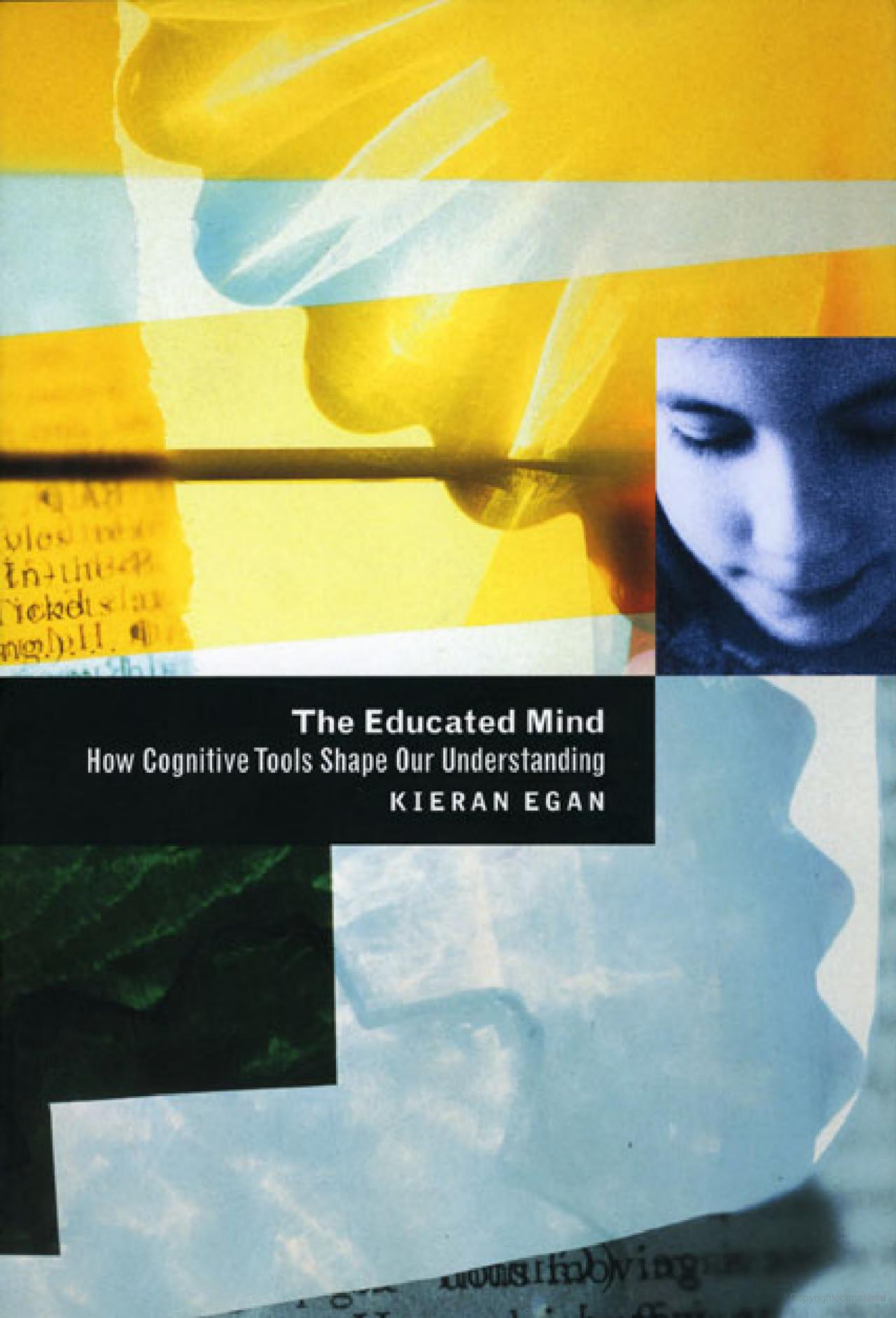

The Educated Mind

How Cognitive Tools Shape Our Understanding

KIERAN EGAN

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THE UNIVERSITY OF CHICAGO PRESS *Chicago & London*

The University of Chicago Press gratefully acknowledges the assistance of the Exxon Foundation in the publication of this book.

