Language and linguistics

BILINGUALISM

68–79   Dartigue, Esther. Bilingualism in the nursery school. *French Review* (Baltimore), **39**, 4 (1966), 577–87.

In the United Nations nursery school in Paris, the children range from three to six. Two-thirds come from countries other than France. A survey of 100 children entering the school revealed that one-third of the children lived in a bilingual French/English environment, some were bilingual in other languages, and others spoke only one language. The school aims to give the children a happy experience of school environment. Bilingualism is an integral part of that environment but no attempt is made to teach either language formally, nor is any child obliged to speak both languages.

School lasts half a day. Directed activities consist of (1) the telling of stories line by line, using felt board and puppets, one day in English, one day in French; (2) music and singing games, where the teacher sings and the children perform actions. During non-directed activities, the teacher remains in the background, speaking to the child in the language he understands. In the kindergarten group, language teaching becomes more formal and one language is chosen for formal schooling.

The use of two languages does not seem to bother the children. Most are positive and receptive to the second language and become fully bilingual if there is suitable support in the home. Even if the second language is later forgotten, there are reports of residual facility.

Besides the many factors at play in the language-learning situation generally, in this case, adjustment to the new school, the new country, and personality differences are crucial. The child under five learns because he wants to be understood, and in this school verbal interaction is believed to be more important than a structured lesson in the acquisition of a second language. [Bibliography.]

68–80 Laycock, D. C. Papuans and pidgin: aspects of bilingualism in New Guinea. *Te Reo* (Auckland), 9 (1966), 44–51.

Bilingualism in New Guinea occurs in a multilingual situation. There are possibly a thousand different languages but in pre-European times knowledge of other languages was apparently not extensive. Social interaction between groups consisted of 'silent trading' or warfare. In complex linguistic areas young boys were exchanged between villages so that they could become bilingual and mediate in disputes.

Most foreign borrowings in New Guinea languages came with the spread of pidgin which is mostly learnt from other local pidgin-speakers, not from Europeans. As the new lingua franca, pidgin served as the vehicle for the importation of new words connected with European culture and acquired a prestige value not yet lost. It is fairly easily acquired by speakers of both Melanesian and Papuan languages. A detailed study is given of the influence of pidgin grammatically and phonetically.

WORLD LANGUAGE

68–81 Caruana, R. M. What Esperanto is. *Incorporated Linguist* (London), 6, 2 (1967), 39–41.

The first Esperanto grammar was published in 1887. The main feature of Esperanto is that it is easier to learn than any other language. Based on Romance and Germanic roots, its grammar incorporates many of their features in simplified form; its orthography is phonetic, and its rules are without exceptions. It contains almost no idiomatic expressions.

After the publication of the grammar, the Bible and some literary works were translated into Esperanto. Within a few years, Esperanto was spoken in Russia, Poland, Germany, France and England. The first International Esperanto Congress, held in France in 1905, established Esperanto as an international language. Since 1905, many international congresses, as well as specialized ones, have been held in many countries. The World Esperanto Organization has its head-

quarters in Rotterdam, where the official journal *Esperanto* is published. There are also many specialized societies, all using Esperanto as the official language. Eighty magazines are published in Esperanto. There are about three thousand works, including original and translated prose and poetry, as well as dictionaries and pedagogical material. Approximately 563 schools in thirty-one different countries teach the language, as well as a few universities.

Esperanto is used in commerce and industry, in the literary field and in radio broadcasts. It has been used as a bridge language in translations. Scientific and specialist periodicals have published articles or summaries in the language. The World Esperanto Association enjoys consultative status with Unesco, which has used that language on several occasions. In view of the ascending graph of Esperanto teaching, Esperanto speakers are optimistic. The activity of present speakers will however determine the future of Esperanto.

68–82   Lidvall, H. Språkliga internationella kommunikations-problem inom den medicinska forskningen. [Linguistic problems of international communication in medical research.] *Nordisk Medicin* (Stockholm), **78**, 29 (1967), 921–6.

