MCLAREN - BOX 87-DOC 9 DRAFT

BY JOHN MCLAREN

The ability to speak, the capacity to use a symbolic system of sounds and signs, is unique to the species *homo sapiens*. It is what makes us human. It enables us not only to communicate with each other, but to escape from the time and circumstance which bind all other animals and to live in a world of our own making. Through language we can remember, anticipate, plan; record our experience and pass it on to others; create worlds of fiction and speculation; woo, mystify and control.

The origins of language are so far distant in time, as distant as the origin of the species, that linguists today are reluctant to speculate about them. No theory can be proved or disproved, but some account better than others for the observable facts about language. One theory, the 'pooh-pooh' or 'haw-haw' theory, was that language started as an expression of feelings; another was that it began was an imitation of natural sounds like the roaring of a wind, the whisper of leaves, or the murmur of a stream. Another suggestion was that it developed from the kind of warning calls used by some herd animals to signal the approach of predators. None of these theories however can account for the complexity of language, the fact that it consists not just of words but also of syntax. This combination gives language its power, generating a human creativity such that every sentence we utter is likely to be unique, a statement that has never been made before. It is only when we lapse into stereotyped and bureaucratic styles of thinking that we lose this capacity, and with it our freedom to act freely in the world.

Syntax is the system by which words are combined into patterns which make meaning. The syntax of a language is described in its rules of grammar, which are so complicated that it may take a lifetime to learn them, yet so natural that we all learn to use most of them in our native language in the first four or five years of our life, and all of them by the time we are twelve. The syntax of a sentence expresses the relationships that the speaker perceives between its parts, and allows an infinite number of sentences to be generated from a finite number of words. The syntax of every language is strictly limited, and innovation slow and difficult, whereas the voabulary is potentially unlimited and changes constantly.

Contrasting human with artificial intelligence, the writer Barbara Garson describes how her daughter first uses a sentence:

> When my daughter was a year and a half old, I would hand over her ord say, "Here's your orange juice." Or I would say, "Here's your apple juice." And she would say "Appo juice." I unconsciously mouthed the words with her, "appoo juice", "orange juice", as though I were somehow drawing them out of her soul.
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> Then one day I said, "Juliet, here's your orange juice," andshe said, "No, I want apple juice."
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> Where had that sentence come from? She'd never heard anyone say "No, I want apple juice."
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> I had created something that was not my own creation. My own daughter would go on to say the most extraordinary things ever uttered in the English language.

Long after I die, she'll be saying things I never could dream of. What greater gratification could there be for a parent?"

(from The Electronic Sweatshop, Simon and Schuster, New York, 1988. Reprinted in The Australian, 5 July 1988, p.58)

Garson contrasts this natural and creative use of language with the "intelligent computer", which can be programmed to respond to human questions in an apparently reasonable manner, but can never say anything, make any set of connections, that has not already been built into the program.

The importance of Juliet's question is that she has combined the noun part, apple juice, with a negative of rejection and a verb expressing her own feelings or desire so as to make a complete statement. We could even argue that she has repeated her mother's statement as a negative, "No, [I do not want orange juice]" and then made her positive statement. From all the possible combinations of these elements, and from all the elements in her then vocabulary, she has chosen the ones that suit her purpose. Grammatically, she has chosen between positive and negative, and between the mode of statement -- "That is apple juice" -- and that of command -- "I want". She has discovered the power of language both to pattern her life and to make others act to suit her desires.

The most satisfying explanation of how we developed this complex instrument of thought is that it arose from the ritual song and dance which patterned the lives of the earliest hunters and gatherers. Some of the forms of hunting which can be

reconstructed from archeological finds would have needed the complex organization and co-ordination which could be supplied by songs. The work of heaving together to move trees and rocks would lead to the evolution of work songs. Above all, ceremonies which enacted the day's hunting would preserve skills and produce the magic that would ensure the success of future hunts. Over time, some of these ceremonies would be standardized to preserve the dreaming of the people and the deeds of their heroes.

If this account of the genesis of language has any truth, the pattern would precede the words. Later, parts of the pattern or chant would become identified with particular things or actions, and words as we understand them would develop. The notion of stone-age people speaking a language of grunts and monosyllables is untenable. Language is complex from the start.

We know that as children learn to speak, pattern precedes words. They start selecting the sounds of the language from the first weeks of their life, and later their childish babble produces the patterns of phrases and sentences before they use any individual words. Their vocabulary then expands with amazing rapidity, but their syntax develops more slowly in harmony with their developing mental abilities. By the age of puberty they will have acquired the whole syntax of their mother tongue, but seemingly at this age lose the ability to learn further languages in this spontaneous fashion. Contemporary linguists are concerned with the study of how this complex system of language actually works.

Modern linguistics can be divided into three major schools of thought. Structural linguistics was developed around the turn

of the century by Frederick de Saussure, who turned the attention of linguists from the way in which languages change through history to a study of the structures which make them work. He defined language as a system of signs which have no necessary relationship to what they signify. Words define each other, they are not defined by some outside relationship. So white is not black, not red, not any other colour we might think of. A tree is something which is not an animal, a gum is not any other kind of tree, a spotted gum is not any other kind of gum, and so on. These words are grouped into various categories -- nouns, verbs, prepositions. To speak, we must link these according to particular rules, which will differ from one language to another. The groups of words in each category Saussure calls paradigms, and the linked strings, the particular utterances, syntagms.

For the American linguist, Noam Chomsky, these relationships are too superficial to explain either the complexity of language or our ability to use it to generate an infinity of statements. Chomsky concentrates not so much on the patterns of the language as on the extraordinary capacity for language which is innate in every human being. He explains this through his theory of generative or transformational linguistics. According to which each utterance is generated by an initial perception of relationships which are then transformed by a series of syntactical steps to give us the eventual statement, or word string. The meaning of this statement is determined both by the initial perception and by the grammatical rules, or structures, through which it is uttered and by which numbers of perceptions

can be combined. Through these rules we generate new combinations of meaning which are nvertheless comprehensible to any other speaker of our language.

Finally, Michael Halliday emphasizes the intent of the speaker and the choices she makes in composing an utterance. These choices include whether the sentence will be negative or positive, transitive or intransitive, passive or impassive, and so on. The choices we make determine not only the meaning or reference of the utterance, but how it will affect others. Halliday, unlike many linguists, is interested not only in how we put words together, but in how we use them to make meaning. His work has thus carried him beyond the analysis of sentences to an analysis of discourse and an investigation of the way we make whole passages of language hang together.

His work thus leads naturally to the work of the semiologists who are concerned with the analysis of how signs have meaning. Language is a system of signs, which derive their meaning from the culture which generates them. Any group or structure of signs forms a message, which communicate, orcarry meaning, because both the speaker and the listener share the code in which it is written. By studying the signs a culture uses in its communications, as well as its structures, and by noting those sings it excludes or devalues as well as those it includes and values, we can therefore discover the intellectual and emotional structures of its society, and through these its the economic and social structures. A clear example is the difficulty I have even in this discourse when I want to use the word he or she to indicate a single person of either sex. A

stylistic analysis of the kind of sentences I use, the kinds of words I prefer, will disclose still more about the kind of person I am, the assumptions I have learned from my time, the expectations I have about readers. All of this will in turn give an indication of the cultural context within which I am writing and from which this text is produced.