The University of Chicago Press, Chicago 60637
The University of Chicago Press, Ltd., London
© 1997 by The University of Chicago
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Published 1997
Paperback edition 1998
Printed in the United States of America
13 12 11 10 09 5 6 7 8
ISBN: 0-226-19036-6 (cloth)
ISBN: 0-226-19039-0 (paperback)

Library of Congress Cataloging-in-Publication Data

Egan, Kieran.
The educated mind : how cognitive tools shape our understanding / Kieran Egan.
p. cm.
Includes bibliographical references and index.
ISBN 0-226-19036-6 (alk. paper)
1. Education—Philosophy. 2. Cognition and culture. 3. Civilization, Western—History. 4. Educational anthropology. 5. Educational sociology. 6. Learning, Psychology of. 7. Teaching. 8. Psycholinguistics. I. Title.
LB14.7.E53 1997
370′.1—dc20 96-42208
CIP

♾ The paper used in this publication meets the minimum requirements of the American National Standard for Information Sciences—Permanence of Paper for Printed Library Materials, ANSI Z39.48-1992.

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acknowledgments

I am most grateful to the many kind people who have read parts or all of this book in manuscript, whose suggestions, criticisms, abuse, and corrections have made this book better than it would otherwise have been. In particular I am grateful to John Willinsky of the University of British Columbia; Wendy Strachan of the Department of English at Simon Fraser University; Richard Wilkins of the Association for Christian Teachers in Great Britain; Hunter McEwan of the University of Hawaii; Joanne Buckley of the Department of English at University of Western Ontario; Merlin Donald of the Psychology Department at Queen's University; Avril Chalmers, Jennifer Jenson, and David Hammond, Ph.D. students in the Faculty of Education at Simon Fraser University; and Susanna Egan of the English Department at the University of British Columbia.

I have also benefited from comments on parts of the book from Alan Rudrum of the Department of English, Jerry Zaslove of the Institute for the Humanities, Sen Campbell and Peter Cole, Ph.D. students in the Faculty of Education, and Stephen Smith and Heesoon Bai of the Faculty of Education, all at Simon Fraser University. I am grateful to Miranda and Christopher Armstrong for permission to reprint the conversation that appears in chapter 4.

Eileen Mallory has typed the whole manuscript with her everyday supernatural speed, accuracy, and kindly good cheer. John Tryneski of the University of Chicago Press has been supportive and challenging, and the source of numerous insightful suggestions that have improved the book significantly; the compleat editor. I am also indebted to the editorial skills of Leslie Keros, which she applied to the manuscript with grace and wit, clarifying it considerably. One of the Press's reviewers, I discovered, was Howard Gardner of Harvard University; his incisive suggestions have had a significant effect on the manuscript, and I am pleased to be able to acknowledge his generosity and help.

Some paragraphs from chapters 1, 2, 3, 4, and 5 appeared in "The development of understanding," my article in *The Handbook of Education and Human Development* (David R. Olson and Nancy Torrance, eds.), Oxford: Blackwell Publishers, Ltd., 1966. I am grateful to the editors and publisher for permission to use these paragraphs here. During the writing of this book I have been the grateful beneficiary of a research grant from the Social Sciences and Humanities Research Council of Canada.

Introduction

Those of us who were around during the economic crisis of the late sixteenth century in Europe find some features of the current educational crisis oddly familiar. There is a major social puzzle, which touches and irritates nearly everyone, and lashings of blame fly in all directions. Today we are puzzled by the schools' difficulty in providing even the most rudimentary education to so many students, despite a decade or more of effort by expensive professionals. The costs of our educational crisis, in terms of social alienation, psychological rootlessness, and ignorance of the world and the possibilities of human experience within it, are incalculable and heartbreaking.