The total number of medical papers published every year is now more than 220,000. The quantity produced increases at an accelerated rate. More than a third of all articles are written in English. This language holds a dominating position among the 'national' languages, but the number of 'important' languages is increasing. There is already a great unsatisfied need for a translation service, and the need will increase rapidly. The documentation service does not satisfy the present need and, as it seems now, this service will probably become more and more insufficient.

Scientists tend to overcite the literature written in their own languages in relation to that in other languages. This is, of course, to some extent due to linguistic difficulties, but a precise knowledge of how much information is thus lost can only be attained by further extensive investigations.

There are good reasons to doubt that any national language will

5-2   67

ever be accepted as a single international auxiliary language. When comparing English and Interlingua (a constructed auxiliary language) it is quite evident that Interlingua would be preferable as a means of international cultural communication.

An artificial basic language for the purpose of scientific translation and documentation should be developed and energetically supported by Unesco. Unless this is done in the near future, there is little hope that the trend towards an increasing loss of information can ever be successfully counteracted.

PHONETICS AND PHONOLOGY

68-83   Lewis, J. Windsor. Vowel symbolisation by diagram. *Språk og språkundervisning* (Oslo), **2**, 1 (1966), 2–11.

Individuals differ in their ability to distinguish vowels, and speech communities vary enormously in the range of vowels they recognize. It is inappropriate to aim at a high degree of exactitude in marking vowels on vowel diagrams.

A vowel diagram must adequately show auditory relationships, be easy to draw, and be reconcilable with physical perceptions and ascertained knowledge of the positions of the tongue. The simplified quadrilateral has proved its usefulness.

Research so far published does not justify confidence in the correlation between vowel-sound and tongue-position, but it is unlikely that the vowel diagram now in use will need to be changed.

Vowel-sounds no further apart than one-fifth of the distance between two adjacent cardinal vowels would be indistinguishable to the average ear. Taking lip position into account, a well-trained ear of average acuteness can distinguish about fifty vowels. The IPA alphabet provides amply for the phonemic transcription of any language.

The dots on the vowel diagram indicate only the approximate tongue positions of average English vowels. It would be better to represent these positions by circles. [Diagrams are given.]

68–84 **Malécot, A.** Mechanical pressure as an index of 'force of articulation'. *Phonetica* (Basle), **14**, 3 (1967), 169–80.

The labial and alveolar mechanical pressures of phonetically naïve subjects were recorded as they uttered six consonants intervocalically before a stressed vowel in randomized nonsense syllables. Results showed that the speakers did not articulate in such a way as to yield values (for duration, peak pressure, and pressure impulse) distinctively characterizing phonetic class.

A psychophysical test to determine whether the speakers were sensitive to differences as small as those that occur in real speech showed that they are sensitive to very small differences.

[Details of the experiments, accompanied by a photograph, graphs and tables, are given.]

ACOUSTIC PHONETICS

68–85 **Hanley, T. D., J. C. Snidecor and R. L. Ringel.** Some acoustic differences among languages. *Phonetica* (Basle), **14**, 2 (1966), 97–107.

[The authors describe an attempt to discover whether significant differences in pitch, intensity, and time factors among Spanish, Japanese, and American English speakers would be revealed by instrumental analysis.] Twenty-four subjects (eight for each language) were recorded, under acoustically controlled conditions, reading a passage in their own languages and thereafter speaking about their future career plans. The recordings were acoustically analysed for a number of features. A statistical analysis of the data was then made. Differences among the language groups for pitch level and variability, sound-pressure level and variability, and phonation/time ratio were sufficiently big for their chance occurrence to be unlikely, both in the reading and in the speaking sample. The male speakers of Spanish and Japanese were found to be alike in pitch level and higher than the speakers of American English, and also alike in sound-pressure level and lower than the speakers of American English. The male speakers

69

of English spent more time phonating than the speakers of Japanese and Spanish. The Japanese and English speakers read with greater pitch variability than the speakers of Spanish. The sound-pressure level varied more with the Spanish and Japanese than with the English speakers. The reading performances were higher and more variable in pitch, and had more phonated time, than the speaking performances.

68–86 Reddy, D. R. Computer recognition of connected speech. *Journal of the Acoustical Society of America* (New York), **42**, 2 (1967), 329–47.

