

GERMAN PHONETICS: A SURVEY

FRANK SCHINDLER AND EIKE THÜRMAN

The material for this paper was taken from the analytical "Bibliographie zur Phonetik und Phonologie des Deutschen", which comprises approximately 1800 entries (published 1971 by Niemeyer Verlag, Tübingen). From the bulk of this material 691 studies were selected according to the criteria of comparability and usefulness of results for further research. The corpus was quantitatively analysed under the additional viewpoints of chronology and the nationality of authors. We are well aware of possible shortcomings and errors of such an enterprise, combining title selection on subjective grounds and quantitative treatment. Nevertheless, we feel that we are able to make some tentative statements on the history of German phonetics and phonology, the desiderata, and the planning of further research in this field.

The material was classified under the main headings of phonetics on the one hand and phonology on the other. In the field of PHONETICS, 221 publications by 97 different authors were selected for statistical treatment. The chronological analysis, computed by integrating over five years (cf. Figure 1), shows an ever increasing growth of interest and a distinct structure, reflecting historical events and epochs of scientific activity. These are: (1) classical experimental phonetics before and after World War I, (2) *Phonometrie* before and after 1945, and (3) the growth of modern phonetics in the sixties. 25% of all publications were contributed by non-German authors and the increase in their share from 1960 on is considerable and may be taken as an indication of the growing internationalization of research. Although there are 221 publications, the subject analysis of the phonetic section contains — due to double entries — 261 items, which are divided into three subject groups, two of which are bi-partite, owing to further differentiation of subject matter in the first case and methodological considerations in the second (cf. Figure 2). These subject groups are: (1) GENETIC studies, i.e., studies aimed at the investigation of language specific sound production, which have a 21% share in the total phonetic field, (2) GENNEMATIC studies, i.e., aimed at the investigation of the specific sounds, 48.5%, divided into segmentals, 41%, and suprasegmentals, 59%, (3) ENERGETICALLY oriented studies, 30.5%, divided into 61% perceptual studies, investigating the specific perception of German speech sounds, and 39% studies based on auditory description. The field of GENETIC, i.e.,

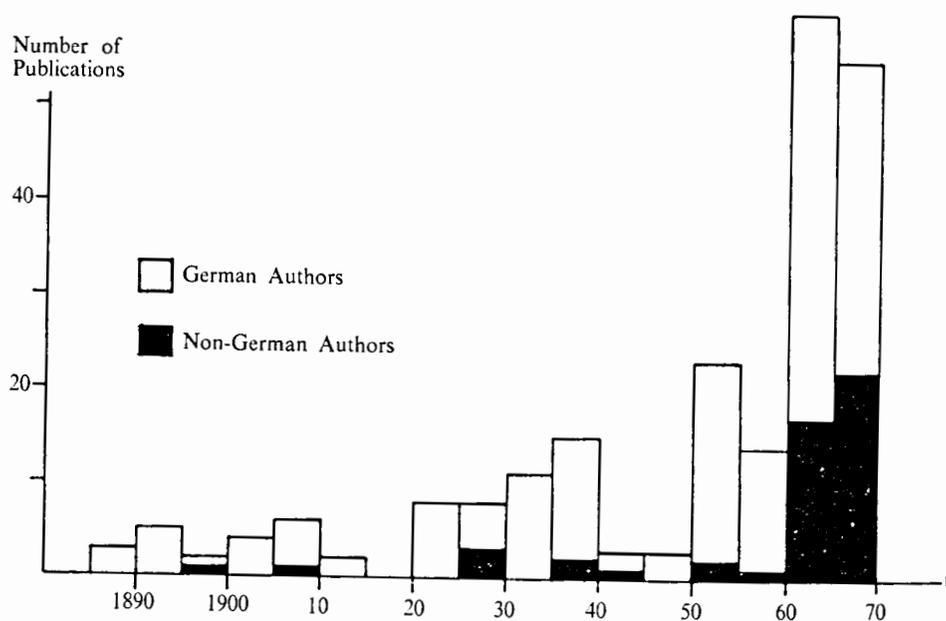


Fig. 1. Chronology of Studies in German Phonetics.

