

Libri

Phonetica 37: 275–284 (1980)

H. GRASSEGER: **Merkmalsredundanz und Sprachverständlichkeit.** Forum Phonicum 7. Buske, Hamburg 1977. 167 pp., 40 Tab., 24 Abb.; DM 24.–. ISBN 3-87118-301-6.

Die vorliegende Grazer Dissertation macht den Versuch, die Frage nach der Korreliertheit von paradigmatischer Merkmalsredundanz in den Phonemsystemen des Deutschen (= Dt.) und Französischen (= Frz.) und der Wortverständlichkeit in diesen beiden Sprachen theoretisch aufzubereiten und empirisch zu überprüfen. Dabei gliedert sich die Arbeit in drei Teile, die inhaltlich umfassen: 1. Erläuterung des Redundanzbegriffs; 2. Aufstellung der Phonemsysteme des Dt. und Frz. mit Diskussion von Einzelproblemen, Bestimmung der paradigmatischen Redundanzwerte; 3. Experimenteller Teil mit Auswertung.

Verf. beschränkt sich bei der Untersuchung der phonologischen Redundanz auf die paradigmatische Redundanz, die er auf der Grundlage der *Distinctive-Feature-Theorie* für die Phoneminventare berechnet. Der Ermittlung der Redundanzwerte liegt ein informationstheoretischer Redundanzbegriff zugrunde, der die Merkmalsredundanz «durch das Verhältnis von minimal nötiger zu tatsächlich verwendeter Merkmalanzahl festlegt» (p. 18).

Im zweiten Teil werden die Phonemsysteme des Dt. und Frz. diskutiert, wobei die Erstellung des frz. Phonemsystems im wesentlichen auf der Darstellung von JAKOBSON und LOTZ [3] basiert (p. 42). Die Problematik der sogenannten Halbvokale, des *e muet*, der *liaison* und des *h aspiré* wird diskutiert; Verf. bleibt dabei allerdings im methodischen Umfeld des Jakobson'schen Modells. Dies hat zur Folge, daß Auseinandersetzungen mit neueren methodischen Ansätzen, etwa denen der Generativen Phonologie, nicht stattfinden, obgleich gerade diese für das Frz. zumindest in der Arbeit von SCHANE [7] überzeugende und bislang nicht ernsthaft in Frage gestellte Ergebnisse für eine Uminterpretation des frz. Vokalsystems geliefert hat (Fehlen systematischer Nasalvokale und systematischer Glides, dafür 7 gespannte und 7 ungespannte Vokale). Da Verf. die Arbeit im Literaturverzeichnis aufführt, hätte man eine Bezugnahme im Text darauf erwarten dürfen.

Die phonetischen Merkmale sind in der Fassung von JAKOBSON *et al.* [4] verwendet. Die empirische Unzulänglichkeit dieses Merkmalinventars hat zu einer großen Anzahl von Modifikationen und Erweiterungen geführt, deren bedeutendste durch CHOMSKY und HALLE [1] und durch LADEFOGED [6] gegeben sind. Es wäre wünschenswert gewesen wenn Verf. seine Entscheidung für das Jakobson'sche Inventar unter Aufzeigung der Defizienzen der genannten erweiterten Inventare begründet hätte. Eine derartige Diskussion findet jedoch nicht statt.

Nicht immer folgen will man Verf. auch bei der Behandlung des dt. Phonemsystems, das «in den wesentlichsten Zügen» (p. 80) auf der Grundlage der gemäßigten Hochlautung im Siebsschen Sinne erstellt sein soll, das Verf. aber durch eine Reihe von Modifikationen von der hochsprachlichen Norm abbrückt. Die Entscheidung z.B., in Anlehnung an KUČERA und MONROE [5], das Phonem /ɛ:/ nicht in das Inventar aufzunehmen (p. 55), erleichtert zwar die Beschreibung des vokalischen Subsystems (durch Eliminierung der störenden Asymmetrie /e/ vs. /ɛ:/ vs. /ɛ:/ im Vergleich zu /i/ vs. /i:/ usw.), ist aber in bezug auf die gemäßigte Hochlautung durch nichts zu rechtfertigen.

Die Zuordnung von Schwa zu /e/ (p. 51) sowie die biphonematische Wertung von Diphthongen und Affrikaten (pp. 51 f., 61) im Anschluß an MORCINIEC [9] vereinfachen die Beschreibung mit Merkmalen wiederum erheblich (wie etwa sollte man Diphthonge mit Merkmalkomplexen vergleichsweise einfacher Struktur, wie sie von JAKOBSON *et al.* [4] geboten wird, beschreiben?), doch vermißt man auch hier eine wohlbegründete Entscheidung des Verf.

Die Zuordnung von [j] zu /i/, die im Anschluß an Arbeiten von KUČERA und MONROE [5], HALLE [10] und MORCINIEC [9] vorgenommen wird, sieht Verf. selbst als schwierig an;

daher werden die Berechnungen sowohl mit /j/ als auch ohne durchgeführt. Hier wäre vielleicht eine klare Position im Sinne einer minimalistischen oder maximalistischen Interpretation des Phonemsystems praktikabler und auch plausibler gewesen, denn so bleibt unerfindlich, warum der Ansatz von /j/ in Frage gestellt wird, nicht aber der von /ŋ/ (vgl. das kurze und übersichtliche Referat bei WERNER [8], mit Literatur).