In the sixteenth century, average citizens saw prices for all commodities begin to rise rapidly. Most obvious were the increased amounts they had to pay for necessities like clothes. The citizens blamed the clothiers for greedily raising prices. The clothiers protested, blaming the merchants who were greedily demanding more for their cloth; the merchants in turn blamed the weavers, who blamed the wool merchants, who blamed the sheep farmers. The sheep farmers said they had to raise their prices to be able to buy the increasingly expensive clothes. And so it went round. Who was to blame?

It took some time, and much blaming, before Jean Bodin (1530–1596) worked out that none of the obvious candidates was at fault. Rather, the general rise in prices was connected with the import into Europe of Central and South American gold and silver and with the European monarchs' use of this bullion through their royal mints. That is, the monarchs increased the money supply and thus stimulated inflation. A development in economic theory resolved the central puzzle and laid a tenuous foundation for greater understanding and practical control of economic matters.

So who is responsible for our modern social puzzle, the educational ineffectiveness of our schools? (By "modern" I mean the period beginning with the late-nineteenth-century development of mass schooling.) For media pundits and professional educators, there is no shortage of blameworthy candidates: inadequately educated teachers, the absence of market incentives, the inequities of capitalist societies, the lack of local control over schools, the genetic intellectual incapacity of 85 percent of the population to benefit from instruction in more than basic literacy and skills, drugs, the breakdown of the nuclear family and family values, an irrelevant academic curriculum, a trivial curriculum filled only with the immediately relevant, short-sighted politicians demanding hopelessly crude achievement tests while grossly underfunding the education system, a lack of commitment to excellence, vacuous schools of education, mindless TV and other mass media, the failure to attend to some specific research results.

Along with the cacophony of blame comes a panoply of prescriptions: introduce market incentives, make the curriculum more "relevant" or more academic, reform teacher training, ensure students' active involvement in their learning, and so on. Back in the sixteenth century, a litany of cures for inflation also was proposed: restrain merchants' profits, introduce price controls, restrict the export of wool, introduce tariffs on imported cloth, and so on. We can now look back indulgently at those prescriptions and see that they were irrelevant to the real cause of the problem: They would have been ineffective in slowing inflation and would in most cases have brought about further economic damage. Similarly, we are likely to look back on the current list of prescriptions to cure education's ills as irrelevant because they, too, fail to identify the real cause of the problem.

The trouble is not caused by any of the usual suspects. Instead, as I intend to show, it stems from a fundamentally incoherent conception of education. I will try, first and briefly, to show the lack of coherence that marks most people's notions of what schools ought to be doing, and, second and less briefly, to propose an educational theory that can enable schools to become more effective—a theory that lays a foundation for greater understanding and practical control of educational matters.

Oh, dear—the problem has to do with one educational theory and the solution with another one? The comparison with sixteenth-century inflation suggested something more richly tangible, like gold from Eldorado. The promise of a new educational theory, however, has the magnetism of a newspaper headline like "Small Earthquake in Chile: Few Hurt."

Educational theorizing is generally dreary because we have only three significant educational ideas: that we must shape the young to the current norms and conventions of adult society, that we must teach them the knowledge that will ensure their thinking conforms with what is real and true about the world, and that we must encourage the development of each student's individual potential. These ideas have rolled together over the centuries into our currently dominant conception of education. There are just so many variants that one can play with so few ideas before terminal staleness sets in, and matters are made worse by most people's unawareness of the fundamental ideas that shape their thinking about education.

The good news, I suppose, is that there are indeed only three ideas to grasp. The bad news is that the three ideas are mutually incompatible—and this is the primary cause of our long-continuing educational crisis. My first task in chapter 1 is to elaborate those ideas a little, to show in what ways they are mutually incompatible and to show that this incompatibility is the root of our practical difficulties in education today. My second task in chapter 1 is to introduce the new educational theory and indicate why it might be a better bet than any other, or any combination of others, currently around.