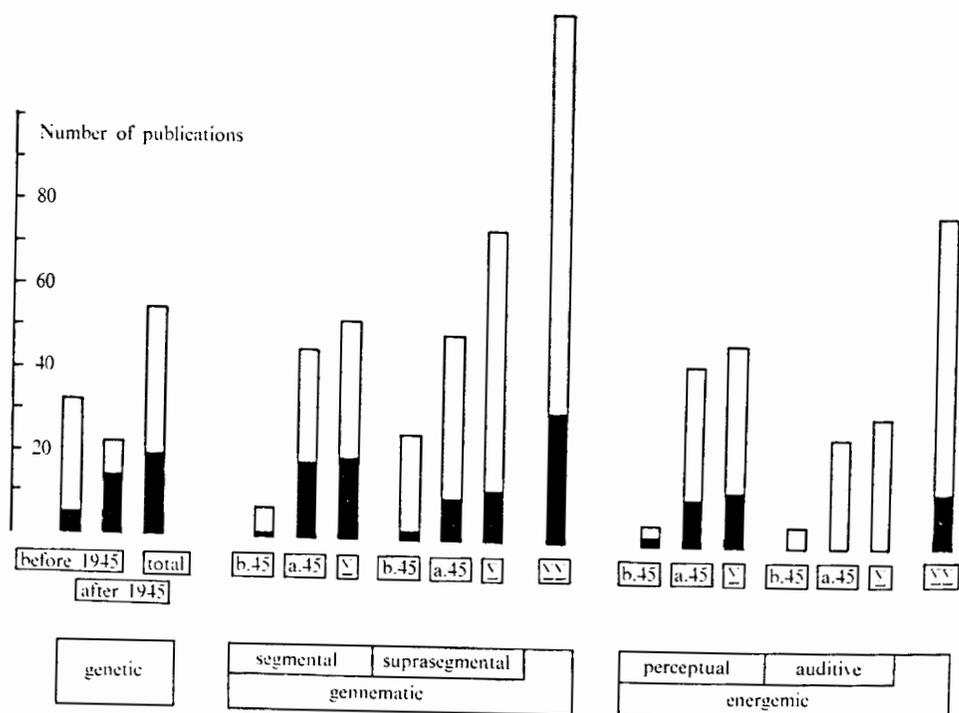


Fig. 2. Studies in German Phonetics, Differentiated According to Subject Matter, Date, and Authors.

articulatory phonetics, is the only one in which more work was published before 1945 than after. Also in this field the contributions of German scholars were by far fewer than in the other two. 28% of all items dealt with the problem of voicing. In the way of quality, too, work done on articulatory phonetics is least impressive since there are almost no publications based on comprehensive empirical observations or making use of recent developments in experimental technology. In GENNEMATIC phonetics, German scientists showed a decided interest in suprasegmental problems. This may be ascribed to the influence of classical experimental phonetics and *Phonometrie*, which together produced 50% of the work done in this field. The interest of non-German scholars was concentrated on segmentals rather than suprasegmentals, 36% vs. 23%. A large part of these publications may but cautiously be regarded as acoustic studies since, although the authors did record pressure variations, they restricted themselves mostly to measuring duration. Regarding segmentals the main interest was focussed on vowels. As far as clear-cut distinctions can be made among suprasegmental features, 39% of the work concerned duration, 35% pitch, and 15% intensity. The rest cannot be clearly classified. In ENERGEMIC phonetics, research on speech perception clearly shows the non-existence of a universally applicable synthesizer in either East or West Germany, i.e., a synthesizing system of the third generation. Thus, only 14% of these investigations made use of synthesis and these were restricted to stationary vowels and fricatives. Strictly speaking, only 35% of all publications listed were explicitly aimed at speech perception, half of them by non-German scientists. The energemic studies based on auditory description stand on safe methodological ground and are far more systematic than the majority of those listed under the heading of speech perception. Except for the few publications before 1945, we owe this work to the achievement of those East German scientists who prepared the recent codification of Standard High German pronunciation, published in the *Wörterbuch der deutschen Aussprache*. The frequent re-editing of the *Siebs*, however, has not furnished us with systematic empirical results.