Das von Verf. beschriebene Phonemsystem unterscheidet sich also beträchtlich von dem der dt. Hochlautung, wie sie z.B. im DUDEN Aussprachewörterbuch [2] dargestellt ist. Es stimmt dagegen bis auf das Fehlen von /ʒ/ mit dem von KUČERA und MONROE [5, p.29] dargestellten überein, das sich daher wohl eher als Bezugspunkt anbietet als die Hochsprache im Siebsschen Sinne.

Diese phonologischen Wertungsfragen sind nun aber nicht nur methodisch von Belang, sie haben auch unmittelbaren Einfluß auf die Berechnung der Merkmalsredundanz, die sich für die Phonemsysteme aus dem Komplement der Effizienzwerte h ergibt, welche wiederum nach folgender Formel berechnet werden:

$$h = \frac{\lg P}{n}.$$

Dabei ist P die tatsächliche Phonemanzahl, n die Anzahl der Merkmale eines Systems (p. 84). Es ist leicht zu sehen, daß die Redundanzwerte sowohl von der Phonemanzahl als auch von der Anzahl der Merkmale, d.h. von der Wahl eines von mehreren Analysemodellen, abhängig ist. So schwanken die Redundanzwerte für das Frz. zwischen 42,56 % (mit /a/ vs. /ɑ/, /ɛ/ vs. /œ/ und mit Schwa) und 43,48 % (Zusammenfall der beiden genannten Oppositionspaare), für das Dt. zwischen 50,00 % (ohne /j/, Diphthonge und Affrikaten) und 53,75 % (mit Affrikaten) (pp. 85–87). Diese Schwankungen veranlassen Verf. zu einer spürbaren Vorsicht bei der Interpretation der Redundanzwerte (p. 89), die er dahingehend deutet, daß «die daraus ablesbare relativ niedrige Redundanz des Französischen (...) tatsächlich schon unter der Toleranzschwelle zu liegen (scheint), da die zum Teil schon vollzogene Aufgabe von zwei Oppositionen auf die Entwicklung zu höherer Merkmalsredundanz hinweist» (p. 89).

Diese und weitere Feststellungen im vierten Kapitel des 2. Teils führen Verf. zu der interessanten Vermutung (p. 97), daß Systemänderungen durch den Zwang, ein gewisses Maß an paradigmatischer Redundanz zu gewährleisten, erklärt werden könnten. Möglicherweise würde eine breiter angelegte Untersuchung zeigen, daß eine Begründung für die bislang unerklärten *spontanen Lautwandel* in der «Tendenz zum idealen Entropiegleichgewicht» (p. 97) liegt.

Der dritte, experimentelle Teil enthält das eigentlich Originelle der Arbeit. Hier erweist sich Verf. als gründlicher Kenner des physikalischen Instrumentariums, das bei der Begründung des Testaufbaus, besonders hinsichtlich der Auswahl der Störquellen und deren Effekte auf die Sprachverständlichkeit, auch dem Philologen verständlich wird (pp. 100 ff.). Der Test selbst wurde vorwiegend mit Schülern der Abschlußklassen einer Grazer und einer Pariser Schule durchgeführt, indem den Testpersonen über einen Komplex-Sprachaudiometer SA 10 das Material eines frz. bzw. eines dt. Sprachverständnistests mit einsilbigen Wörtern unter Zumischung eines von 20 dB bis 0 dB Störabstand fünffach gestaffelten Störgeräusches eingespielt und die Verständlichkeit des Sprachmaterials überprüft wurde. Bei den Eckwerten des Störgeräuschabstands (20 dB und 0 dB) zeigen die beiden Sprachen keine signifikanten Unterschiede in der beobachteten Verständlichkeit, bei den mittleren Störabständen (15, 10, 5 dB) jedoch sind die Wortverständlichkeitswerte des Frz. signifikant höher als die des Dt. (pp. 142 ff.).

Wenn nun dieses Ergebnis mit den Werten der Redundanzanalyse verglichen wird, ergibt sich beim Dt. mit zirka 50 % Redundanz gegenüber dem Frz. mit zirka 43 % ein deutlich höherer Wert, so daß mit Verf. (p. 152) die Frage nach der positiven Korreliertheit von Merkmalsredundanz und Wortverständlichkeit zu verneinen ist.

Dieses Resultat wird (p. 154) dahingehend interpretiert, daß die Tendenz zu einem idealen Entropiegleichgewicht im Phonemsystem stärker vom Artikulationsaufwand des Sprechers als von der Dekodierungsleistung des Hörers bestimmt wird. Eine Erklärung für die negative Relation zwischen Redundanz und Verständlichkeit gestörter Sprache sieht Verf. in mit dem Spracherwerb zusammenhängenden Lernvorgängen, die den Hörer einer Sprache mit geringerer paradigmatischer Redundanz dazu bringen, «mehr Phoneme auditiv zu unterscheiden als der Hörer einer Sprache mit höherer Redundanz» (p. 157).

