

## CONTRASTIVE AND ERROR ANALYSIS: VIETNAMESE — GERMAN

HEINRICH P. KELZ

*University of Bonn*

### 0. INTRODUCTORY REMARKS

In this article I should like to report on an aspect of our work which has gained considerable importance during the past months. Due to political developments in South East Asia, Germany, within a relatively short period of time, was confronted with some 26,000 immigrants from Vietnam, Laos, and Cambodia. The situation being as it is, these immigrants will probably stay in Germany for some time to come.

One of the immediate necessities fundamental to their social integration into German society was to make them acquainted with the new language. At first, the immigrants were sent to various language teaching institutions where in some cases, it was possible to teach them in homogeneous classes. In most of the courses, however, results were unsatisfactory because these institutions were not sufficiently prepared for the special task of teaching German to South East Asians in the shortest possible time. As it turned out, the situation could only be improved by giving teachers a special training<sup>1</sup> and by developing specific teaching materials. This was the starting point for our work which aims at defining possible areas of learning difficulties and at designing time-saving and efficient means of language teaching. The first step towards this goal was to gather detailed information on the learners'

---

<sup>1</sup> The teaching objective here cannot be the same as for the instruction of foreign workers or of foreign university students, who are in Germany only temporarily. As pointed out initially, the South East Asian immigrants are to stay in Germany for a long time and their integration into German society is a must, if only for economic reasons. Therefore their language should as little as possible be stigmatized as utterly foreign. Furthermore their language instruction should include paralinguistic signals including those on the phonetic level (such as hesitation sounds, emphatic forms of intonation, and so on).

sociocultural background, on their learning behaviour, on problems they might have in communication, and — last not least — on the differences between their mother tongues and the German language.

Contrastive analyses of the four languages spoken by the majority of the immigrants served to delimit areas of linguistically based learning problems. The languages concerned were:

- Vietnamese (also called Annamese)
- Laotian
- Khmer (or Cambodian)
- Guangdonghna (the language of the largest Chinese minority group in Indochina, more commonly known as Cantonese).

The contrastive analyses included the phonetic, grammatical, and lexical levels as well as aspects of semantics and pragmatics. The objectives of the contrastive analyses was to give some preliminary information to teachers of German as a foreign language who never taught learners from South East Asia before and who are not acquainted with the mother tongues of their students. These contrastive analyses will be complemented by error analyses conducted for each of the above languages with a total of about 500 pupils; the results of both kinds of investigation will then be compared. Up to now, only preliminary observations were recorded from utterances of some 25 randomly selected students.<sup>2</sup> I shall try and relate these findings to the contrastive analyses — with all necessary predications, keeping in mind the small number of informants and the provisional status of the results.

### 1. THE FRAMEWORK

I will have to restrict the scope of this report to one language and within that language to one aspect only. As an example, I will take the segmental phonetic features of Vietnamese.

This raises the question of the theoretical framework for a description and a comparison the two languages, Vietnamese and German, which poses the problem of choosing between a number of possible concepts. Since neither the phonemic approach — as exemplified e.g. in the *Contrastive Structure Series* — nor the generative approach are satisfactory<sup>3</sup> with regard to the goal set for this project, it is assumed that only the phonetic substance, i.e.

<sup>2</sup> All pupils were enrolled in a German language course and were not previously exposed to German at all. If foreign language knowledge has been acquired in Vietnam, this was usually French and/or (American) English. This, however, is only true for a small group.

<sup>3</sup> I have dealt with this problem in several articles and in my book *Phonetische Probleme im Fremdsprachenunterricht* (1976). In my opinion, a phonemic approach is very satisfactory when the task is a purely descriptive one or especially when an effec-

the physical reality, provides valid material for a contrastive analysis especially with regard to a later comparison with the findings of error analyses.

Even if the teaching objective is defined in terms of "communicative competence", a phonological basis for both analyses and their comparison seems to be quite inadequate. The assumption that only phonological oppositions have any bearing on the validity and quality of pronunciation is quite wrong. Phonological oppositions are vital for the establishment and description of a language system (*langue*) but not necessarily for the speech act (*parole*), which is the object of the analyses and the target of the project.<sup>4</sup> Nor can traditional phonology bring out the phenomena connected with speech rhythm — and as their result the various forms of coarticulation, reduction, assimilation, epenthesis, and elision — nor those aspects which can be summarized under the term 'basis of articulation'.<sup>5</sup>

Thus we will proceed by describing and comparing the two languages, i.e. the mother tongue and the target language, on the basis of their phonetic substances, and by using well established parameters.

