2 The structure of language

2.1 Semantics

Although there are many differences between the models of language devised by linguists, and terminology varies, all recognize three main structural dimensions, here called semantics, grammar, and mode of transmission.

Semantics is the study of meaning in language. Avoid its pejorative sense ('just semantics') and its extended sense on the Internet (the Semantic Web, which includes encyclopedic data). In linguistics, semantics is concerned chiefly with vocabulary and how it is organized. The units of vocabulary are usually called words, but they are more accurately referred to as lexemes or lexical items – a notion that takes account of grammatical variants (eg *go*, *goes*, *going*, *gone*, *went* are word-variants of the lexeme *GO*) and lexical units consisting of more than one word (eg *come in*, *sit down*). The distinction is clear when we do vocabulary counts: there are about 30,000 different words in Shakespeare, but fewer than 20,000 lexemes.

What is the size of our personal vocabulary? Few people can give an accurate estimate, either for their active vocabulary (words they use) or passive vocabulary (words they know but do not use). They usually hugely underestimate their lexical knowledge. One investigative technique is to use a college dictionary in which individuals identify lexemes they know or use. The exercise typically gives a result well above 50,000 for passive vocabulary, with active somewhat lower.

Vocabulary size is only one aspect of semantics. We also need to explore the spread of vocabulary through the notion of semantic fields (eg vehicles, colours, furniture). Words also do not exist in isolation, but display sense relationships such as synonymy and antonymy. Children acquiring vocabulary learn clusters of words, such as *hot/cold*, *big/little*. They learn that there are different kinds of opposite, such as the gradable *hot/cold* (*very hot*, *quite cold*) and the ungradable *single/married* (we don't say *very single* or *quite*

married, except in jest). These, along with several other sense relationships, give vocabulary its organization.

Word sequences are part of semantics too. Language has to be coherent, as illustrated by topic sentences in paragraphs and paragraph divisions. Ideas have to be acceptably sequenced, using notions such as beginning, middle and end. Sequencing problems are often seen in language-disordered children, who tell a story starting at the end or in the middle.

2.2 Grammar

People sometimes identify meaning with vocabulary alone. If this is so, it should be possible to understand the meaning of a word simply on hearing it in isolation. An example such as 'table' shows this is not the case, for this word has several meanings (item of furniture, graphic display in a book, etc). The ambiguity is resolved only by putting words into context, which means into sentences. In this way we move from semantics to grammar. Sentences, and sentence structures, exist in order to make sense of words.

We can see the move from vocabulary to grammar in early language acquisition. An 18month-old child confused her father by saying 'push': he was unclear whether she was to push him, or he was to push her, or whether some other thing was to be pushed. Six months later, and basic sentence relations, such as subject, verb and object, would be established to resolve this ambiguity.

Grammarians usually distinguish morphology and syntax. Both terms have usage outside linguistics. Morphology (cf usage in botany and geology) studies the structure of words, and how words are built up (*nation, national, nationalize...*). It thus includes the processes of affixation, especially inflectional endings, as well as types of word creation, such as by abbreviating (*BBC, txtng*), compounding (*flower-pot*), and blending (*brunch*).

Syntax (cf usage in other subjects, such as cooking and sex) is the study of sentence structure and connectivity. It thus includes all the levels of sentence organization, such as clause and phrase, word-order variations (eg *old ruined house*), relationships between constructions (such as active and passive), and the way we use connecting devices (such as *and*, *moreover*) to make sentence sequences.

Children acquire grammar in stages. A one-word stage (12–18 months, eg *dada*, *gone*) is followed by a two-element stage (18 months to 2 years, eg *daddy gone*), and during the third year the range of elements grows to include the full range of clause elements (eg *daddy kick ball, mummy go town bus*) along with phrasal expansions (*my mummy do go to town on a bus*). At around 3 years, coordinating conjunctions (especially *and*) allow the production of long clause sequences, though initially with normal non-fluency (*daddy gone*)

in the garden and – and – and he did go on the swing). Between 3;6 and 4;6, irregular morphology is acquired (*me not like them mices > I don't like those mice*).

Some writers suggest that the acquisition of grammar is complete by age 5. However, later grammatical learning includes more advanced structures (such as the use and comprehension of passives) as well as more sophisticated forms of sentence connectivity (*however, actually*). Also, learning to read and write brings an encounter with a standard language and notions of correctness in grammar. Grammatical intuitions are now shaped by teaching practices and expectations. Prescriptive rules of varying levels of artificiality may be introduced (eg never begin a sentence with *and*, never end a sentence with a preposition). A linguistically informed perspective here is essential.

Semantics and grammar together comprise the structured content of language. For communication of this content to take place, we need to choose a mode of transmission, which for most people means the choice between speech and writing.