Ein solches Ergebnis fordert andererseits dazu heraus, die Ursache für die Diskrepanz zwischen Testresultat und intuitiver Erwartung auch im Methodischen zu suchen. So müßte bei der festgestellten Abhängigkeit der Redundanzberechnung von dem verwendeten phonologischen Deskriptionsverfahren überprüft werden, ob unterschiedliche Phonemanalysen, besonders die Anwendung unterschiedlicher Merkmalinventare, zu signifikant verschiedenen Redundanzwerten führen. Es ist auch zu fragen, wie aussagekräftig die Relation zwischen *paradigmatischen* Redundanzwerten und Wortverständlichkeit ist im Vergleich zur Verwendung *syntagmatischer* Redundanzwerte, die wegen des zwangsläufig syntagmatischen Charakters der Sprachverständlichkeitstests vielleicht vorzuziehen wären.

Des weiteren ist der mit monosyllabischen Wörtern durchgeführte Sprachverständlichkeitstest nun eben kein *Sprach-*, sondern ein *Wortverständlichkeitstest*; allerdings sind befriedigende Sprachverständlichkeitstests, die mit Sätzen oder gar Texten operieren, wegen der Fülle der mit ihnen verbundenen theoretischen Probleme einstweilen nicht verfügbar. Daher eröffnet sich hier lediglich eine gewiß vielversprechende Perspektive für künftige Arbeiten in der Richtung des von Verf. behandelten Themas, zu dem die vorliegende Arbeit trotz einiger Mängel im phonologischen Teil einen anregenden und interessanten Beitrag leistet.

Versehen und Schreibfehler: (p. 17, Zeile 18 =) 17.18 möglich~~n~~; 24.4 kommt~~;~~; 25.14 JAKOBSON; 29 Tab. [r] ist uvular, nicht velar; 52 öfters: Diphthong, alle /ə/ sind /e/ zu lesen; 53 Fn. 2, 63 Fn. 3 MORCINIEC; 55.9 /æ:/; 58.12 /f/ statt /ff/; 60.10 /zalts/, /gef_vulst/; 72.14 Okklusive; 96.1 Konsonanten oder Geräuschlauten statt Verschlusslauten; 162.31 Czech statt French; 165.29.31 Schane, S.A. statt A.S.

DIETER MICHAEL JOB, Bochum

Literatur

- 1 CHOMSKY, N.; HALLE, M.: The sound pattern of English (Harper & Row, New York 1968).
- 2 DUDEN: Aussprachewörterbuch. Wörterbuch der deutschen Standardausprache; 2. Aufl. (Bibliographisches Institut, Mannheim 1974).
- 3 JAKOBSON, R. and LOTZ, J.: Notes on the French phonemic pattern. Word 5: 151–158 (1949).
- 4 JAKOBSON, R., et al.: Preliminaries to speech analysis (M.I.T. Press, Cambridge, Mass. 1952).
- 5 KUČERA, H. and MONROE, G. K.: A comparative quantitative phonology of Russian, Czech, and German (Elsevier, New York 1968).
- 6 LADEFOGED, P.: Preliminaries to linguistic phonetics (Univ. of Chicago Press, Chicago 1971).
- 7 SCHANE, S. A.: French phonology and morphology (M.I.T. Press, Cambridge, Mass. 1968).
- 8 WERNER, O.: Phonemik des Deutschen, pp. 55 ff. (Metzler, Stuttgart 1972).
- 9 MORCINIEC, N.: Zur phonologischen Wertung der dt. Affrikaten und Diphthonge. ZPhon 11: 49–66 (1958).
- 10 HALLE, M.: The strategy of phonemics. Word 10: 197–209 (1954).

P. R. LÉON and P. J. MARTIN: **Toronto English**. Studies in Phonetics to honour C. D. Rouillard, Studia Phonetica. vol. 14. Didier, Ottawa 1979.

Canadian English pronunciation (Toronto English) is compared with RP as described by DANIEL JONES, and with 'General American' as described by GLEASON. This is said to be the first study (with one exception) 'based on a considerable corpus' (recordings of readings

of 102 sentences by 17 Toronto high school students, and "spontaneous exchanges") 'and supported by experimental data such as perceptual, instrumental and statistical analyses and including a sociolinguistic analysis of the results'.

The accent is rhotic, by implication; this is not discussed. Since RP is said to enjoy some prestige, are there no non-rhotic speakers? Even inconsistently?

The 'vocalic system' is /i, ɪ, e, æ, ə, a, o, ʊ, u, ɔ, ɒ/, i.e., it contains no /ɒ/ nor /ɔ/. The length contrast between 'long' and 'short' vowels is said to have been lost.

Though some prestige attaches to resemblances to the RP system and realizations, 'the position of Canadian English, which is in a minority in the North American English-speaking community, is unstable, and pressure exerted by American English is undoubtedly in the process of tipping the scales in favour of General American.'

