

perception and particularity are fundamental components of that which makes us moral. Theories that ignore these aspects are to that extent, if to no other, incomplete.

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Meadows, S. (1993). *The child as thinker: The development and acquisition of cognition in childhood*. New York: Routledge, 473 pp. (Softcover).

In her recent book, *The Child as Thinker: The Development and Acquisition of Cognition in Childhood*, Sara Meadows provides both a review of current research on children's cognitive development, and a discussion of the panoply of factors which may influence growth in thinking. In so doing, the book covers the two central tasks of any science, description and explanation, in a more balanced way than many previous efforts. Particularly welcome on the explanation side was her care in considering both biological and environmental streams of influence, and discussing their roles in supporting development in a detailed and thoughtful fashion. The book is distinctive in its strong orientation toward educational implications of the developmental evidence as well. And finally, Meadows devotes considerable attention throughout to issues of individual variation in cognitive development, an important and seriously neglected topic in many contemporary volumes on the growth of children's thinking.

Obviously, the preceding agenda is a full one, and requires a substantial effort to carry it through. This is no slight volume. With nearly 400 pages of text and well over 1500 references, the book is detailed and comprehensive in coverage. Nor is it the easiest read; for example, my introductory graduate level class found the chapter on theories of cognitive development a bit heavy going (though admittedly I assigned it to them "cold" after the first week of class!). Nevertheless, serious attention to what Meadows has to say will be rewarding for the advanced-level student, and for the researcher, both because of the inclusion of relatively novel topics, and for her thoughtful, but no-nonsense approach to reflecting on the broader implications of

developmental research for children's lives and schooling, as well as for theory and research.

The book consists of six chapters. After a brief introduction a second long chapter covers the substance of the evidence regarding the growth of thinking and reasoning, primarily concentrating on the preschool to preadolescent periods (and probably wisely leaving the mushrooming area of infancy and the more discreetly budding topic of adolescent thinking mostly aside). This is organized by topic areas, and includes such mainstays as the acquisition of reading skills and memory development, as well as less standard topics such as children's musical cognition and concepts of health and illness. For the most part, these reviews are reasonably comprehensive and clear. I must admit to being a bit disappointed in the limited coverage of some areas of social cognition (moral reasoning in particular gets short shrift), but this is a minor quibble based on my own interests, and the important recent areas of social-cognitive development such as children's concepts of emotions and of mind are well-represented. Nevertheless, the effect of covering such a broad range of topic areas (over 20) may be somewhat daunting, and this first substantive chapter feels a bit sprawling for a student reader.

Chapter 3 then is devoted to a consideration of some individual difference factors in cognitive development, by far the most extensive and interesting of which is the discussion of variability in intelligence. This is set in the context of a thoughtful review of the basic problems and pitfalls of measurement and interpretation of this contentious construct, which should help the student sort out some of the central questions, if not the currently less attainable answers, in this area. Chapter 4 discusses theories of cognitive development, including the familiar standbys of Piaget and information-processing, in very competent fashion. Meadows' theoretical predilections seem reasonably eclectic and balanced, which I found a definite virtue. Particularly welcome here is the inclusion of a substantial section on a third, newer model (at least for us in the West), Vygotskian theory, which is only gradually making its way into general review texts such as this one. Meadows' comments on Vygotskian theory are thoughtful and her exposition is clear and helpful, with many good illustrations and examples of this newest thicket of jargon, such as scaffolding, the zone of proximal development, and the like. As a reader with more than a passing interest in this topic, I found the treatment to be commendable. Furthermore, discussions of these three theories are then judiciously interwoven throughout the remainder of the volume as well.

Chapter 5 turns to an extended treatment of the sources of growth and variation in cognitive development, and provides interesting commentary

both on genetic/neurological sources of differences, as well as the role of the social environment. These reviews are again set in the context of discussions of the basic issues raised by previous work, often from other disciplines (e.g., neuroscience, philosophy of mind, cross-cultural studies). Though of necessity brief, these reviews are generally scholarly, sound and sensible, and will be of benefit to students in helping them locate many of the most central references in these areas should they wish to pursue questions further. Many interesting, and less-travelled, pathways are also ventured upon in this chapter, for example, the impact of nutrition on cognitive development, in typically comprehensive fashion. The final chapter is briefer, and provides a short overview of some of the important problems and issues which need further investigation in cognitive development (e.g., types of constraints on development, the role of emotion in cognitive development). As the author herself notes, questions are a fitting way to finish such a book, given the current state of research and theory in developmental psychology.

Throughout the book, there are brief summaries at the ends of sections which are for the most part clear and faithful to the material presented. These summaries surely will help the student negotiate the text with greater ease and a sense of mastery. Meadows' writing style is often a bit dense, and her asides sometimes require considerable background understanding, but she also writes with style and humour, and frequently provides interesting examples from real-life (including her own). All this is engaging and should serve to hold the reader's attention. Though the book is definitely the work of a British author (in terms of citation counts at least), it also contains many up-to-date and important references to North American and international work as well. All in all, this is a thorough and interesting treatment of cognitive development with much to offer both advanced student and professional from a thoughtful, balanced perspective.

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