

REVIEWS

MARGARET DONALDSON, *Children's minds*. Glasgow: Fontana/Collins, 1978.

Pp. 156.

In discussions of child development, much is to be gained, in my view, by separating the deep epistemological aims of Jean Piaget's theory from direct psychological issues. And this is exactly what is required to appreciate the subtleties of Margaret Donaldson's book *Children's minds*. From an epistemological point of view, Donaldson is in many ways a Piagetian – *peut-être une piagétienne malgré elle* – for interwoven throughout the chapters of her book are the concepts of constructivism and interactionism, so basic to Genevan theory. However, the author presents data from experimental psychology which, she argues, 'compel us to reject certain features of Jean Piaget's theory of intellectual development' (9).

Donaldson places great emphasis on the fact that, given the right circumstances, very young children are capable of non-egocentric, deductive-like reasoning. Yet it would be a pity to read into this book and its somewhat impassioned 'he is wrong' (19) merely another Anglo-Saxon attempt to contradict Piagetian experimental paradigms and age groups. Any talented experimental psychologist can devise situations which put successful performance either two years earlier or two years later than some previous work had done. If developmental psychology were to be reduced to a scoreboard for chalking up task/age group success rates, then it is doomed to sterility. However, unlike much of the popular 'anti-Piagetian' literature on the market today, Donaldson's book goes well beyond such narrow issues and pursues in-depth discussions of children's reasoning processes and their educational implications.

It is far from my intention in this review to engage in repartee by attempting to pull apart the experiments which Donaldson cites as 'powerful evidence' for her line of argument. It is none the less worth recalling that each time a logical problem is translated into a spatialized form, it may lose its original logical structure in the process; it becomes in any case considerably easier because of the privileged status that spatial representations have for both children (Gillieron 1977) and adults (Minsky 1975). Nor shall I indulge in the time-consuming exercise of unearthing, say, on p. 486 of a 1951 book, the fact that Piaget had already anticipated the criticisms levelled at his theory in a new book. Piaget's theory is so broad that, somewhere or other, he probably has touched upon almost every essential question to be raised about cognitive development, at times seemingly contradicting himself in the process! One can either dwell on Piaget's comparison of the very restricted intellectual capacities of under-seven-year-olds relative to older children, or marvel at his incredibly rich account of the complex knowledge-in-action of spatial and causal relations of two-year-olds.

Donaldson is correct in regretting that Piaget did, for many years, discuss the pre-school child's capacities in terms of the lacunae they represented vis-à-vis older subjects. However, as pointed out by Beilin (1977), Piaget's theory has undergone constant refinement by Piaget himself; and more recent Genevan research has aimed at accounting for pre-school children's behaviour in its own right (e.g. Piaget, Grize, Szeminska & Vinh Bang 1968*a*, Piaget, Sinclair & Vinh Bang 1968*b*, Robert & Sinclair 1974).

Donaldson rightly bemoans the fact that isolated Piagetian concepts were taken by misguided educators as recipes for teaching practice. But Piaget too deplors this fact. No psychological theory should be DIRECTLY applied to education, as Donaldson points out herself (125). Pedagogical theories should, in my view, be developed in their own right, drawing on aspects of both epistemological and psychological theories. I agree with Donaldson that egocentrism, for instance, should not be taken as a stage-defining concept, but rather should be looked upon as a dynamic mechanism, i.e. a phase involved in encounters with new problems at any age. This is implicit in certain aspects of Piaget's theory, even though he initially did stress egocentrism as being more specific to pre-operational children. However, if one views Piaget's work in its entirety, one can discover examples at all ages of both egocentric reasoning and the capacity to decentre, depending on the problem with which the child is grappling. The dispute between Piaget and Donaldson resides in the developmental significance to be attributed to egocentrism (25).

What I should like to do in this review, for a journal specializing in child language, is to raise what I consider to be the book's two major issues for developmental psycholinguists. The first concerns Donaldson's emphasis on 'the child's ability to make sense of things', i.e. the fact that small children's interpretation of situations and utterances is influenced by the expectations which they bring to the situation (69). Whilst at first sight this might appear to be merely another way of stating the well-known Piagetian concept of assimilation of input to current knowledge structures, Donaldson touches on a somewhat different aspect of the problem. It can be said that Piaget is concerned with the child's means for making COGNITIVE SENSE of a situation. Donaldson pinpoints in her book another essential facet of development, i.e. the child's means for making what I would call SOCIO-DIALOGIC SENSE of an interactive situation. Several authors have recently placed particular emphasis on early non-verbal, dialogic interaction (Halliday 1975, Bruner 1975) and the role of speech act theory in interpreting children's early utterances (Dore 1975). Thus, it can be said that in the experimental situations which Donaldson discusses, children are making use of their CURRENT STATE OF SPEECH ACT KNOWLEDGE, i.e. knowledge about dialogic rules, why and when adults ask questions, the relationship between people's actions and their motivations for commenting upon certain aspects of those actions and not upon others, their requests for non-redundant information in an interactive

setting. Indeed, when small children ask an adult questions, they become rather irritated if the adult responds 'what do you think?'. In asking the question in the first place, they have demonstrated that they know that a certain bit of missing information is essential to the particular goal (overt action or thought) that they are pursuing. The adult's response in the form of a question violates a tacit dialogic convention, i.e. that one should respond informatively to a request for information. In experimental situations, *E*'s questions may represent a violation of dialogic rules for the small child, in that questions ought to be asked of salient, non-redundant aspects of a setting (the data Donaldson presents on p. 48 are particularly revealing in this respect). One way of testing Donaldson's interpretation would be to ask small children to anticipate what the experimenter's question will be.