There are papers on the low vowels; vocalic oppositions (and confusions); the phonetic realizations of diphthongs (/av/ still has a 'raised variant' before voiceless consonants, while /aɪ/ seems to be losing its 'raised variant'); nasalization of oral vowels followed by nasal consonants; aspiration of initial voiceless stops (interesting sociolinguistic variation here); voiced t; final stop consonant release; glide usage and effects of palatalization (/nu/ vs. /nju/, etc.); the pronunciation of /h/ (in 'wh' spellings and unstressed 'h'); intonation of yes-no questions; intonation of the declarative sentence.

It is interesting to have so much information about *consonant* detail: comparison of accents is usually heavily weighted with *vowel* quality differences. I hope we can look forward to more information about consonants; e.g., given that American English is commonly but erroneously described as having only 'dark' /l/, it would be good to hear something about /l/ in Canadian English. Is there more to be said about glottal stop for /t/ than its occurrence at word-boundary before /j/? What kinds of /r/'s do Canadians have?

It is a little surprising to read in a work of this description and date, 'Only in rare cases was [t] heard as a distinct, fully articulated occlusive; for most subjects it *degenerated* somewhat...' (my emphasis).

The author of the 'glide usage' paper does not seem to realize that there is a difference in American English (and therefore presumably in some Canadian English) in the treatment of C'u' sequences, depending on the place of the stress; it is only in words in which the stress (primary or secondary) falls on the syllable represented by the 'u' that there is a difference between RP and American: 'tune, 'duty, 'new, en'thusiasm, pre'sume, 'stupid; 'atti'tude, 'resi'due, 'ave'nue, 'reso'lute; ɪpneu'matic, ɪlu'bricious, ɪtu'torial, ɪdu'plicity, ɪsu'perior, ɪstu'pendous without /j/; if stress falls on the syllable *before* the /u/, one finds C/ju/ or assimilated forms: annual, value, ritual, gradual, pressure, casual; and of course the difference occurs only after apicals, so there was no point in looking at 'continued', 'unusual' or 'muted'; indeed, these three words are listed in table III, p. 109, with no figures to accompany them.

The spelling and proof-reading leave a good deal to be desired, and an 'American English Pronouncing Dictionary' is attributed to DANIEL JONES in the bibliography.

ELIZABETH ULDALL, *Edinburgh*

Estonian Papers in Phonetics. Studies on Accent, Quantity, Stress, Tone. Papers of the Symposium, Tallinn, November 1978. Academy of Sciences of the Estonian S.S.R. Institute of Language and Literature, Tallinn 1978. 104 pp.

This, the 7th volume of *Estonian Papers in Phonetics*, is devoted to papers from a symposium held in Tallinn in November 1978. 27 papers were presented at the symposium, dealing with accent, quantity, stress, and tone. 5 of the papers were primarily of a theoretical nature; the others focused on the prosodic systems of a wide range of languages spoken mostly within the confines of the Soviet Union. Finno-Ugric languages were represented by 5 papers dealing with Estonian, 1 with Samoyed and Ugric languages, and 1 with Udmurt. Indo-European languages discussed at the symposium included Russian (6 papers), English, German, Latvian, Lithuanian and Romany. Turkic languages were treated in 1 paper,

languages of the Caucasus in 3, and Alutor, a language of the Chukchee-Kamchadal group, in 1 paper.

Since information concerning recent investigations of languages spoken in the less accessible regions of the Soviet Union is not easily obtainable, I shall start my review with a consideration of papers devoted to those.

S. KONZASOV and I. MURAVYOVA, 'Stress in the Alutor language', pp. 47–48. Alutor was studied by an expedition organized by Moscow University in 1971–1972. Alutor is characterized as a 'typically syllabic language'. There are two syllable types: CV (light) and CVC (heavy). Stress consists of an increase in articulatory energy applied mainly to the non-initial part (coda) of the syllable. It may fall only on one of the two initial syllables of a word, stress on the second being preferred. Only heavy syllables may be stressed. Stress is excluded from the final syllable. The authors formulate the following accentuation rules for Alutor:

- (1) In monosyllabic words, the single syllable (which is always heavy) is stressed.
- (2) In disyllabic words, the first heavy syllable receives stress.
- (3) In polysyllabic words the second syllable is stressed, if it is heavy; if the first syllable is heavy and the second light, stress is placed on the first syllable.

Rule 2 may produce words with stress on the last syllable; in those cases the final consonant is geminated and an unstressed vowel is added, creating a permissible trisyllabic structure.