The names of those 11 authors who together contributed 81 or 31% of the total amount of phonetic publications analysed here may stand as representatives for those methodological schools to which we owe the vast majority of investigations: E.A. Meyer, P. Menzerath, and O. von Essen for classical experimental phonetics; E. Zwirner and A. Maack for *Phonometrie*; Eva-Maria Krech and G. Meinhold for the codification of Standard German pronunciation in the *Wörterbuch der deutschen Aussprache*; G. Lindner and W. Tscheschner for the reception of modern phonetics in East Germany; Eli Fischer-Jørgensen and P. Delattre for the international interest in German phonetics, mainly within the compass of contrastive studies.

A total of 470 titles were chosen for detailed analysis of structurally oriented studies on German PHONOLOGY. They are in general of a taxonomic nature with only a few recently published generative accounts. The number of publications has been steadily increasing except for the years 1940-45, for which a marked decrease may be noticed (cf. Figure 3). There was a sharp rise of activity on German phonology

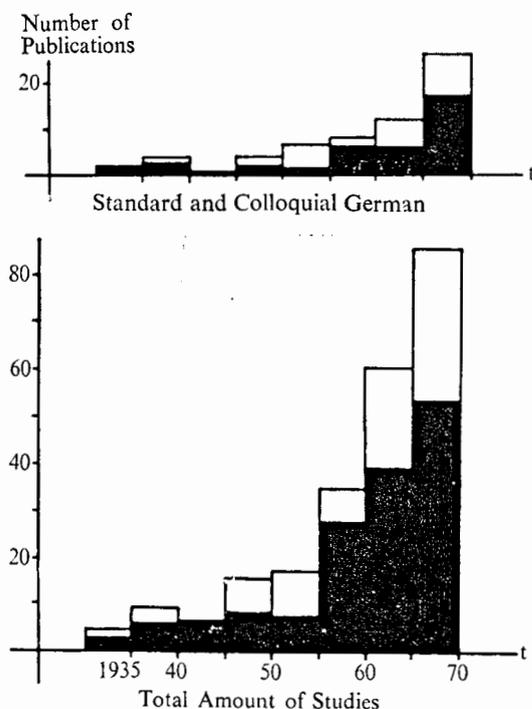


Fig. 3. Chronology of Studies in German Phonology.

in general during the mid-fifties. The amount of work devoted to Standard and Colloquial German dramatically increased a decade later. 65% of the total amount was contributed by non-German authors. Despite the general increase of activity the ratio of German to non-German publications has remained constant through the years. Compromise rather than the dichotomies of orthodox taxonomic phonology guided the arrangement of the bibliographical material according to specific topics (cf. Figure 4). 21% of the articles dealt with various problems of DIALECTOLOGY with the contribution of German authors amounting to 35%. Research in this field mainly focussed on South German dialects (cf. publications by Keller, Koekkoek, Kufner, Moulton *et al.*) and North American immigrant dialects (cf. publications by Seifert, Reed, Kurath *et al.*). It seems that, in dealing with German dialects, non-German authors laid emphasis on interference phenomena, thus approaching concepts of sociolinguistics (bilingualism, language barriers, social restriction). 19% of all phonological items are purely DIACHRONIC, and all but 10% have been published by non-German authors. Special interest has been aroused by those epochs of German language history that are closest to other West- and North-European languages. Again, it seems that non-German authors dealt with the problems of German diachronic phonology in order to study phenomena of language contact and differentiation of linguistic systems. We chose 64 articles that could be classified in terms of single stages in German language evolution. 38% of these refer to the Pre-OHG stage

