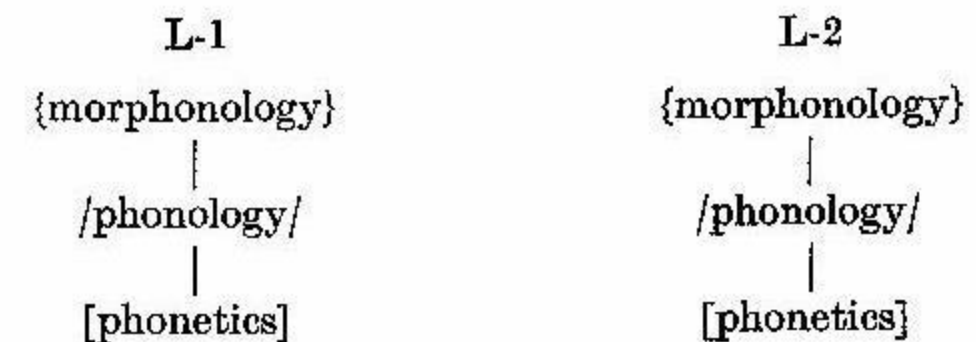


ON THE RELEVANCE OF PHONETIC, PHONOLOGICAL,
AND MORPHONOLOGICAL LEVELS IN CONTRASTIVE PHONOLOGY

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Discussing theoretical problems of contrastive phonology it has first of all to be made clear which kind of contrastive phonology is meant. There are, I believe, two basically different types of contrastive phonological investigation. The difference between the two is made up by two different targets they aim at. On the one hand, the phonological systems of two or more languages may be contrasted when doing research in the realm of language typology, i.e. looking for universal processes and features. Within this can be demonstrated how phonetic patterns are derived from more abstract levels. It will be investigated which segments, processes, and features are involved proceeding from a most abstract, perhaps morphonological level, possibly over a less abstract phonological one to a least abstract phonetic level, both in a first language L-1 and in a second language L-2 (cf. diagram below).



The striking point in this way of contrasting the sound systems of two languages with each other is that both languages play the same role, that is to say that each level of language L-1 is of the same importance as the corresponding level of language L-2. This again results from the aim of the comparison: if it is not done for its own sake, then in order to deliver insights in universal aspects of sound patterns on the data of two languages.

But it is not this type of contrastive phonology that will be dealt with in the following.

The second type is a contrastive phonology in the area of phonic interference (which of course may also deliver insights to universal aspects of sound patterns). Already the notion of interference hints at the crucial difference to the kind of contrastive phonology mentioned before. In a comparison of this type the two languages involved do play different roles. One language has to play the "active part", that is, it will be the interfering one. The other takes over the passive part. It is the one that suffers the interference.

The effects of one language L-2 interfering in another language L-1 can be observed in data of two different kinds: firstly, on the basis of defective pronunciation of language L-1 by native speakers of L-2; secondly, on the basis of phonic developments that loan words from L-1 undergo when being assimilated by L-2. It is a well known fact, that similar sound substitutions can be observed in the two subkinds of language contact.

Coming now to the main point, i.e. to the relevance of phonetic, phonological, and morphological levels in contrastive phonology under the aspect of phonic interference, Polish will be the interfering language L-2 and German the language suffering interference L-1. What will be discussed is which levels of which of the two languages are involved in the perception and reproduction of German, mainly on the basis of perception and reproduction of the German uvular R-sound by native-speakers of Polish, looking for further evidence within German loan words in Polish.

When doing research in the perception of German sounds by native-speakers of Polish from October 1982 to August 1983 at the Jagiellonian University of Cracow, I had the chance to observe how the back German R-sound is perceived and reproduced. Several informants were asked to repeat 15 syllables with an initial R, the 15 German monophthong vowels always once in the middle and the consonant [t] at the end. The initial R-sound was either an uvular fricative [ʀ] or a frictionless [ʁ]. The German voice delivering the examples to be repeated used both sounds as facultative variants, in few cases coming out near to the uvular vibrant [R]. The impact of this phonetic variance on the perception data must be examined more thoroughly.

The following observations could be made in the reproduction of these syllables by the informants:

One frequent substitution for German uvular R was the velar fricative [x] as in Polish <chód> or the palatal fricative [ç] as in the Polish name for "China" <Chiny>, or even the H-sound [h] that may substitute for both of the former sounds as a local or individual variety.