A. KIBRIK, S. KONZASOV and S. STAROSTIN, 'Word prosody in Dagestan languages', pp. 44–46. During a linguistic expedition to the mountain areas of Dagestan, organized by Moscow University in 1975, lexical tonal contrasts were discovered in two languages of the Andi group (Chamalal, Tindi) and in one language of the Tsez group (Khwarshi). The prosodic systems of some other Dagestan languages were investigated in subsequent years. The authors have found four types of word prosody:

- (1) 'Syllable accent' – every syllable carries contrastive tone. This system was found in Akhwakh and Chamalal (the Gigatli dialect).
- (2) Word-level tonal configurations without contrastive stress. This system was found in Tindi, Bezhta, Tzakhur (the Mikik dialect), and Dargwa.
- (3) Word-level accent. In this type, words have both a tonal contour and lexical stress; the tonal configuration is defined by the tonal characteristics of the stressed syllable. These prosodic systems were found in Chamalal (the Gakwari dialect), Awar (the Chadakolob dialect), Tzakhur (the Gelmetz dialect), and Dargi (the Chirag dialect).
- (4) Systems with free stress, but no tonal contrasts. Languages with this prosodic system are Archi and Khinalug.

The acoustic correlates of tonal contrasts were established by experimental study. The article contains reproductions of fundamental frequency contours of tonal contrasts in monosyllabic and disyllabic words in Bezhta and Chamalal and on disyllabic words in Akhwakh.

S. STAROSTIN, 'Preliminary remarks on accent correspondences between some languages of Dagestan', pp. 88–90. This paper compares the accentual systems of four languages of Western Dagestan – Tindi, Chamalal, Avar (the Avaro-Andian subgroup) and Inkhokwari. Chamalal has two tones, rising and falling; Tindi has three – level, rising and falling; Inkhokwari has four – high level, low level, rising and falling. Avar appears to have no contrastive tone, but it does have movable stress. STAROSTIN reconstructs a proto-system with three tones for the three Avaro-Andian languages. A comparison of the Avaro-Andian three-tone system with the four tones of Inkhokwari shows that both Inkhokwari high level tone and rising tone correspond to Tindi rising tone. STAROSTIN suggests that level and rising have fallen together in Tindi. A further interesting phenomenon is the relationship between phonation type and tone. Inkhokwari low tones are characterized by an 'additional lax voice characteristic', connected with low pitch. While in Tindi this tone has

lost its low character and has become the only level tone (high level turned into rising), it preserves the 'lax voice articulation', which now is not dependent on low pitch any more. Finally, in Chamalal, the level tone becomes rising, still maintaining its 'lax phonation'. Chamalal appears to be in the process of developing into a system with a binary opposition between two phonation types, rising and falling tone changing into nonsignificant concomitant features of contrastive phonation.

V. DYBO, S. NIKOLAYEV and S. STAROSTIN: 'A tonological hypothesis on the origin of paradigmatic accent systems', pp. 16–20. In this paper, the authors compare different Caucasian accent systems with those of Balto-Slavic. The Proto-Slavic system of two accent paradigms was later transformed into a three-paradigm system, A with immobile stress on the root, B with immobile stress on the suffix, and C with mobile stress. The system of Avar presents a significant typological analogy: it has two paradigms with immobile stress on the root (A – stress on the first syllable, B – stress on the second syllable), and one (C) with mobile stress. The authors hypothesize that in both cases we are dealing with a phonologized restructuring of different types of demarcation accent: in Balto-Slavic and Avar – initial –, and in Western Caucasian – final. The demarcation accent is hypothesized to have been tonal. The fact that tonal systems have been found in some modern Caucasian languages is considered supportive of this hypothesis.

V. DENISOV, 'Word-stress in Udmurt', pp. 14–15. Word stress in Udmurt is traditionally described as falling on the final syllable of a word. This is considered to be due to the influence of neighboring Turkic languages, since no other Finno-Ugric language has final stress. Most authors consider duration the main property of stress. DENISOV, however, suggests that 'what is considered a property of stress is in fact a marker of sentence intonation, for as is well known, any syllable at the end of an utterance is prolonged. Thus, length as a leading component of Udmurt stress may be rather a feature of the intonation system.'

This conclusion appears suspicious on several grounds. First, it implies that there is a single stressed syllable in an utterance, regardless of its length. This appears unlikely to say the least. Second, the term 'intonation' commonly refers to the fundamental frequency contour applied to a sentence. One would then expect that some feature of the fundamental frequency contour, such as a terminal rise, produces the lengthening. This, however, is contrary to experience: a syllable at the end of an utterance is prolonged regardless of whether the intonation is rising or falling. Thus it cannot be intonation that lengthens the final syllable. One can only endorse the author's plea for further investigation of stress in Udmurt.

E. HELIMSKI, 'Notes on the origin of prosodic features in some Samoyed and Ugric languages', pp. 35–38. HELIMSKI observes the existence of long vowels in some Nenets words. Reconstructing Proto-Northern Samoyed (PNS), HELIMSKI finds that practically all long vowels of PNS origin go back to diphthongs, while corresponding short vowels reflect monophthongs. In the easternmost dialects of Tundra Nenets, the opposition is likewise distinctive, but appears to be tonal: vowels that are long in other dialects are falling, while those that are short elsewhere are rising.