One unfamiliar feature of this new theory is that it describes education in terms of a sequence of kinds of understanding. A further oddity is that it conceives of education as so intricately tied in with the life of society and its culture that it is also a theory about Western cultural development and its relationship to education in modern multicultural societies. I characterize Western cultural history, and education today, in terms of an unfolding sequence of somewhat distinctive kinds of understanding.

What kind of category is a "kind of understanding"? Perhaps by reflecting on the following piece of information, you will gain a preliminary sense of what I mean.

In 1949, at El Quantara railway station in the Suez Canal Zone, there were ten lavatories. Three were for officers—one for Europeans, one for Asiatics, and one for Coloreds; three were for warrant officers and sergeants, divided by race as for the senior officers; three were for other ranks, also divided like the others by race; and one was for women, regardless of rank, class, or race. One might respond with outrage to the injustice of such arrangements and to the injustice inherent in the society that these arrangements reflect. One might feel a simple tug of delight at accumulating such a piece of exotica. If one considers social class a prime determiner of consciousness, such lavatory arrangements will have a particular resonance; if race, another; and if gender, yet another. One might fit this information into a narrative of social amelioration between earlier unjust authoritarian regimes and later democratic systems. One might consider it dispassionately as reflecting one among a kaleidoscopic variety of social systems human beings have devised and those lavatory arrangements as no more or less bizarre than whatever today would be considered more just, proper, or "normal." One might consider the arrangements with relief, taking the perspective of the officers, or with resentment, taking that of the other ranks, or with mixed feelings, taking that of the women.

In each of these responses the information is understood in a somewhat different way. Today a response will rarely involve just one of these ways of understanding the facts; we commonly adopt a number of such perspectives, understanding the information as complex, polysemous.

My primary aim in this book is to unravel some of the major strands or layers of our typically polysemous understanding. I try to separate out a set of general and distinctive kinds of understanding and characterize each of them in detail; I distinguish five, which I call Somatic, Mythic, Romantic, Philosophic, and Ironic. I try to show, furthermore, that these kinds of understanding have developed in evolution and cultural history in a particular sequence, coalescing to a large extent (but not completely) as each successive kind has emerged. The modern mind thus is represented as a composite. This conception of the mind is a bit messy, but it tries to adhere to what systems theorists call the principle of requisite variety: that the model conform with the complexity of what it represents.

My second and related aim is to show that education can best be conceived as the individual's acquiring each of these kinds of understanding as fully as possible in the sequence in which each developed historically. Thus I construct a new recapitulation theory, distinct from those articulated in the late nineteenth century mainly in terms of *what is identified* as being recapitulated.

I try to show that each kind of understanding results from the development of particular intellectual tools that we acquire from the societies we grow up in. While these tools are varied, I will focus largely on those evident in language: the successive development of oral language, literacy, theoretic abstractions, and the extreme linguistic reflexiveness that yields irony. I explore the implications of being an oral-language user for the kind of (Mythic) understanding one can form of the world, and the kind of (Romantic) understanding that is an implication of growing into a particular literacy, and the kind of (Philosophic) understanding that is an implication of fitting into communities that use theoretic abstractions, and the kind of (Ironic) understanding that is an implication of self-conscious reflection about the language one uses.

Now "tools" is obviously an awkward word; I mean something like the "mediational means" the Russian psychologist, Lev Vygotsky (1896–1934), describes as the shapers of the kind of sense we make of the world. Vygotsky argued that intellectual development cannot adequately be understood in epistemological terms that focus on the kinds and quantities of knowledge accumulated or in psychological terms that focus on some supposed inner and spontaneous developmental process. Rather, he understood intellectual development in terms of the intellectual tools, like language, that we accumulate as we grow up in a society and that mediate the kind of understanding we can form or construct. In chapter 1 I try to show how the focus on mediating intellectual tools, rather than on forms of knowledge or on psychological processes, enables construction of a new educational idea. So, my gold from Eldorado that is designed to carry us past our present educational problem and transcend the ideological logjam at its core is a set of language-based intellectual tools that generate Somatic, Mythic, Romantic, Philosophic, and Ironic kinds of understanding.