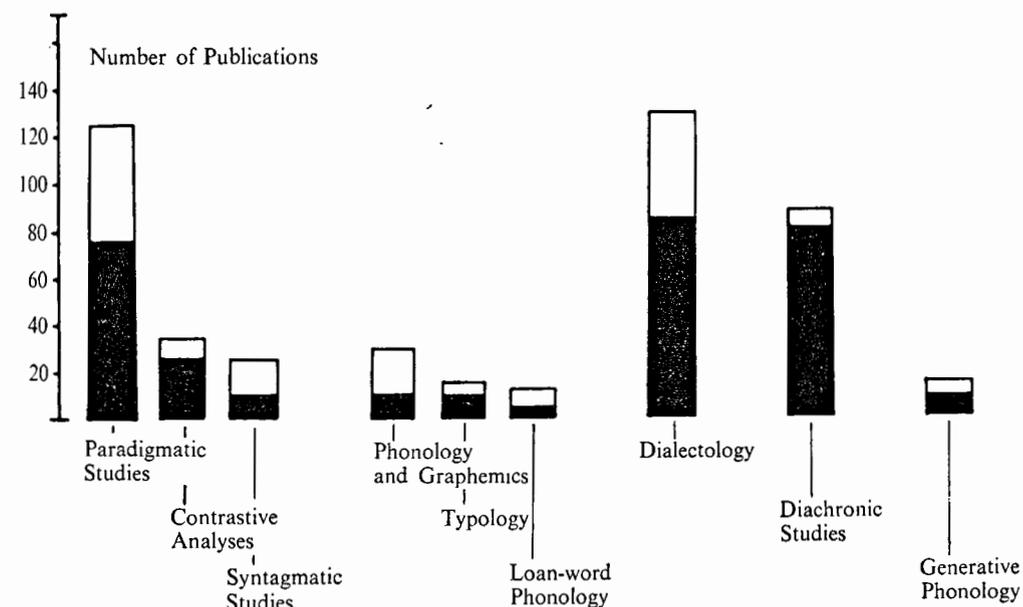


Fig. 4. Studies in German Phonology.

(even though especially for this stage selection was very strict), 44% to OHG proper, only 14% to MHG, and a bare minimum of 4% to Early-NHG. There is a marked interest of generative phonology in German diachronic linguistics. The field of interlingual CONTRASTIVE ANALYSIS occupies relatively little space within the scope of our analytical compilation (i.e., 7%). Of the total amount of articles all but two were published after World War II. 21 of these contrasted German to English phonology, seven compared German to Russian, five to French, and four to Spanish. However, those seven contrastive analyses of German and Russian were written by five different authors, whereas those on French and Spanish by two different authors and a single author (P. Delattre), respectively. We may safely hypothesize that the essentially different curricula of East- and West-German high schools and universities influence the nature and the amount of work on contrastive analysis. The fact that only 23.5% of the work on contrastive analysis was published by German authors results in the unfavorable proportion of studies with German as source language in contrast to those with German as target language.

27% of the corpus expressively relates to topics of STANDARD and COLLOQUIAL GERMAN PHONOLOGY; the contribution of non-German authors amounts to 60%. Work on information theory, distribution, and orthography ought to have been included into this chapter, but we preferred separate lists in order to document the general lack of interest in these fields, especially in syntagmatic factors. In the field of segmental phonology, the majority of publications dealt with vowels under the aspect of quantity in relation to quality (cf. Figure 5). As regards consonant segments,