A second very frequent substitution was — most strikingly to me — a sound near to the British English R-sound as in English <row>, i.e. the voiced, frictionless, post-alveolar [r]. Sometimes this was accompanied by a more or less dis-

tinuous vibration (in fewer cases friction), but clearly a far more back one, than in normal Polish R-articulation.

Not so frequent was an articulation of the normal Polish apical R as well as an acceptable imitation of German back R.

There was at least no obvious influence of the following vowel, but this again will be examined more closely on another occasion.

Without going into detail, what has happened in the substitution mentioned is presumably the following: Substitution of the German back R-sound by an uvular fricative [x], a palatal fricative [ç] or by an H-sound indicates the interpretation of German back R as an allophone of a back fricative phoneme /x/ like the one to be observed in the Polish phonological system. Furthermore, that it was not just the articulatory base or the physiological inability resulting from an unfamiliar movement of the speech organs that made the native-speakers of Polish articulate [x] for [ʀ] is confirmed by the question I was asked by almost all of my informants. Namely, whether there was a [x], the velar fricative, or an R-sound at the beginning of the test words, which definitely indicates that there is a phonological misinterpretation behind this substitution. Especially this substitution makes clear, that it is the phonetic data of German and not its phonological system that was taken under account in the reproduction efforts of my Polish informants.

This is, in the one hand, nothing more than understandable, because informants without knowledge of the German language (and that was the case for all but one of my people) have absolutely no idea about the phonological relations of German. On the other hand, this means that the linguistic investigator has to take into account first of all the phonetic data of a given foreign language L-1, when trying to find out what difficulties might arise for native-speakers of a mother language L-2 learning L-1.

In other words, the input into Trubetzkoy's 'Sieb' (to use the German word) of a mother-language L-2 has to be the phonetics of the foreign language L-1. Phonological regularities of the foreign language L-1 are important only when investigating in how far an interference-marred pronunciation of that language L-1 disturbs communication in L-1. Strictly speaking, in contrast to the phonetic data of L-1, they are irrelevant for finding out perception and reproduction difficulties encountered by native-speakers of L-2.

Obviously the phonetic data of German allowed a second interpretation of back German R, namely as a member of an /r/ — phoneme, similar to the Polish one. This can be said without any doubts when the German sound in discussion was reproduced in the form of the normal Polish apical vibrant [r] or as a uvular fricative [ʀ], near to acceptable German articulation, which is for some native-speakers of Polish an individual realization of the Polish /r/-phoneme. All of my informants, however, realized the Polish /r/-phoneme as an apical vibrant.

The substitution by an R-sound similar to an RP-English one may seem somewhat strange. On the one hand I have no doubt that this substitution gives clear evidence for an interpretation of back German R as /r/ phonologically, because the absence of friction does not allow an interpretation as a velar fricative /x/. A further argument for this can be that vibration occasionally cooccured when a sound was produced at this place of articulation.

On the other hand according to the principles of Natural Phonology, as is formulated by Stampe (1973) and Donegan (1978), this substitution may indicate a compromise status of British and American post-alveolar R-sounds of the type mentioned in comparison to apical and uvular R-sounds. We can call it a compromise status in the sense that an uvular R-sound in articulatory terms is more distinct from any known L-sound than apical R-sound is, leaving for example RP-English R in the middle. Obviously this compromise type of R is the most back non-fricative continuant — apart from the glide [j] — that native-speakers of Polish could accept as a member of an /r/-phoneme, trying to articulate it in a maximally back position.

Having underlined the primary relevance of the phonetic level of the foreign language when trying to foresee or explain the phonic interference by a mother-language, I will now discuss which levels of the latter, in our case Polish, are of importance in this context.

The alternation between — phonetically speaking — Polish [r] and the fricative [ʒ] (unvoiced [š]) has to be considered as a part of the competence of any native-speaker of Polish. Synchronically, this alternation can be explained when morphological facts are taken into account, e.g. by deriving both sounds from one segment of an abstract morphonological level. For the occurrence of that type of fricative sound without alternation like in Polish <rzeka> “river” a further morphonological segment {ř} could be postulated (cf. Pohl 1980:359f). Thus distinguishing [ž]/[š]-fricatives, which historically developed from a palatalized R-sound over a Czech-type [ř]/[ṛ̌] from fricatives [ž]/[š] that — roughly speaking — always have been fricatives of this kind throughout the history of the Polish Language, different behaviour of the two superficially identical fricative sounds may be explained. But obviously this morphonological level of the competence of Polish native-speakers does not play any role in the perception and reproduction of German speech sounds. There was no [ž]-fricative among the substitutions for German back R. This corresponds to the distinction in Natural Phonology of rules and processes, where rules like the [r]/[ž] alternation do not represent constraints on pronunciation, whereas processes that are unsuppressed in a living language do. Furthermore it seems to be obvious that learners of foreign languages do not transfer alternation rules of the type cited above from their mother-language to the foreign one. I have neither heard of any case that a German learning Polish has for instance transferred the umlaut-alternations of German to Polish nor of a native-speaker