### 2. THE LINGUISTIC MATERIAL

German and Vietnamese are two languages differing in many respects. Genetically the former belongs to the Indo-European family, whereas the latter's classification is not absolutely clear.<sup>6</sup> Typologically, German is of an incorporating type, Vietnamese of an isolating one. While German is a stress-timed language, Vietnamese is a syllable-timed one, and it is a tone language, whereas German is not.

Therefore, further differences are to be expected not only on the morpho-syntactic, but also on the phonetic level. The phonetics of Vietnamese is characterized

(1) by the limited phonotactic possibilities for the formation of monosyllabic morphemes; (2) by the phonemic value of syllable tones; (3) by the manifold possibilities for phonemic contrasts in the vowel system.

tive writing system is to be developed on the basis of pronunciation; a generative approach is quite satisfactory when phonological processes are to be demonstrated and also when explanations should be given as to why certain changes occur.

<sup>4</sup> cf. also Kelz, H. P. (1977).

<sup>5</sup> cf. also Kelz, H. P. (1971) and (1978).

<sup>6</sup> Although Vietnamese contains lexical material of Chinese, the Thai and the Mon-Khmer languages it is not related to either one of them. Some linguists (such as W. Schmidt) consider it a branch of the Austro-Asian language family. Those who consider it a member of the Sino-Tibetan family do not agree on the point of subgrouping: while some (such as R. Shafer) prefer to group it under the Tibeto-Burmese branch, others (such as H. Maspéro) see it as part of the Lao-Thai branch.

## 2.1. The vowels

Vietnamese has 47 vowel phonemes. Of these 11 are monophthongs, 24 diphthongs and 12 triphthongs. Among the monophthongs (cf. chart 1) there are three rounded and three unrounded back vowels [u, o, ɔ] and [ʊ, γ, ɔ], four front vowels [i, e, ε, a] and one central vowel [ə]. The Vietnamese learner will thus have little difficulties with the primary vowel qualities: [i, u, e, o, ε, ə, a] and [ɔ] have similar qualities in German; only German open [ɪ] (as in *Mitte*) and open [ʊ] (as in *Mutter*) have no equivalents in Vietnamese. Secondary vowels are found in both languages: while, however, Vietnamese has unrounded back vowels [ʊ, γ], German has rounded front vowels [y, γ, ø, œ] and these have no equivalents in Vietnamese. Vietnamese has only one central vowel [ə], while German has two, [ə] (as in *bitte*) and [ɐ] (as in *bitter*).

A further difference between German and Vietnamese lies in the vowel quantity: German has long and short monophthongs as phonological oppositions, Vietnamese does not.

Another problem for the Vietnamese learner of German may arise from some dialectal variants in Vietnamese where some of the vowels are diphthongized: this refers especially to the vowels [a] (pronounced [au]) and [o] (pronounced [ou]).

Beside these regionally occurring diphthongs, there are 18 falling diphthongs, among them are the equivalents for three German falling diphthongs: [ai], [au] and [oy]. The fact that Vietnamese has six rising diphthongs while German has none, does not lead to interferences.

However, Vietnamese has no equivalents for the seven German centralising diphthongs: [iə] as in *ihr*, [yɐ] as in *für*, [ʊə] as in *her*, [eə] as in *er*, [øə] as in *dör*, [œə] as in *vor* and [ɔə] as in *Bar*.

## 2.2. The Consonants

The consonant system of Vietnamese (cf. chart 2) also shows a great variety of sounds, which becomes particularly evident with regard to the plosives. There are four kinds of voiceless stops:

(1) fully articulated, non-aspirated stops; (2) aspirated stops; (3) affricate stops; (4) glottalized stops.

Glottalized stops appear only in final position, where they are the only stops occurring. Since glottalized stops do not exist in German, German listeners may not even hear the stops when pronounced by a Vietnamese. Non-aspirated voiceless stops occur initially in positions where (Standard) German has nothing but aspirated stops. There are only three affricates: one which is normally pronounced as a retroflex, one alveo-palatal, and one which is a variant of aspirated [k<sup>h</sup>]. The only other aspirated stop is a dental.

Only the voiced stops have immediate equivalents in German, in the same position and with basically the same points of articulation.