In an analysis of stress in Selkup, HELIMSKI finds the placement of stress determined by affixes. In root words and word forms containing affixes of the 'first type', the last long vowel is stressed; if there is no long vowel, stress falls on the first syllable. The peculiarity of affixes of the 'second type' is that they contain phonetically short vowels that behave as if they were long, i.e. they can be stressed if no long vowels and no affixes of the same type follow. The 'third type' of affix causes the word to have two or more stressed syllables. HELIMSKI hypothesizes that affixes of the second type originally contained long vowels that were shortened for phonetic reasons, and that affixes of the third type developed from independent, separately stressed words.

All six vowels of the Somatu dialect of Enets may be short or long; the morphological behavior of the long vowels resembles that of biphonemic vocalic clusters, and HELIMSKI

shows that they have developed either from PNS diphthongs or from *VCV sequences where the intervocalic consonant has disappeared.

In considering the long-short opposition of Hungarian vowels, HELMSKI proposes that it goes back to an accent shift. HELMSKI reconstructs a Proto-Hungarian stress rule: the last syllable is stressed unless it contains a high vowel. With accent shift to the first syllable, originally stressed first vowels (i.e. first vowels in words with high vowels in nonfirst syllables) become long, while originally unstressed first vowels remain short.

For reasons of limited space, the remainder of the papers will be reviewed very briefly. The 5 papers dealing with Estonian include the following: A. EEK, 'Just-noticeable differences of duration and language type: some preliminary notes', pp. 21-26; R. HARMS, 'Some observations and hunches concerning Estonian prosody', pp. 31-34; M. HINT, 'Changes in the prosodical system of contemporary Estonian', pp. 39-43; U. LIPPUS, 'Prosody analysis and speech recognition strategies: some implications concerning Estonian', pp. 56-62; and T. VIITSO, 'Accents in Estonian', pp. 94-98. EEK compares just noticeable differences in the perception of duration by two groups of listeners, Estonian and Russian. Since duration plays a different part in the native language systems of the listeners, EEK hypothesizes that the differences actually found in their listening behavior might be attributed to their different language background. HARMS presents his current views concerning the quantity system of Estonian. HINT offers interesting examples of changes in the phonotactics and grammar of colloquial Estonian, contrasting it with 'rigidly standardized' official literary Estonian. According to HINT, standard Estonian may be regarded as a mora-counting system, while the prosodic system of colloquial Estonian is in the process of changing into a syllable-counting system. The paper by LIPPUS presents an automatic speech recognition strategy for Estonian disyllabic words. VIITSO offers an analysis of Estonian quantity based on recognition of four distinctive quantities.

Several of the other papers, too, would be worthy of more extensive discussion; I shall just mention a few that I found particularly interesting, some of them possibly for the reason that they touch upon areas of my own research. P. ARISTE, in 'On two intonations in a Romany dialect', pp. 5-7, discusses tonal oppositions he has found in the West-Baltic Romany dialect and compares them to prosodic phenomena found in Latvian and Estonian. A. PAKERYS, T. PLAKUNOVA and J. URBELIENE, 'The pitch of Lithuanian diphthongs', pp. 77-78, describe the realization of Lithuanian tones on diphthongs and find that the distinction between rising and falling accents is manifested in the position of the peak of the fundamental frequency contour, which occurs earlier in the case of falling accents. M. REMMEL, in 'Theoretical experiments and prosody', pp. 85-87, raises important issues concerning the comparability of segmental phonetic space ('formant space') and 'prosody space'. And B. GASPAROV, in 'On sentence prosody change in contemporary Russian', pp. 27-30, speculates about the possible reasons why modern actors acting in plays from the classical Russian repertoire sound too 'soviet'.

All in all, this is an interesting volume.

ILSE LEHNSTE, *Columbus, Ohio*

H. H. WÄNGLER (ed.): **Festschrift für von Essen anlässlich seines 80. Geburtstages**. Hamburger Phonetische Beiträge, vol. 25. Buske, Hamburg 1978. 480 pp.; DM 58.-. ISBN 3-87118-355-5.

It is undoubtedly fitting that a former pupil and colleague of OTTO VON ESSEN's should edit the collection of papers offered in his honour on the occasion of his 80th birthday. There can also be no objection whatsoever to the expression of appreciation offered by the board of the German Society of Speech Therapy (Deutsche Gesellschaft für Sprachheilpädagogik) and the chairman of the north-west regional section of the Association of German Teachers of the Deaf (Bund Deutscher Taubstummenlehrer), which combines with VON ESSEN's autobiographical reminiscences (*Lichtblitze aus meinem Leben*) to create a worthy picture of the phonetician and speech therapist both as a man and a scholar. For the reader aware of von

ESSEN's reputation but unfamiliar with the scope of his academic interests, the list of publications (pp. 19–23) provides insight.

But if a 'Festschrift' is to be a source of information and not *just* a token of respect, it is the contents which have to undergo appraisal. In this connection WÄNGLER has neglected perhaps one of the more important of his editor's duties; there is no mention in his introductory remarks of the criteria adopted in selecting the 23 articles contained in the volume. But whatever they were – and one has the impression that contacts to Colorado/Hannover and Trier were as important as any direct link with VON ESSEN – an eye for quality rather than quantity would have served the book's function as a 'Festschrift' and an anthology of phonetic writings better. This is not to say that the overall quality of the contributions is inferior, but it is one of the prime duties of an editor to try to avoid the 'curate's egg'; timely excision or modification enhances the appreciation of what remains.

