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Computer Experience and Cognitive Development: a childs learning in a computer culture
ROBERT W. LAWLER, 1985
Chichester, Wiley
£25.50 hardback

Despite the ordering of the title, this book is concerned with the cognitive development of children (in particular, Miriam, the daughter of the author) rather than the computer. True, computers and computing play a dominant and central role throughout, but this remains a book that is essentially devoted to the study of learning. As such, however, it is a very valuable contribution to the field of educational computing, as well as to that of cognitive science. Ever since Seymour Papert's book *Mindstorms* first appeared in 1980, there has been a widely-felt need for hard evidence of the interaction between computer systems (particularly those offering 'microworlds', such as LOGO) and the development of children's thinking. This book can fairly be said to satisfy that need.

It is an illustrated account of what Lawler calls 'The intimate study'. The objective of this was to follow, in fine detail, the development of learning in Miriam Lawler, aged six at the start of the study, over a period of six months. Lawler observed and recorded her behaviour in "well-structured situations" and followed her "beyond the confines of the computer laboratory with naturalistic observation in the various settings of her everyday world". As her father he was, of course, uniquely well-placed to do this; furthermore, he seems to have conducted the whole experiment with commendable scientific objectivity. He collected data under four headings: profiles, sessions, vignettes and a log. Much of this data is described and analysed in the book.

The central themes are described as: the progressive construction of mind; the equilibration of cognitive structures; the articulation of complementary roles; cognitive organisation. The materials used ranged from arithmetic, geometry and programming to tic-tac-toe (noughts and crosses), inventing jokes, and puzzle assembly. There was also quite a lot of work at the meta-level of talking about thinking. Towards the end of the book, Lawler describes the results of the Binet test taken by Miriam at age 6;1;17, collating the questions, responses and scoring. This is included in a very useful Appendix, under the heading 'Relating this subject to other studies'. Other appendix sections include 'Extended Citations' (giving an overview of the work of Papert, Levi-Strauss, Langer, Jacob and others) and four pages of helpful references.

This book is important, readable and very useful. It should have appeal both to those concerned with the developmental psychology of children and to the specialists in educational computing. Perhaps one may hope that the publication of books of this kind, and written in this way, will strongly promote the necessary overlap between these academic areas.

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