3 The mode of transmission

3.1 Speech

How many ways are available to send a linguistic message? Speech is the norm for all languages; writing is available for many. Electronic communication sits uncertainly between spoken and written language. Sign is available for certain communities, chiefly the deaf (the study of sign languages is sometimes called cherology).

Note the plural form: sign languages. There are many sign languages in the world, such as British Sign Language and French Sign Language. These are individual, sophisticated systems, not to be confused with the basic set of gestures studied by kinesics.

The pronunciation of speech is studied under two headings: phonetics and phonology. Phonetics studies human sound-making (articulatory phonetics), sound transmission (acoustic phonetics) and sound reception (auditory phonetics). It describes all properties of the sounds of speech, regardless of the languages in which they occur. Phonology, by contrast, studies the sound system of individual languages.

Two dimensions of analysis are recognized under each heading. The segmental dimension deals with spoken vowels and consonants, and the way these combine to form syllables in connected speech. The non-segmental dimension deals with the prosody and paralanguage – variations in pitch (intonation), loudness, tempo, rhythm and tone of voice. The distinction between the two dimensions is summed up in popular parlance by the expression 'It ain't what you say, but the way that you say it'.

The segmental dimension has received most study, as vowel and consonant segments are relatively easy to transcribe and describe, and are reflected in alphabets. The non-segmental dimension is more difficult, so is further illustrated using the main tonal contrasts heard in English, and by examples from child language acquisition – an early set of contrasts used with the word *dada*, and 7–10-year-old awareness of the intonation of football results. The distinction between stress-timed and syllable-timed rhythm is demonstrated from emerging accent variation in global English.

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3.2 Writing

Writing has been less well studied from a linguistic point of view, so the analysis and terminology is less well established. I make an analogous distinction between graphetics, the study of the making, transmission and reception of written marks on a surface; and graphology, the study of the writing system of individual languages. Graphetics explores such matters as the inventory of graphic shapes, writing implements, types of surface, and hand—eye coordination. Graphology deals with alphabets, syllabaries, ideograms and other orthographic systems.

As with speech, two dimensions of analysis are recognized under each heading. The segmental dimension deals with written letters (upper- and lower-case), in their various handwritten and printed styles, as well as punctuation marks, syllabics, characters, and the way these combine to spell out words, sentences and other orthographic units. The non-segmental dimension deals with all the issues usually placed under the heading of graphic design, such as variations in layout, spacing and colour. The distinction between the two dimensions might also be summed up by adapting the popular expression: 'It ain't what you write, but the way you present it'.

Much of the interest in orthography has focused on literacy and problems of illiteracy among children and adults, with particular attention being paid to analysing and evaluating the variety of methods used in teaching people to read (the various 'reading schemes'). Due emphasis has been given to the need for an integrated approach: writing depends on reading, and speaking depends on listening; but it is essential also to relate reading to speaking. What this means in practice is that reading schemes need in their early stages to reflect the spoken linguistic level of the learner, and not to exceed it. For example, a story aimed at 6-year-olds should not include grammar and vocabulary that would be used only by older children (such as passive constructions).

An example of integration in writing is the way children overuse *and* as a sentence-connecting device in their early written work. To eliminate this, children need to be aware of other kinds of connectivity in listening, speaking and reading. Vocabulary analysis

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suggests semantically contrastive adverbial connectors such as *happily/sadly*. Can this be made motivating for children? Remy Charlip's *Fortunately* shows that it can.

The remaining category under 'Mode of transmission' refers to electronically mediated communication (EMC). This includes computer-mediated communication (such as using the Internet) as well as communication by mobile phone, dialogue with voice-activated machines, and other kinds of electronic interaction. It is given separate mention because it combines properties of spoken and written language. We type web pages and emails, yet talk of having an email 'conversation' and enter 'chatrooms'. At the same time, EMC goes beyond traditional speech and writing. Unlike speech, it lacks the simultaneous feedback that is essential for a successful face-to-face conversation, and it permits multiple interactions to take place simultaneously (as in a chatroom). Unlike writing, on-screen movement of language contrasts with the stability and permanence of traditional written text, and hypertext links relate pages in an unprecedented way.

This completes the outline of what is involved in language structure. Semantics and grammar combine to be transmitted in speech, writing, sign or electronically. We now turn to the ways in which these structures change and vary in situations of language use.