The problem of speech recognition by machine has yet to be satisfactorily solved, but the Stanford computer-science department has developed a system for obtaining a phonemic transcription from a connected speech sample entered into the computer by a microphone and an analogue-to-digital converter. The speech utterance was divided into segments approximately corresponding to phonemes and a list of parameters computed for each segment. Each segment was then classified and given a phoneme-group label. About thirty utterances lasting one to two seconds each were analysed on an interconnected IBM 7090-PDP 1 system and many vowel and consonantal phonemes were correctly identified for a single speaker. [The article is richly illustrated with diagrams and charts showing details of the work.]

GRAMMAR

68–87 Zatorski, R. Early and later versions of the theory of transformational grammar. *Zeitschrift für Phonetik, Sprachwissenschaft und Kommunikationsforschung* (Berlin), **20**, 3 (1967), 259–70.

In making sentences we employ an internalized system of rules and relations conventionally designated as a grammar. A generative grammar which is to account for linguistic competence must contain a syntactic component assigning syntactic descriptions to signals, a semantic component assigning a semantic interpretation to the deep

structure, and a phonological component assigning a phonetic representation to the surface structure. Transformational linguistic theory provides a general account of syntactic description, a theory of semantic representation, a theory of phonetic representation, a specification of a set of potential grammars, and a specification of the operational procedures by which syntactic descriptions are generated and the semantic and phonetic representations assigned.

[The author explains how early versions of the transformational grammar were revised.]

The syntactic component consists of a base and a transformational component. The base consists of the categorical subcomponent and the lexicon. The categorical subcomponent consists of a twin sequence of rewriting rules. Each entry in the lexicon is a set of phonological and semantic features. The insertion of lexical entries completes the derivation from the base component and yields the terminal string. Transformational rules map deep structures into surface structures, to which the rules of the phonological component give phonetic interpretation. The transformational component consists of a set of simple transformations yielding a generalized phrase marker. The output of this component is a well-formed sentence, as surface structure.

Taxonomic grammars are inherently incapable of accounting for our knowledge about the structure of complex sentences. The main virtue of transformational linguistic theory is its enhanced capacity to account for complex processes.

SCIENTIFIC LANGUAGE

68–88 **Bečka, J. V.** Jazyk a sloh odborných textů. [The language and style of scientific texts.] *Bulletin of the University of 17 November* (Prague), 2 (1967), 1–14.

The aim of scientific texts is to communicate knowledge and its practical application by means of language. The basis of this kind of text is learning which manifests itself in precise expression. Scientific terms are verbal signs for precise concepts. Each scientific discipline has a collection of such terms, some of which are shared with other disciplines.

71

There are also technological terms for practical application and descriptive terms for concrete objects submitted to scientific investigation. As science develops so terms are in a constant state of development.

Scientific texts are diametrically opposed to literary texts, where a need for precise terms does not exist, and where expressive forms are very frequent. Scientific texts also vary according to whether the subject is theoretical, synthetic, a manual for study, or a technological work for practical application. These differences are clearly reflected in the style. Moreover there are differences between scientific treatises, descriptive passages and reflective thinking.

The characteristics of scientific style are linked with the structure of the language, but they also depend on the intellectual function of scientific communication. This function is supralinguistic and its influence depends on the level of the research and possibilities of its publication.

68–89   Bečka, J. V. Neterminologická složka odborných textů. [The non-terminological vocabulary of scientific texts.] *Bulletin of the University of 17 November* (Prague), 2 (1967), 81–92.

The vocabulary of Czech scientific texts consists of 70 per cent of technical words and 30 per cent of ordinary words. The technical words can be divided into terminology and non-terminology. The statistics of these two groups are not precisely known nor has a frequency list of non-terminological words been established. In 1964 the university started research work on the last two points which is not yet complete. Obviously it is not always easy to distinguish between terminology and non-terminology because there are a certain number of words in everyday use which function as terminology, and there are specialist terms which have passed into everyday use. The non-terminology group has been much influenced by scientific thought and expression. Many common words in everyday speech are rare in scientific texts (expressive, appreciative words). The goal of this research is to draw up a frequency list of words from the chosen texts which will serve as a basis for teaching Czech.