

often seems to learners to be chaotic and contradictory. The learning of algorithms for dealing with content is therefore meaningless until the child has had time to "play around" with the ideas, to stand them on their heads, to look at them forwards, backwards and sideways, until they make some sort of personal sense. As an object-to-think-with, the Turtle is therefore also an object to tinker with. Papert provides numerous examples of children who, left to tinker with a problem, using the Turtle, will eventually arrive at an understanding that is satisfying.

Another powerful idea is "debugging". The traditional idea that there is a right answer, and the corollary that there is always the possibility of failure, no longer applies. If the Turtle does not draw what the child expected it to, it means that there is a "bug" in the programme that has to be found, not that the child has failed. Debugging in a sense that goes far beyond computer programmes is an essential part of learning anything. In the LOGO environment, bugs are talked about among children, and with teachers. They are found and corrected by breaking procedures into smaller steps, and by "playing Turtle". In this way, children arrive at meaningful corrections to what they are trying to teach the Turtle, while at the same time learning a new type of thinking.

This is procedural thinking. Papert points out that "in our culture number is richly represented, systematic procedure is poorly represented", (p. 175). Programming the Turtle and debugging programmes encourage the development of a particular style of thinking by means of which people break procedures down into bite-size "modules". These modules are the essence of the LOGO language and modular thinking plays an important role in children's learning. Papert claims that it is frequently advantageous for people to think in this way like a computer. This may put a lot of people off. But it is not really dehumanizing if you accept Papert's definition of computer literacy as knowing when it is appropriate to think like a computer. The net result is that in a computer culture, people might become systematic before they become quantitative.

These are but a few of the ideas that make *Mindstorms* such an important book. The computer is presented as a tool that allows a new type of learning to occur. And as Papert states, Mathematics is not the only domain of application for these ideas. LOGO and the Turtle are limited in their potential by the technology of the 'seventies, when they were developed. They therefore serve more as a model for what education in the future might look like rather than offering a specific direction for future action. Certainly the future will feature computers prominently. And surely children will learn to think in different, perhaps computer-like ways. But what is really important about Papert's ideas is the breadth of his vision and the optimism that I, for one, detected on every page. Children are indeed born with a love of learning. They have to learn to dislike learning, and unfortunately that is what nearly always happens when learning is dissociated from the real world in which children live. Papert has provided us with a model for improving this situation. Given the present state of education, we ignore his ideas at our peril.

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Fox, Seymour, *Philosophy for Education* Humanities Press, 1983, 120 pp., \$9.95 (U.S.)

This is a collection of papers on the idea and ideals of liberal education written by a group of American and Israeli professors of philosophy and education of whom the best known to Canadian readers are Mortimer Adler, Thomas Green and Joseph Schwab. The papers were first presented during a 1977 conference sponsored by the Centre for the Study of Democratic Institutions located in California. The collection is dedicated to the late Robert Hutchins, the Centre's founder. Hutchins is probably best remembered for his tireless efforts as a teacher and university president to champion the cause of a liberal or general education as an individually worthwhile end in itself and as a condition of democratic living.

In some respects the publication of this modest volume is timely. There is at the moment in North America an unprecedented enrollment in private and independent schools, a sign that many parents have lost confidence in the quality of public education for their children. The recent report of the (U.S.) National Commission on Excellence in Education concludes that the "rising tide of mediocrity" in American education threatens to overwhelm the educational foundations of that nation and to place the nation at risk. (*A Nation at Risk: The Imperative for Educational Reform*) Since the preservation of academic excellence in school and college education is integral to a philosophy of liberal education for all it is a fair question to ask to what extent the work in the present volume might help to inform and guide those who desire for their children a general education of high standards from the public system. On this point the response must be a mixed one at best.

In the first two papers of the collection, Adler's "Everybody's Business" and Leon Botstein's "Wisdom Reconsidered", there is nothing unfamiliar to anyone who has read either Hutchins' or Adler's earlier works. It might of course be argued, as does Botstein's paper which classifies the 1936 publication of *The Higher Learning in America* as a work of "timeless merit", that since one is dealing here with a perennialist philosophy of liberal education the idea of finding something new or revolutionary is simply not on. It is consequently the task of these two papers to enunciate once more the "truths" concerning perfection and fulfillment of the self as a human being and the role education must play in this distinctive form of development. Despite whatever changes in life styles and outlooks, in social and economic conditions which have occurred in recent times, humanistic or philosophic learning, as Adler describes it, is still everybody's business. By this he means the mass of students needs as always to be engaged in the best which has been thought and said in the intellectual and cultural traditions of Western Civilization. The trouble of course with this message of liberalism in education is that it has not been taken very seriously for some time now. Humanistic learning it might be argued does not exactly make the economy bullish. There is too the fear that such erudition is beyond the reach of many students and that a system of school and college education which demands the mastery of a broad "paideia" at the expense of specific occupational skills breeds a privileged cultured minority and unjustly condemns others to a life of hardship and unequal life chances. Despite populist criticisms and the widely accepted educational practices roundly condemned by Adler and Botstein of enmeshing liberal and vocational or career studies, particularly at the level of higher learning, there is no sense of despair in these two papers of ever achieving a pure liberal education reform. Such a reform would of course involve the separation of humanistic from career studies making the latter of logically secondary importance. The most disappointing aspect of these two papers however is their failure first to address some of the more trenchant charges of intellectual elitism and social injustice directed against the liberalist position and second to suggest rather more concrete practical lines along which ideas of a liberal educational reform might be implemented.

