

STRONG AND WEAK CONSONANTS IN OLD AND MODERN GERMANIC

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ABSTRACT

As a phonetic parameter, consonant strength is inseparable from length, aspiration, and voice. Distinctive strength should not be recognized unless it is allowed to function word initially. In Germanic, only southern German has always fulfilled this condition.

In modern Germanic, the idea of consonant strength finds its main support in the functioning of obstruents in southern German dialects. A historian of Germanic observes strength in the study of the Second Consonant Shift, for intervocalic /p t k/ yielded /ff zz xx/; it appears that /p t k/ did not only change their place of articulation but were also reinforced. In word initial position, /p t k/ became affricates. To the extent that /pf ts kx/ are stops pronounced with a lax explosion, they can be looked upon as spliced and drawn out stops, i.e., as sounds homologous with /ff zz xx/. Intervocalic /p t k/ would probably also have become affricates, but they had to retain their independence vis-à-vis the reflexes of old /pp tt kk/, which yielded affricates and made /p t k/ seek new realizations. Later all the reflexes of the Second Consonant Shift in High German behaved as strong.

Notker's Law also testifies to the presence of the ancient correlation of strength, at least in part of Alemannic. According to this law, word initial /p t k/ occurred in Notker's dialect after a pause and after the nonsonorous final consonant of the preceding word, while sonorous word final consonants were followed by word initial /b d g/ of the next word. Since in Notker's system vowels and /l m n r/ were opposed to all obstruents, the main distinction must have been between sonorous and nonsonorous consonants. For Notker /p t k/ and /b d g/, along with the fricatives and affricates, were nonsonorous, i.e., voiceless rather than voiced, but his /p t k/ did not coalesce with /b d g/, as hap-

pened in Central German dialects. The feature distinguishing Notker's /p t k/ from /b d g/ was therefore the degree of sonority, even though it demarcated two classes of voiceless stops.

The greater the intensity of voiceless stops, the less sonorous they must be. Conversely, to remain voiceless and to acquire a measure of sonority, voiceless stops need a lax articulation. It is reasonable to assume that the nonsonorous voiceless stops were strong, whereas their less sonorous correlates were weak.

The history of /t/ can likewise be interpreted in terms of strength. By Notker's Law, /d/ < /b/ (as in *daz* 'that') alternates with /t/, so Notker had /t/ that participated in the opposition of sonority, or strength (*taz* versus *daz*). But /t/ < /d/ (as in *tac* 'day') did not alternate with /d/. The sandhi phenomena subject to Notker's Law show that when stops were not affected by sonorous sounds, they were strong. The phoneme /t/ < /d/, strange as this conclusion may seem, was always strong.

Later events confirm this conclusion. In Middle High German (MHG), stressed syllables of disyllabic words were lengthened (either the vowel or the intervocalic consonant was affected), but /t/ remained short after a nonlengthened vowel. Apparently, short /t/ possessed the property (strength) that the other consonants acquired as the result of lengthening. MHG /m/ behaved in the same way, which comes as a surprise and makes it clear that our reconstruction is incomplete; sonorants could, most probably, also have been strong and weak, as is the case in many modern southern German dialects.

The existence of strong and weak consonants in modern High German dialects is an established fact, but strength is, as a general rule, synonymous with gemination: strong consonants are long, weak consonants are short. The question arises to what extent length is different from strength. Strong intervocalic

consonants are always long, and the same dependence characterizes word final consonants in monosyllables. In High German dialects, a strong consonant tends to follow a short vowel, and a syllable containing a long vowel most often ends in a weak consonant. In nearly all dialects in which vowels were lengthened in monosyllables of the *Kopf* 'head', *Tisch* 'table', *Loch* 'hole' type, word final strong consonants underwent weakening.

The formula "short vowel + strong consonant versus long vowel + weak consonant", as it is known, for instance, in Middle Bavarian, is not in principle different from the formula "short vowel + long consonant versus long vowel + short consonant", as it is current in all the modern Scandinavian languages except Danish. Strength as a feature distinct from gemination should be posited only when it differentiates consonants in word initial position.

Previous discussion centered on High German, but the terms *fortes* and *lenes* are widely applied to all the other old and modern Germanic languages. However, outside High German only analogues of strong and weak consonants can be detected, and sometimes these analogues turn out to be false. For example, between the 13th and 16th centuries late consonant shifts took place in Germanic. They affected old obstruents in Icelandic, Faroese, and Danish and resulted in the dephonologization of voice and phonologization of aspiration in /p t k/:/b d g/. Although on a smaller scale, this process has also been recorded in Swedish, Norwegian, English, and Low German. Loss of distinctive voice could have been due to the new role of the syllable as the minimal unit of segmentation in later Germanic, but, whatever its causes, it did not make strength distinctive.