There are three pairs of fricatives (voiced and voiceless): the labio-dental, the retroflex and the alveo-palatal fricatives. In addition, there are a voiceless velar fricative, which is a variant of the velar aspirated stop resp. affricate (see above), pre-aspiration of the vowel (aspirated vowel onset), which may be considered as a pharyngeal fricative, and a voiced labialized velar fricative, mostly, however, pronounced as a continuant (semivowel). Since the German alveolar and palato-alveolar fricative pairs are missing, problems will arise here as well as with the German *ich*-sound [ç].

The nasals will pose no major problem. In addition to the points of articulation of the nasals in German, Vietnamese has a palatal one. However, nasals in final position are generally glottalized, and in some areas of Vietnam a tendency for nasalization of the preceding vowel will occur as a result of an anticipatory lowering of the velum.

The German [ʀ], though, will cause difficulties in all positions since there is no r-sound at all in Vietnamese<sup>7</sup>, while [l] will only partly cause difficulties, since in Vietnamese it never appears in final position. The cases of sound conflicts in the two consonant systems are illustrated in chart 3.

## 2.3. Syllable Structure

In contrast to the rather complex sounds system, Vietnamese has a very simple syllable structure. This feature of Vietnamese underlies most of the learner's difficulties. Except for the affricates mentioned above there are no consonant clusters. Only the nasals and the glottalized stop may occur in final position; in all other cases the syllable ends in one of the 47 vowel phonemes.

The fact that German has a highly developed system of consonant combinations on the one hand leads to omissions and, on the other hand, to the insertion of svarabhakti on the part of the Vietnamese learner.

To compensate the limited possibilities for syllable formation, the Vietnamese language offers the possibility of pronouncing syllables on different tones: identical phonotagms can have up to six different meanings according to the tonal feature of the respective syllable. This fact leads to a positive learning effect in so far as it enables the Vietnamese learner to grasp the German intonation contours more easily, being highly sensitive to tonal features of speech.

Difficulties, however, arise from the difference in the rhythmic structure of both languages. While Vietnamese is a syllable-timed language, German is accent-timed. Thus Vietnamese will often speak German with a type of

<sup>7</sup> The written <r> of Vietnamese is pronounced [ʒ].

staccato pronunciation with little dynamics. Furthermore, since all words in Vietnamese have only one accent, the German word accent will be quite a new phenomenon to the Vietnamese learner.

### 3. ERROR DATA

The error analysis complementing the contrastive analysis serves to find out not only whether errors are actually made where linguistic comparison reveals differences, and thus to detect probabilities of interference. It also helps to evaluate the learning difficulties caused by interferences, and the persistency of these errors, the final goal being the establishment of a hierarchy of difficulties on the statistical basis of the errors made.

The 25 pupils selected for the investigation of pronunciation errors were asked

(1) to read a text; (2) to tell a story according to a series of cartoon-like pictures; and (3) to repeat sentences or phrases which they heard from a tape recording. Their oral productions were recorded on tape for later analysis. This measure was taken so that possible discrepancies in their oral production could later be differentiated according to the three stimuli used:

(1) graphic stimulus; (2) visual stimulus; and (3) auditory stimulus.

### 4. DISCUSSION

A comparison of the contrastive analysis with the observation of the errors actually made reveals some discrepancies.

On the basis of the contrastive analysis it is e.g. assumed that learners will substitute the [ʃ]-sound of German with the closest fricative in Vietnamese i.e. with [s]. The examination of the verbal material, however, shows that in only 15 out of 19 cases where errors were made [ʃ] was substituted by the retroflex [ʂ]. In the remaining four cases it was substituted by the alveolar [s], a sound not occurring in Vietnamese, but rather one to be learned.

Similarly, the initial cluster [tʃ] (as in *stehen, Stuhl*) was replaced by the retroflex [ʂt] and the alveolar [st]. The former occurred in five out of eleven cases; the latter variant occurred six times, but only in the section which was read by the pupils, not in free production.

The affricate [ts] in the initial position (as in *zu, zwei*) also created problems. It was generally pronounced as a single fricative: in 23 out of 40 cases as simple [s]; this happened whenever a vowel followed. If, however, a consonant (here only [v] is possible) followed, it was generally pronounced as [ʂ]. In words like *zwei, zwar, Zweck*, yet another error was observed (particularly when the text was read): the substitution of [v] by [w]. If this semivowel was used

instead of the consonant [v] the pronunciation was also [s], the same as was the case when a vowel followed.

These examples already show that there can be no generalization as to the substitution expected on the basis of transfer hypotheses. Contrary to expectations, sounds not yet mastered were substituted by other sounds of German; their distribution depended both on linguistic context (as in the third case) and on the stimulus used (as in the second case) as well as on other factors (as in the first case).