The small child's capacity to decentre in the case of meaningful socio-dialogic situations is clearly an essential facet of development. However, it does not replace but is complementary to the child's need also to make COGNITIVE sense of the situation. However much stress we wish to place on social interactive systems (Halliday 1978) and on the initial social interpretation of situations, as Donaldson does in her book, we are still left with the need to elucidate why the over-seven-year-old can ignore his speech act knowledge and give the dis-embedded, abstract responses which adults tend to give. Something rather deep must change around seven years, which would explain why somewhat contrived experimental questions finally do get the 'right' cognitive response, albeit often accompanied by a smile or shrug of the shoulders, as if to show that the child realizes that speech act conventions are being violated. Older children seem to expect adults to violate normal dialogic rules in experiment/classroom situations ...but, paradoxically, is that not just what parents/caretakers continually do in the initial years, i.e. the plethora of questions to which both they and their baby already know the answer...! Many theoretical questions remain to be answered here.

The second issue of interest in this book to developmental psycholinguists is the relationship Donaldson makes between the cognitive demands on the child's learning to read at school with the acquisition of the capacity for 'disembedded' thought. Rather than viewing the CONTENT of the reading matter as important to the child's intellectual development, the author places stress on the COGNITIVE PROCESSES involved in the child's interaction with a new form of representation which is completely divorced from the child's real-world knowledge systems. For Donaldson, the child enters school with a large amount of knowledge 'turned outwards'. The next step is to 'free language from its embeddedness in events' (89) so that the child can finally give weight to 'sheer linguistic form', moving away from interpreting TOTAL situations and the motivations for adults' questions, to what actual words mean. Referring to Piaget's work on the grasp of consciousness (1976), Donaldson asks what makes us stop and think about our

thinking. She argues that the cognitive demands of learning to read may have a highly significant contribution to make in helping children stop and think about their thinking processes and about their spoken language. The author maintains that children should be informed by the teacher from the outset about the lack of one-to-one correspondence between the sound and written systems and encouraged to realize that they are encountering a formal, disembedded system, totally removed from their socio-cultural knowledge systems. There are data suggesting that, spontaneously, well before encountering any reading lessons, urban children have been working on the written system and do not expect a correspondence between the spoken and written systems until quite late in development (Ferreiro & Teberosky, in press).

Whilst this cognitive interaction with the written system may indeed help children become more explicitly aware of disembedded representational systems, as Donaldson argues, I believe children 'reflect' spontaneously on the spoken system before necessarily coming into contact with the written one. It can be hypothesized that meta-procedural behaviour is part of a spontaneous process which occurs each time a representational tool which children have acquired is functioning well procedurally. The well-functioning procedural unit can then be considered by the child as a problem-space in its own right. This appears to hold for aspects of language acquisition such as the functions of determiners (Karmiloff-Smith 1979*b*) and for other representational systems (Karmiloff-Smith 1979*a*). However, the child's encounter with the written system may enhance this natural tendency.

My major criticism of Donaldson's book is that frequently it is difficult to ascertain at which kind of readership it is aimed. On the one hand, to appreciate the subtleties of her critical discussion of Piaget's theory, the alternative experiments and interpretations, the reader needs a thorough prior knowledge of the developmental psychology theoretical and experimental literature. Yet, on the other hand, the author concludes her book with a summary of Piagetian theory which is obviously addressed to a different readership. Whilst couched in a deep Piagetian epistemological framework, Donaldson's explanations may be more tangible to educators than the abstract Genevan concepts which have been so conducive to misinterpretation. However, there is the danger that Donaldson's book might be used to induce total rejection of former ideas and blind application of new ones to pedagogical practice, if divorced from that broader setting. *Children's minds* should not be treated as a direct handbook for teachers. Rather it should be used as a highly provocative work to generate constructive theoretical and practical discussions amongst all those interested in developmental phenomena.¹

[1] Views expressed here are merely those of the reviewer and should not be construed as necessarily representative of 'Genevan' standpoint.

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(Received 20 March 1979)

- H. LANE, *The wild boy of Aveyron*. London: Allen & Unwin, 1977. Pp. 351.
- S. CURTISS, *Genie: a psycholinguistic study of a modern-day 'wild child'*. New York: Academic Press, 1977. Pp. xvi + 288.
- C. MACLEAN, *The wolf children*. London: Allen Lane, 1978. Pp. 324.

In *The Wild Boy of Aveyron*, Lane vividly narrates the history of the wild boy who was captured in the woods of Lacaune in south central France in 1797 and entrusted to the care of Jean-Marc Itard, a shrewd physician and pedagogue, who tried to educate him. In the first part of his book, Lane, who was able to dig up many little-known contemporaneous documents, explains why the discovery of the young savage of Aveyron caused such a sensation in the newly born French republic. He then analyses the educative procedures which Itard designed to civilize his protégé and the results he obtained. The last part of the book is devoted to Itard's endeavours in favour of the deaf, the controversy between oralism and sign language, and to the pedagogy of Séguin and Montessori, who appear to be Itard's spiritual heirs. Maclean in *The Wolf Children* relates the history of the two girls who were found in the Indian jungle in the twenties.