Two articles which would have gained a lot from being shorter and conciser are those by H. HOLLIEN and J. NEPPERT. Both authors present eminently respectable points of view, the former defining a budding area of applied phonetics, which he christens 'Forensic Phonetics', the latter discussing the problems of defining phonetics as a unified science. The first half of HOLLIEN's paper, which is devoted to a repetitive and rather trivial description of pitfalls and possible solutions in dealing with tape-recordings of forensic interest (and is consequently peppered with variations on the theme of 'as any Phonetician knows' – with capital 'P!'), is in stark contrast to the interesting and qualified discussion of the problems connected with the identification of speakers and the judgement of their emotional state.

NEPPERT's contribution (Reine Phonetik – Angewandte Phonetik; Allgemeine und Angewandte Phonetik; Durch Anwendungsorientierung mitbestimmte Phonetik) is, as the title suggests, concerned with the complexity of approaches in the phonetic sciences. The problem of finding a theoretical framework for such heterogeneity is of sufficient import to be the focus of a collection of phonetic writings. His strategy for discussing the question must also find approval: taking two extreme standpoints, both represented in Hamburg, one before VON ESSEN's time (PANCONCELLI-CALZIA) and one afterwards (PÉTURSSON), he points out the limitations of both approaches. He does not hedge about his preference for PÉTURSSON's 'linguistic phonetic' approach over PANCONCELLI-CALZIA's philosophically tempered positivism, but rightly sees the limits of too strong a dependence in phonetic research on linguistically defined units. Despite the opacity of his language – a flaw which is rendered more serious by the complexity of the thoughts he expresses – NEPPERT succeeds in tracing a logical path through this section of his paper. As with HOLLIEN's contribution, though, there is a distinct break in the middle. The subsequent section on the question of 'applied' phonetics quickly loses the theoretical orientation of the first half and becomes a historical account, with theoretical interludes, of developments in the Hamburg institute, with particular reference to speech therapy. The reader's final feeling must be one of uncertainty as to the prime aim of the article. The unclear treatment of an admirably conceived topic is negatively enhanced by the occasional grammatical slip (pp. 310 and 333) as well as by a number of unfortunate typing/printing errors (pp. 313, 315, 326, 327) which, since they are semantically distorting, should have been noticed in even cursory proof-reading.

Whereas the two papers just discussed remain of interest despite their weaknesses, the reviewer has considerable doubts about whether the articles by KLOSTER-JENSEN and WEISS should have been included at all. The reasons for such a harsh statement are different in the two cases. KLOSTER-JENSEN has both his position in Hamburg and his present area of activity to justify a contribution to VON ESSEN's 'Festschrift'. But the article itself can only be regarded as disqualifying in the eyes of other phoneticians, and unfortunately it is, in addition, misleading to any phonetically interested reader looking for a general orientation. Basic articulatory labels that have been employed more or less unchanged since before the turn of the century to characterize speech sounds are regarded by KLOSTER-JENSEN in their juxtaposition within *auditorally* analysed and *graphically* represented utterances, and presented as a reflection of the

articulatory transitions themselves. Apart from the severe criticism earned by the total confusion of descriptive levels, this approach does not even fulfill the author's claim that it is new, since it differs only in its form of presentation and in the reduction of the number of parameters from JESPERSEN's description of utterances using articulatory parameters. As a technique for directing the attention of students to articulatory changes within an utterance, in the same way that traditional IPA descriptions direct attention to manner and places of articulation, etc., KLOSTER-JENSEN's 'SNAsAm' model may well have some pedagogical value, but this does not justify the manner in which it is presented here.

WEISS, on the other hand, has only a tenuous link with VON ESSEN through his teacher, WÄNGLER, so that a justification for including his paper can only be sought in the quality of its contents. Since the author does nothing more than resummaries the results of work presented in six previous publications, two of which appeared in the '*Hamburger Phonetische Beiträge*' (Nos. 13 and 20) the justification is hard to find. It is also difficult to appreciate the motive behind presenting a 60-item bibliography while only mentioning 9 titles (including 5 of his own!) in the article.

In view of the variety of subject matter presented in the remaining 19 papers, an attempt will be made to comment on them in thematic groups.

In recognition of VON ESSEN's own work with African languages, two very different contributions in this area are included. FRAJZINGIER discusses contextually induced neutralization phenomena in the consonantal system of Pero within a generative framework, and BRECKWOLDT provides an interesting historical survey of attempts to describe and graphically record 'click' sounds.

A historical paper of a different kind is KOERNER's 'Towards a Historiography of Phonetics'. For the phonetician involved in the direct investigation of speech phenomena, historical accounts of developments in approach and method provide an invaluable background. The value of taking another step away from the object of study and providing a historical survey of historical surveys is not quite clear to the present reviewer, but that is no doubt due to an underdeveloped sense of history.

