auswahl)

Wissenschaftstheoretische und methodische Vorbemerkungen

Grundprinzip empirischer Wissenschaft ist der Bezug auf physische Realität. Zwar ist es beim metasprachlichen Diskurs – in der Linguistik allgemein wie auch im Teilbereich Soziolinguistik – üblich, oft wohl auch unumgänglich, mit begrifflichen Konstrukten zu operieren, damit die Argumentation nicht ausufert, doch muss bei solch verkürzendem Verfahren stets ein Rückgriff auf zugrunde liegende Realität möglich bleiben. Auf keinen Fall darf die linguistische Algebra zum Selbstzweck ausarten.

Gegenstand der Grammatikforschung ist ein definierbarer Ausschnitt aus der sprachlichen Kommunikation, die in zwei Beobachtungsformen empirisch vorliegt: als Menge hörbarer Äusserungen im pragmatischen Zusammenhang der Interaktion zwischen Sprecher und Hörer sowie – als Korrelat hierzu – die während der Äusserung sich im Gehirn von Sprecher und Hörer abspielenden Prozesse (Friederici 1984, 13–14). Zwar mögen die zu letzteren erbrachten neurologischen Befunde sich bislang erst selten mit linguistischen Daten sinnvoll kor-

relieren lassen, doch liegen gerade in der Grammatikforschung vielversprechende Ansätze vor, welche auf die Frage nach der raison d'être grammatischer Module und Verfahren (neben der Lexik – und als Ergänzung zu ihr) neue Antworten erlauben.

Was die Theorie zum grammatischen Wandel betrifft, liegt sie im Vergleich zur erfreulichen Vielzahl empirischer Arbeiten mit oft signifikanten Ergebnissen eher zurück. Es fehlt bei einschlägigen Versuchen immer noch teils die klare Differenzierung bei der Argumentation zwischen der Ebene der Konstrukte und der Ebene der physischen Realität, teils überhaupt der Rekurs auf die sprachliche Kommunikationstätigkeit. Da ähnliches nicht nur für die Grammatik, sondern auch für andere Bereiche des Sprachgeschehens gilt, kann als vorläufige Konsequenz gelten: es lohnt nicht, separate Theorien für Teilphänomene des Sprachwandels zu entwickeln, bevor man nicht über eine allgemeine Sprachwandeltheorie verfügt.

2. Definitionen

2.1. Sprache

Eine Sprache (frz. langue) lässt sich soziolinguistisch definieren als die Menge in einer Gemeinschaft tatsächlich gesprochener Äusserungen (Croft 1996, 109: "the population of utterances in a speech community"); mit anderen Worten: eine Sprache ist gegeben durch die Performanz; die Performanz ist,