There is no gain in calling aspirated consonants in Icelandic, Faroese, and Danish strong, the more so because aspiration is rather a concomitant of *lenes* than of *fortes*, despite the widespread tradition to identify aspiration with strength. Nor will we learn anything new about Germanic if instead of describing /pp tt kk/, etc. as geminates we rename them *fortes*.

In many cases, voiceless consonants (given the correlation of voice) behave like *fortes*. Everywhere in Germanic lengthening in disyllables took place before voiced consonants more easily and earlier than before voiced ones. In High German, weak consonants were the "nonblockers" of lengthening, but elsewhere this function was performed by voiced obstruents.

As pointed out in connection with the history of MHG /t/, in words of the (C)VCV structure either the first vowel or the intervocalic consonant was lengthened. In the disyllables of Middle Danish, intervocalic /m/ prevented vowel lengthening, as it did in MHG; cf. Modern German *Hammer* 'hammer', *Sommer* 'summer' and Modern Danish *gammel* 'old', *komme* 'come'. In some dialects of Middle Swedish, /p t k/ blocked vowel lengthening (i.e., they resembled strong consonants), while in others they joined /b d g/ (and so resembled weak consonants). But Old Scandinavian had neither consonants like those which arose in High German by the Second Consonant Shift nor alternations of word initial obstruents of the Alemannic type (Notker's Law), and without them we lack the means for reconstructing an ancient correlation of consonant strength. The similarity between the role /m/ played in Danish and in German cannot be ascribed to chance, but more convincing arguments are needed to equate the consonant systems of Middle Danish and MHG with regard to strength.

In languages with the correlation of syllable cut (i.e., in all the West Germanic languages and Danish), analogues of the High German *fortes* and *lenes* exist too. When the contact is "tight" (*stark geschnitten*), or after a checked vowel, for example, in English *bid*, /d/ is phonetically stronger than /d/ under the "loose" accent (*schwach geschnittener Akzent*), or after a free vowel, for example, in *bead*. Even within one and the same prosodic type (*bid/bit*, *bead/beat*), vowels are longer before voiced than before voiceless consonants (the reason is the same: the relative weakness of voiced consonants), but these distinctions are not supported by the main feature that makes strength in High German an independent entity, i.e.,

by the alternation strong/weak in word initial position. Nor does consonant length go together with the correlation of syllable cut.

It appears that *fortes* and *lenes* in Modern Germanic exist only where they existed of old, i.e., in the southern dialects of German.

While studying consonant strength, we become aware of a paradox significant for phonology on the whole: it is sometimes easier to reconstruct past events than to analyze synchronic relations. Here are a few examples. In the opposition /b d g/:/p t k/, /b d g/ are marked if the distinctive feature is voice. Such is, for instance, the situation in Russian. Regardless of whether the word final obstruents of Modern Russian are identified with voiceless phonemes (in which case [prut] *prud* 'pond' or *prut* 'switch', sb., are phonemicized as /prut/) or assigned to different obstruents on morphological grounds (then *prut*, genitive *pruta*, is /prut/ and *prud*, genitive *pruda*, is /prud/), or called archiphonemes (then both are /pruT/) — all three solutions have been offered — the fact remains that in the position of non-discrimination only voiceless sounds are allowed to occur, so voice appears to be the marker of the opposition.

Despite the differences between the consonant systems of Russian and German, speakers of German will also agree that /b d g/ are marked and /p t k/ unmarked, for *Rad* 'wheel' (dative *Rade*) is related to *Rat* 'advice' (dative *Rate*) as *prud* (in Russian) is to *prut*. Even if we treat German /b d g/ as weak and /p t k/ as strong, /b d g/ will retain their status of marked members, however awkward it may be to call weakness marked when there is strength. On the other hand, in English, in which the opposition /b d g/:/p t k/ is not neutralized according to the German-Russian pattern, markedness and the nature of the marked feature are harder to define. Neutralization, unlike defective distribution, presupposes ambiguity: Russian [prut] is *prut* and *prud*, German [rat] is *Rat* and *Rad* (one of course looks for potential words, not for actual homonyms). Therefore, the non-occurrence of /b/:/p/, /d/:/t/, /g/:/k/ after /s/ (in whatever language) should not be confused with neutralization. In

words like English *sketch* and German *Skizze*, *sk-* cannot be opposed to *sg-*, but neither form is ambiguous in the sense in which [rat] and [prut] are, so this case is different from the preceding one and sheds no light on the distinctive features of /b d g/ and /p t k/. And true neutralization of /b d g/:/p t k/ is lacking in English.