It also appears that the majority of errors was not due to a simple, or complex, one-to-one substitution, but that they were rather errors which may be attributed to the phonotactic structure of German. Since Vietnamese has practically no consonant clusters, faulty pronunciation occurs with German consonant combinations. In this respect, two types of errors were found: the use of svarabhakti and the omission of consonants, such as:

[rft] as in *durften* → [ft<sup>h</sup> st<sup>h</sup>]  
 [ft<sup>h</sup>] as in *verletzt* → [st<sup>h</sup>, t<sup>h</sup>]  
 [ft] as in *Haft* → [f, p]

It is, however, interesting to observe that the omission of consonants occurred more frequently in free production (after a visual stimulus) than in repetition (after an auditory stimulus) where the insertion or addition of pro- and epenthetic vowels occurred more often.

### 5. SUMMARY

(1) The preliminary data show that syntagmatic phonetic errors are even more frequent than paradigmatic phonetic errors. This is interesting in so far as most contrastive analyses — even those which try to establish a hierarchy of difficulties<sup>8</sup> — are mainly based on paradigmatic phonetic characteristics, thus comparing two sound systems by isolating the segments and without taking the aspects of phonosyntagmatic structure into consideration.

(2) In cases of paradigmatic substitution the choice is not always the "closest sound" available in L 1; in a number of instances it is a sound of L 2.

(3) If, however, L1-substitutions occur phonological major class features do not seem to play a role. Thus the lateral [l] of German in final position is generally replaced by the nasal [ŋ].

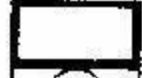

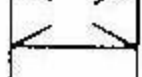


(4) In evaluating the errors and in search of possible causes, not only L1-behaviour has to be taken into account, but also a number of other factors, such as the kind of stimulation (reading, oral reproduction, free production), auditory problems which antecede articulation in the learning process, factors due to the teaching method, and even environmental factors of learning.

<sup>8</sup> As e.g. in Stockwell/Bowen 1965.



Chart 3

|                  |  |                  |     |     |     |                  |  |      |
|------------------|--|------------------|-----|-----|-----|------------------|--|------|
| (b-)             |  | (d-)             |     |     |     | (g-)             |  |      |
| p-               |  | t-               |     |     |     | k-               |  | ʔ-   |
| p <sup>h</sup> - |  | t <sup>h</sup> - |     |     |     | k <sup>h</sup> - |  |      |
| -p <sup>h</sup>  |  | -t <sup>h</sup>  |     |     |     | -k <sup>h</sup>  |  |      |
| -p <sup>ʔ</sup>  |  | -t <sup>ʔ</sup>  |     |     |     | -k <sup>ʔ</sup>  |  |      |
|                  |  | -ts              | -tʃ |     |     |                  |  |      |
|                  |  | ts-              | tʃ- | ts- | tʃ- | kx-              |  |      |
| (f-)             |  | ʃ-               | s-  | ʃ-  | s-  | x-               |  | (h-) |
| -f               |  | -s               | -ʃ  |     |     | -x               |  | -h   |
| (v-)             |  | z-               | ʒ-  | z-  | ʒ-  |                  |  |      |
| (m-)             |  | (n-)             |     |     |     | ɲ-               |  |      |
| -m               |  | -n               |     |     |     | -ɲ               |  |      |
| -m <sup>ʔ</sup>  |  | -n <sup>ʔ</sup>  |     |     |     | -ɲ <sup>ʔ</sup>  |  |      |
|                  |  | -l               |     |     |     |                  |  |      |
|                  |  | (l-)             |     |     |     |                  |  | r-   |

|   |  |
|---|--|
|  | sound of German, no equivalent in Vietnamese |
|  | sounds of German and Vietnamese              |
|  | sound of Vietnamese                          |
|  | no sound in Vietnamese or German             |
|  | possible way of substitution                 |

## REFERENCES

- Kelz, H. P. 1971. "Articulatory basis and second language teaching". *Phonetica* 24. 193-211.
- Kelz, H. P. 1976. *Phonetische Probleme im Fremdsprachenunterricht*. Hamburg.
- Kelz, H. P. 1977. "Zur Lernzielgröße in der Ausspracheschulung: Phonem oder Orthophon". *Plurilinguisme à l'Université*. Brussels. 774-82.
- Kelz, H. P. 1978. "Binary features for the description of the basis of articulation". *The study of sounds* 18. 139-43.
- Stockwell, R. P. and Bowen, D. 1965. *The sounds of English and Spanish*. Chicago: University of Chicago Press.