By "language based" I mean that my focus is on more general cultural phenomena that nevertheless are fairly distinctly reflected in language use, and in each discussion it is with the language forms that I begin. Merlin Donald notes that "the uniqueness of humanity could be said to rest not so much in language as in our capacity for rapid cultural change. . . . [W]hat humans evolved was primarily a generalized capacity for cultural innovation" (1991, p. 10). The kinds of understanding are attempts to characterize a basic level of significant innovative changes in human cultural life, historically and in individual experience.

A working title for this book had been "The Body's Mind." Given my references to language, intellectual tools, and cultural innovations, one may ask why the body figures so prominently. We had, as a species, and have, as individuals, bodies before language. Language emerges from the body in the process of evolutionary and individual development, and it bears the ineluctable stamp of the body: Phrases and sentences, for example, are tied to the time we take to inhale and exhale—though when we speak we take in quick breaths and release them steadily (in a process Steven Pinker describes as syntax overriding carbon dioxide [1994, p. 164]); similarly, we use language to represent the world as it is disclosed by our particular scale and kind of organs of perception. In other words, our body is the most fundamental mediating tool that shapes our understanding. This is obvious, of course, and Somatic understanding refers to the understanding of the world that is possible for human beings given the kind of body we have. In the theory to be elaborated in the following chapters, each kind of understanding does not fade away to be replaced by the next, but rather each properly coalesces in significant degree with its predecessor. The developments in language uses and their intellectual implications that I explore are, then, always tied in some degree to this embodied core of understanding. This becomes especially important when I sketch my conception of Ironic understanding and confront some common assumptions of postmodernism.

In chapters 2 through 5 I describe both the minting in Western cultural history of the five kinds of understanding and the forms they commonly take among students today. I also attempt to show that education can best be conceived as the process of developing each of these kinds of understanding as fully as possible. The first kind of understanding, the Somatic, I discuss in chapter 5 after the Ironic, for reasons that will be given there. Apart from that, in each chapter I characterize one kind of understanding, showing its emergence in Western cultural history, giving examples of its occurrence in various historical periods, and indicating perhaps surprising parallels between these historical occurrences and the lives and activities of students today. Among other things, these accounts offer new explanations of the nature of fantasy and why four- and five-year-olds commonly find it so engaging, of ten-year-olds' interest in the contents of *The Guinness Book of Records,* of eleven- and twelve-year-olds' emotional associations with pop singers or sports heroes, of academic sixteen-year-olds' interest in general ideas, metaphysical schemes, or ideologies, and so on. The unfamiliar category of "kinds of understanding" has at least the virtue of bringing into focus features of students' thinking and learning that are prominent and powerful in their lives but have been somewhat neglected in educational writing.

I realize that this talk of Western cultural development, intellectual tools, and kinds of understanding may not exactly quicken the pulse of those hoping to discover better ways of preparing our children for productive work and satisfying leisure. And the references to Western culture, along with the announcement I now warily make—that I will be constantly discussing and quoting ancient Greeks—may add a seal of hopelessness to this enterprise for more radical spirits. I think neither group should feel disappointed. One simple aim of this book is to show that the occasionally derided "basics" of education may be much more effectively attained than is now common; another is to establish as the appropriate aim of education a kind of Ironic understanding that is quite distinct from the traditionalist conception of the educated person.

Chapter 6 provides a chance to reflect on the theory and to clarify its unfamiliar features. This chapter deals with a range of political, ideological, pedagogical, methodological, moral, and other issues raised by the presentation of the theory to that point. I pretend there that I am answering questions from a varied and critical audience that has had the preternatural patience to sit through the preceding chapters; despite my best efforts at evenhandedess, the skeptical questioners may come off as waspish, bad tempered, obtuse, evil minded, and perhaps somewhat drunk, and the answerer as the essence of sweet reason. (Mind you, this Western "reason" is another prominent issue to be dealt with.)