Although English /p t k/ are voiceless in comparison to /b d g/, aspiration is more important for their recognition. If the mark is tantamount to the presence of a feature, it is more natural to call English /p t k/ aspirated and marked. In Danish, Icelandic, and Faroese, in which voice plays an insignificant role in the production and perception of /b d g/, the situation is clearer than in English; hence the agreement among phonologists that here we deal with the marked (aspirated) /p t k/ and unmarked (nonaspirated) /b d g/. Swedish and Norwegian are close to English. There seems to be nothing wrong with recognizing voice as the distinctive feature of /b d g/ in these three languages (then /p t k/ will emerge unmarked), but it is equally plausible to treat /p t k/ as marked (aspirated). With regard to /b d g/:/p t k/, English, Swedish, and Norwegian are so different from Danish that it is preferable to set up models which will highlight rather than blur this difference.

Standard German also defies a unique solution: neutralization points in the direction of marked (voiced) /b d g/, while the factors that are valid for the analysis of English /p t k/ as marked (aspirated) are present here too. In southern German, consonant strength is indispensable for an adequate phonetic description, but the speakers' intuition and a consensus among scholars cannot replace a set of strict procedures. Such procedures (usually, neutralization) are not always available, and when they are, their results may be at variance with other, equally valid evidence.

It is curious that against such a nebulous background a historian of German easily discerns strengthening, for Old High German (OHG) *pf/ff*, *ts/zz*, *kh/hh* are obviously the reinforced variants of Common Germanic *p, *t, *k. The replacement of distinctive voice by aspiration in Danish, Icelandic and Faroese is

also easy to trace. Without this change the voiceless correlates of /l m n r/ in Icelandic and Faroese would not have arisen before old /p t k/. Nor would preaspiration have acquired its function of being the sole distinguishing element of forms like Icelandic *lappa* 'walk' and *labba* 'mend'.

According to universal belief, historical phonology is unable to overcome its limitation, namely, the disappearance of sounds whose properties it attempts to describe. This is indeed a severe limitation, but it is partly compensated for by the study of the process of change. Dynamics can often reveal the nature of oppositions better than the kaleidoscope of phonemes can do it. Phonemes in synchrony are not quite the same entities as phonemes in diachrony. This is why aphasia and the acquisition of speech by children lend themselves to phonological analysis exceptionally well. A changing phoneme is like a running person: both show the observer their otherwise latent features.

We can now return to Notker's Law, which is an especially characteristic example of the paradoxical interaction between synchrony and diachrony. Since in Notker's Alemannic dialect only word initial /p t k/ occurred after a pause and /b d g/ were disallowed, it follows that /p t k/, rather than /b d g/, were unmarked. This conclusion is borne out by the fact that, according to the rule of "consonant hardening" (*Verhärtung*), the same /p t k/ occurred in word final position, to the exclusion of /b d g/. (This rule characterized the entire area of High German.) In the opposition /b d g/:/p t k/, markedness belonged to greater sonority. Notker's Law can be reduced to the formula: sonorous after sonorous, nonsonorous after nonsonorous. Next to sonorous sounds (resonants and vowels), stops became quasi-sonorous as well. The active role of sonority also testifies to the markedness of /b d g/. It will be seen that the distinctive role of strength, with weakness being marked, has not emerged from this analysis (sonority sufficed to describe all the phenomena under investigation). Above, strength was tentatively deduced as the feature of /p t k/ from general phonetic considerations, but, in looking

at subsequent lengthening, we immediately detect either strength or at least a feature of the same order.

Since the times of de Saussure linguists have prided themselves on differentiating between synchrony and diachrony. Roman Jakobson has gone a long way toward pointing up the dynamic nature of synchrony and the stable knots of diachrony. Our task consists not in wiping out the line between history and the present-day stage of language development: we should merely profit by certain tensions that exist between the two. In the days of descriptive linguistics, a great deal was said about the nonuniqueness of phonological solutions. The nonuniqueness principle is attractive in that it provides the researcher with a flexible model, but it also opens the door to all kinds of legerdemain. It seems that multiple solutions are the price we have to pay for the complexity of our material. Thus, German /b d g/ are voiced (and marked) from one point of view and nonaspirated (and unmarked) from another. In all the Germanic languages that underwent vowel lengthening in the structure (C)VCV, so also in Low German, the voiced intervocalic consonant behaved as though it were weak (see above), but in dialects with *Schärfung/Trägheitsakzent, stoottoon/sleeptoon* the distribution of accents in *and/ant* groups depends on the presence of voice in the obstruent, and in general nothing indicates that /p t k/ are strong in this area (Rhein-Limburg). Recognition of such contradictions is not a tribute to the hocus-pocus approach: God's truth need not flourish in a strait jacket.

Our material is often indeterminate, and we should use the results of phonetic change for retrospective solutions. For example, the strength of MHG /m t/ follows from lengthenings and gives credence to the idea of Notker's nonsonorous /p t k/ being strong. Synchrony and diachrony remain separate, but we no longer balk at interpreting the make-up of some phonemes in light of what became of them. Classical phonetics took this type of reasoning for granted. Modern linguistics will only gain if it shakes off part of the Saussurean dogma and uses common sense instead of structuralist rigor.