Three articles are devoted to a subject which, though not central to the phonetic sciences, was certainly one of VON ESSEN's interests and a part of his scholarship: phonetic aspects of literature. MARTENS and SCHNAUBER both demonstrate how literary interpretation can gain in depth if phonetic questions are asked of the text. BALKENHOL and SASAKI's paper, 'Rhythmus und Pause (*ma*) in der japanischen klassischen Erzählkunst des Rakugo', is less phonetically oriented, despite the title. They (necessarily) devote considerable space to aspects of the cultural background, but from a linguistic-phonetic point of view the conventionalized 'meaning' of overall prosodic patterns gains a new dimension.

Four papers on intonation, in fitting recognition of VON ESSEN's own work in this area, are extremely varied in their approach. ANDERSON presents some results from his doctoral dissertation on German-English interference phenomena, with a brief discussion of previous intonation studies. It is strange that he should conclude with the claim (p. 34) that 'observed -etic differences provide an immediate and practical base for overcoming native language interference', which is not only an implicit contradiction of his own statement that 'a functional contrastive analysis of German and English intonation is not yet possible' (p. 34), but also ignores the fact that overcoming interference is a teacher-learner problem. Knowledge of speech phenomena is perhaps a prerequisite to finding a solution to it, but it is certainly no more.

The (unfortunately) rare recognition of this fact is central to GUTKNECHT's discussion of the function of intonation in the teaching of English. Although the known functional distinctions carried by intonation and stress in English are specified as a useful framework within which to approach the teaching of intonation, the author concludes, in view of the 'intertwining of syntactic, semantic and situational factors' (p. 130), with a welcome emphasis on the need for empirical research in this area.

Two other views of intonation are provided by HEDE HELFRICH, who demonstrates a synthesis of linguistic and psychological interest, and also provides a valuable survey of experimental studies for the investigator taking C. GUTKNECHT's suggestion seriously, and by LYON, LACY and CRANE, who give an interesting methodological and theoretical discussion of one of the basic questions of language acquisition – despite inconclusive results in the investigation reported.

Two papers provide information of a technical nature: STOLTZ gives a short and succinct report (pp. 433–435) on three pieces of apparatus developed in the last few years of VON ESSEN's time in the Hamburg Phonetics Institute, while KÖSTER and KLOS describe past developments and the principles underlying a new generation of segmenters built in Trier.

Rather surprisingly, in view of VON ESSEN's own activities in the field and of the tradition of his institute, only one contribution (SPIECKER-HENKE) is concerned with speech pathology. In it the author presents important data on criteria for judging voice disorders in large-scale screening tests.

An experimental phonetic approach can be found in only six of the papers. Of these, KASCHUBE's instrumental analysis of tones in Crow is, on the author's own admission, his first venture into this field of investigation, and he explicitly regards the instrumental representation in the naive manner of many linguists as an objective support to his own 'limited auditory apparatus' rather than as an independent scientific method presenting its own problems and demanding its own theoretical framework.

The remaining five articles are 'production'-oriented in three cases and 'perception'-oriented in two. BAUMAN pursues one of the traditional questions of durational studies – that of vowel and following consonant duration – in an investigation carefully controlled for context. Her results can certainly be regarded as a useful contribution to the long-standing discussion of speech production mechanisms. PÉTURSSON presents (in German) results of an earlier experiment, previously only available in French, in which a combined spectrographic and glottographic analysis of the sequence /s/ + plosive is examined for phonetic manifestations of the linguistic element 'juncture'. The results – in particular the presence of differences in glottal behaviour within morphemes and across morpheme boundaries – raise questions which require a more systematic corpus and a greater number of speakers. STRAKA's discussion of radiographic evidence on vowel articulation and his resulting criticism of the *physiological* validity of traditional quadrilateral and triangular vowel charts is irrefutable but rather misplaced in view of the accepted *auditory* level of description to which the vowel charts are applied.

The papers on speech perception are concerned with two extremes of perceptual processes. MASTHOFF takes a look at the identifiability of isolated vocalic signals of varying duration (2–70 msec), while OAKSHOTT-TAYLOR pursues the question of word-intelligibility beyond the usual experimental dichotomy of 'isolated' versus 'context-bound' to include position of target word in an utterance as an additional variable. The greater complexity of this experimental task is indicative of a trend towards seeing speech perception as a multi-level process of which only a very distorted picture can be gained from examining the relationship between acoustic signal and single sound identification. It is this distortion which makes MASTHOFF's vowel-identification task questionable. His approach can be located between psychoacoustics and psychophonetics, and his position between these two stools makes the results difficult to interpret.

Two further comments in conclusion: The lack of editorial thought devoted to the basic theoretical conception of the collection of papers is coupled with a regrettable lack of care in proof-reading. The sense is rarely endangered but the frequency of errors by far exceeds the number that inevitably remain after careful correction. It is also regrettable that representatives of other phonetics institutes in Germany were not asked whether they wished to pay tribute to a former director of the first phonetics establishment in Germany.

W. J. BARRY, *Kiel*