of Polish transferring the various types of sound alternations of his mother-language to his potential foreign language German.

In my opinion, it has to be explained by the linguists that a speaker of a mother-language L-2 is able to master the pronunciation of a foreign language L-1, at least to some degree even at the very moment of the first encounter with L-1, as phenomena of a foreign-language competence. The morphonological component of the competence in a given mother language seems to be of no importance for the “competence” of a native-speaker of this language in a given foreign language.

But why is this so? Why do native-speakers of a mother language generally transfer phonological but not morphonological regularities from that mother language to a given foreign one. Of course, as the Natural Phonologists put it, the former are acquired by suppressing certain natural phonological processes, they are not acquired cognitively (Donegan 1978:5). Morphonological alternations are learned without encountering pronunciation difficulties. But there seems to be no discrete classification of phonological and morphonological rules (cf. Dressler 1977:11f). but the gradual transition between the two groups cannot be discussed here.

The decisive point obviously is that in the application of a morphonological alternation rule the component of meaning is involved as well. If we take a German example <Ball> “ball, dancing party”, it is the phoneme /e/ only in combination with the meaning “nominative plural” that causes umlaut <Bälle>, whereas /e/ in combination with “dative singular” does not: <Balle>. Although a naive speaker of a language does not know that sound-meaning relations are in principle arbitrary, he does know that these relations are different in another language, because otherwise he would understand that language. This seems to be a basic, though probably unconscious assumption about foreign languages, which prevents a speaker from applying morphologically conditioned phonological rules of his mother language when trying to express himself in the foreign language. Dressler (1977), who rejects an independent morphonological component, defines a morphonological rule as a phonological rule that is automatically linked to morphological rules. The result of such a rule cosignalizes, as Dressler calls it, morphological data, data, in other words, that imply information about meaning in a broader sense. It is this automatic link between sound alternation and elements of meaning that is seemingly not transferred to foreign languages under the cited presumption that sound-meaning relations in foreign languages are on the whole different from the ones in the mother language. This holds even when things in mother and foreign language are accidentally very much alike. As in German, there is in Polish the French loan word <bal> “dancing party”, which also takes an E-sound i.e. [ɛ] as a marker for nominative plural. Nevertheless, a native-speaker of German pronouncing the Polish plural form as [*bɛlə] has not yet been reported. At least as far as

oreticians did not mention at all or dismissed as individual mistakes. The newest study of that kind, as far as the Polish interference in German sound patterns is concerned, is Predota's "Die polnisch-deutsche Interferenz im Bereich der Aussprache." (1979).

This disillusionment, that is the failure of linguists in explaining phonic substitutions, mistakes, difficulties, and so on in foreign language learning, clearly results from a concentration on phonological facts both in the interfering mother language and in the foreign one which is interfered. Phonetic data, acoustic, physiological-articulatory, and auditive, were widely neglected. No such contrastive study could explain the perception and reproduction of German uvular R as [x], [ç] or [h]. A more phonetically concentrated, feature and process orientated phonological theory, e.g. that of Natural Phonology in the version of Stampe and Donegan, will doubtlessly be able to do, observing the fact that in Dutch and Flemish, for example, the /r/-phoneme is frequently realized as a velar fricative (Göschel 1971:110).

Nor would a traditional contrastive phonology account for the reproduction of back German R as a British-type post-alveolar continuant [ʀ] by native-speakers of Polish that do not know any English. Without going into the details of a natural phonology of liquids I think it worth mentioning, that the place of articulation of the British-type R-sound and the fricative [ʒ], where the development of former Polish palatalized [r'] ended, are very near to each other. Furthermore, when this British-type R was articulated by my informants with a cooccurrence of vibration or, less often, friction, a Czech-type [ɣ] seemed to be near.

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