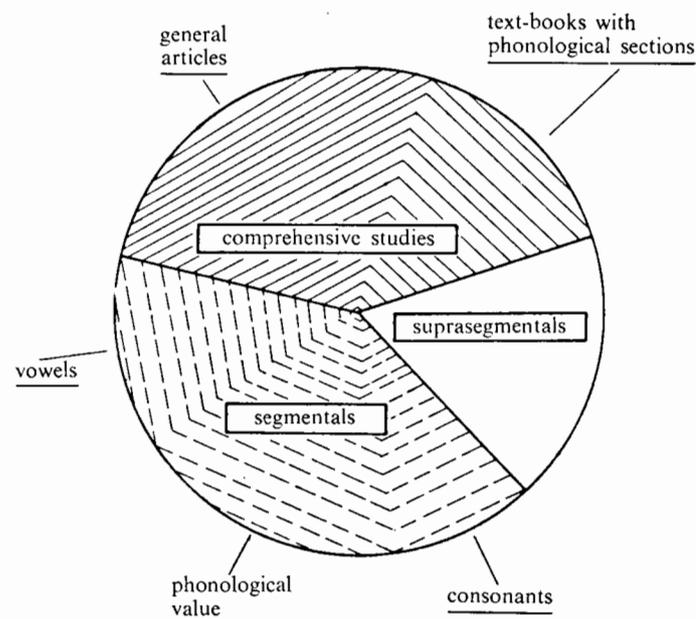


Fig. 5. Standard and Colloquial German Phonology.

we recorded only 12 highly specialized contributions, the majority of which dealt with the problem of voicing in final word position, the rest, that is three articles, discussed nasals, especially the German nasal /ŋ/. A rather homogeneous group of publications is arrived at when material is classified under the heading of 'phonological value', thus touching on segmental phoneme groups such as German diphthongs, affricates, and spirants (*c/x*). 21 items cover the domain of suprasegmental phonology; here the syllable attracted considerable attention.

In conclusion we would like to point out a few possible areas in which research could profitably be carried out. In the field of German PHONETICS: (1) comprehensive articulatory descriptions on safe methodological grounds which, in contrast to traditional approaches, aim at levels of statistical relevancy. These descriptions ought to allow for the progress of scientific technology, i.e., techniques now widely accepted such as electromyography (EMG), ultrasound, high-speed cineradio- and fluorography; (2) complex acoustic descriptions on a broad statistical basis; (3) research in language specific perception, wider application of modern methods in psychophonetics as well as systematically synthesized stimuli. This implies the construction of an efficient synthesizer in Germany. German PHONOLOGY is in need of research on (1) Middle and Low German dialects, (2) the differentiation of social and territorial dialects, thus possibly laying ground for a sociophonology of German, (3) (granted that contrastive analysis is an integral part of Applied Linguistics and that it has to take into account socioeconomic factors, such as three million guest-workers in German-speaking countries) contrastive analyses of target languages such as Italian,

Turkish, Serbo-Croatian, etc.; (4) juncture phenomena; and, (5) the differentiation of functional dialects (style) within the field of Standard High-German phonology.

Finally we should like to reiterate former statements by Steger and Stammerjohann and make bold to ask German *Germanistik* to probe deeper into structural phonology in order to apply it more widely. Up to now German contributions to phonology have originated almost exclusively in departments of General and Comparative Linguistics, Phonetics, Communication Sciences, and English and French Philology.

Institut für Phonetik
Universität Köln

DISCUSSION

RUDNYČKYJ (Winnipeg)

Question *re* Slavic (Ukrainian, Russian, Polish, etc.) materials dealing with German phonetics and phonology: in the interviewer's opinion, the data presented in the paper would slightly change if those articles, reviews, etc. would be included.

SCHINDLER

As regards Slavic publications we nearly exclusively had to rely on the *Bibliographie Linguistique* which, as is well known, unfortunately does not pay due attention to Slavic periodicals and monographs. Therefore we are well aware of a certain lack of documentation in this area and we suspect that it may not be the only one.