Green's contribution, "Liberalism and Liberal Learning Within Limits" which takes the forgoing papers as its point of departure, is one of the best works in the collection. Impatient with the idea in the modern age of a firm separation of liberal from career studies he argues that "liberal learning" must shed some of its traditional ties with studies in philosophy, literature, history, the fine arts and pure science to align itself with what he calls "the extension of virtue." Virtue is defined as a "comprehensive competence", an "all-inclusive type of practical skill" which enables a person, within the limitations imposed by the physical and the social worlds, to act "effectively", i.e. to use time, talent and resources well. This "virtue" which Green believes is to be developed by a study of the social sciences and certain bodies of professional knowledge supplemented by useful images of man and community from the humanities, is he says an important aspect of our moral conscience. Thus it should not be unusual he thinks for professional studies like civil engineering or accounting which are "important ways of expressing our concern for neighbours and work" to be considered as elements of moral education. Green concludes that traditional liberal education has lost much of its influence precisely because of its failure both to so extend the scope of "virtue" with which it ought to be concerned and to enlarge the boundaries of moral education and ultimately our understanding of "a good life." This thesis of Greens' opens up a number of areas for further critical study, two of which are of particular interest — a concept of virtue seen not as traits of character but as a set of practical skills, and the enlargement of the domain of moral education to include various professional studies.

Schwab's paper "Freedom and the Scope of Liberal Education" and Nathan Rotenstreich's "The Right to Educate" also touch upon the theme of social and moral education in liberal learning. Schwab is the only contributor to the volume to acknowledge openly that development of companionship is one area of human experience liberal education has ignored, largely he thinks, because academics have felt uncomfortable with the idea of nurturing something like companionship. Nevertheless he is convinced that for the good of everyone alike liberal education must find means and provide occasions for overcoming the pronounced isolation, aggravated by differences in age, in work and in socio-economic backgrounds, of individuals from each other in our society. If there is with Schwab's paper signs of an emerging social conscience for liberalism in education there is with Rotenstreich's paper (which appears at the end of the volume) a return to the themes of classical liberalism with which the collection began. The question about the right to educate is treated as one concerning the right of teachers to intervene in the lives of young people for the sake of assisting the young to transform their potential to be fully human into actuality. There then follows further familiar discussions on the place in this transformation of traditional wisdom and continuity with the past, of great books and of an understanding of religion and society.

Two other papers also appear in the collection. "Ideals and Second Bests" by Avishai Margalit is a closely reasoned work but which in many ways seems to bear only tangentially on the main themes of the collection. It is a potentially useful paper however since it raises matters concerning second best alternatives or approaches where various constraints block the way to achievement of ideals — a situation which any recovery of liberal education might well have to face. "Theory into Practice in Education" by the editor Seymour Fox, is an extremely short piece which in its brevity fails to consider some of the more recent contributions by philosophers of education to the important discussion of the theory — practice distinction.

Philosophy for Education is, one must say, an uneven publication both in terms of topics and quality. With the possible exception of papers by Green and Schwab there does not seem to be demonstrated sufficiently fresh thinking with which to meet the challenges that face the humanities and liberal education in the 1980's. Since *Philosophy for Education* does not speak very directly to the public (parents) concerned about the quality of public education for their children and since what is said, with the exceptions noted, is fairly familiar to philosophers and educators it remains something of a puzzle to know for whom the volume actually is intended. Perhaps it should be left that it is "for everybody."

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Rich, John Martin, *Discipline and Authority in School and Family*, Lexington, Massachusetts: Lexington Books, 1982, 199 pp. \$28.75 (U.S.)

R.S. Peters, in his *Education and the Education of Teachers*, published in 1977, suggests that there is a new phase of educational theory emerging in which specialists, philosophers, social scientists and historians, integrate their contributing disciplines around concrete problems. He claims that philosophy of education can make a significant contribution to such an approach to educational theory, especially in terms of clarifying concepts, providing an ethical theory and a theory of man, and generally in integrating the contributions made from the various fields. *Discipline and Authority in School and Family* clearly belongs to this more adventurous, pragmatic, integrative approach to educational theory.

Various statistics are cited by Rich to show that the problem of discipline in relation to misbehavior and violence is one of the most significant problems in education today (pp. 1, 81, 158, 160, 163). Too often, however, studies of disciplinary problems in schools pay insufficient attention to the role of the family in creating early disciplinary patterns which shape the attitudes and behaviors of students in