Chapter 16
The development of communication and cognition

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INTRODUCTION

The two topics indicated in the title of this contribution represent central areas in the study of mental handicap. Difficulties in acquiring and using communication skills and difficulties in acquiring and handling information are at the core of a definition of mental handicap.

Despite their centrality the two areas have not attracted large amounts of research. In fact, as we will see, research in these fields is largely derived from theories and work with normal children and adults. To the extent that such research and theorizing is well ahead of application to mental handicap the fields represent a rich source of future research.

Theory and research in these areas do not lend themselves to neat exposition. In this contribution we will be selective in coverage and will concentrate more on work on communication than on cognition.

FROM SPEECH TO COMMUNICATION

Two trends in the study of normal child language are of considerable importance to this paper. The first is a switch of emphasis in explaining language development. The Chomskyite view sees language primarily in terms of syntax, and development as involving the unfolding of what are essentially innate linguistic structures (Chomsky, 1965). During the early 1970s research on early language development recognized that Chomsky had underplayed the role of the child's motives in acquiring language. Many early utterances could not be understood in simple syntactic terms. The child's intended meaning had to be taken into account before utterances could be interpreted (cf. Bloom, 1970), and rather than being seen as an unfolding of innate structures, language development began to be seen as motivated by the child's need to communicate, by the desire to affect the behaviour of other people. For example Bruner (1975, p 2) argued

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that "language is acquired as an instrument for regulating joint activity and joint attention".

The approach to the analysis of language from the viewpoint of communicative functions is termed "pragmatics". Analyses of this type lead to a very different classification of utterances than those given by analyses in terms of syntax or for that matter semantic classifications. For example Halliday's scheme (1973, 1975) involves the following categories (from Yoder and Calculator, 1981):

**Instrumental**, the use of language as a way of getting things done through requesting goods and services.

**Regulatory**, the use of language to regulate the behaviour of others, for example through asking someone to do something or establishing a rule.

**Interactional**, the use of language to establish and maintain relationships, from greeting or calling to persuading others.

**Personal**, language used to express feelings or attitudes.

**Heuristic**, the use of language as a way of learning about things.

**Imaginative**, language use as "let's pretend".

**Informative**, the use of language as a means of communicating information to other people.

Two crucial points need to be made about this and parallel pragmatic analyses. Firstly, the functions which are described can be achieved through non-verbal as well as through verbal communication. For example, a non-verbal child can lead an adult to a desired object (instrumental function), or draw attention to something which interests him (regulatory), greet others (interactional), express likes and dislikes (personal), or call attention to a novel event (informative).

Secondly, each of the functions described can be realized in more and more complex syntactical structures. For example, an instrumental utterance requesting a ball may be expressed as "ball", or at any level of complexity to "I would be grateful if you could give me that blue and white striped ball". The categories represent an alternative to other analyses.

As we have already noted, theorists within this tradition see the child's reason for acquiring language, from first words to mature grammar, as resting in his desire to regulate joint attention and joint activity. The credibility of this approach is illustrated in a study by Moerk (1978). Moerk classified the verbal interactions of 20 mother-child pairs where the children ranged in age from one year nine months to five years. All the children were of normal intelligence. Seven of Moerk's categories related to functional aspects of language, including the child requesting information or tangible benefits and the mother giving directions or clarifying what the child had said. The data showed that, on average, children spontaneously employed language as a tool to obtain information or tangible advantages around 17 times per hour. Mothers used techniques to elicit and regulate speech and other acts around 40 times per hour on average, and