Chapters 7 and 8 then explore the theory's implications for the curriculum and the classroom. The overall shape of the book, then, is a funnel that begins with general theoretical issues, moves through more concrete theory construction, and concludes with a somewhat detailed look at practical implications. Readers whose primary interest is in the theory's practical implications might find the earlier chapters hard going, so I sketch the implications fairly thoroughly in chapter 2 and, to a lesser degree, in the succeeding chapters, hoping that such readers will be able to manage the trek through to chapters 7 and 8 without further oxygen.

I have organized the book into two parts. The first deals primarily with modern people's recapitulation of the kinds of understanding developed in their cultural history. The second looks at implications of the theory for the curriculum and for teaching practice. This division is designed to alert the reader to the rather different styles of the two groups of chapters. It is not possible to discuss the social studies curriculum in eighth grade or the science curriculum in third grade in quite the same style as one can lay out the theoretical argument. In addition, I try to relate the theory's implications as closely as possible to current curricula and to everyday classroom practice. It might seem less glamorous than what the earlier discussion prepares one for, but I hope nevertheless that the genuine practical improvements that follow from the theory will be clear.

Unusually for a developmental scheme, the gains that come with each new set of intellectual tools are represented as entailing some loss of the understanding associated with the prior set. For example, when we become literate we do not cease to be oral-language users, but we do commonly lose some of the understanding that is a part of being exclusively an oral-language user. While this theory identifies cumulative aspects of understanding, it also represents education, and cultural history, as processes in which we can lose more by way of alienation and emotional as well as intellectual desiccation than we gain by way of understanding and aesthetic delight. Stand outside a public high school at the end of the school day and you will see this only too painfully. The educational trick is to maximize the gains while minimizing the losses. If we are unaware of the potential losses, we do little to minimize them.

This is not a book of new discoveries or of new knowledge generated by research. Rather, it simply reorganizes long-known ideas into a coherent scheme. My aim is not to present some exotic new conception of education, but rather to articulate a theory that is more adequate to what has long been meant by the word. We have lived with important but inadequate and mutually incompatible educational ideas for such a long time, and have even become comfortable with the discomforts they have caused and cause, that a theory aiming to remove the discomforts must itself seem rather a nuisance. In his own work in economics, John Maynard Keynes expressed the problem succinctly:

> The composition of this book has been for the author a long struggle of escape, and so must the reading of it be for most readers if the author's assault upon them is to be successful,—a struggle of escape from habitual modes of thought and expression. The ideas which are here expressed so laboriously are extremely simple and should be obvious. The difficulty lies, not in the new ideas, but in escaping from the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds. (1936, p. xxiii)

Part One

chapter 1

Three Old Ideas and a New One

INTRODUCTION

Education is one of the greatest consumers of public money in the Western world, and it employs a larger workforce than almost any other social agency. The goals of the education system—to enhance the competitiveness of nations and the self-fulfillment of citizens—are supposed to justify the immense investment of money and energy. School—that business of sitting at a desk among thirty or so others, being talked at, mostly boringly, and doing exercises, tests, and worksheets, mostly boring, for years and years and years—is the instrument designed to deliver these expensive benefits. Despite, or because of, the vast expenditures of money and energy, finding anyone inside or outside the education system who is content with its performance is difficult. Many task forces, commissions, and reports have documented the inadequacies of schools throughout the Western world and have proposed even more numerous remedies. The diagnoses of illness are so many and the recommended remedies so varied that politicians and educational authorities cannot address the evident deficiencies with much confidence of success or of general support.

Consider the community school along with other major institutions that developed into their modern forms in the latter part of the nineteenth century. The factory, the hospital, the prison, and the school have become prominent and integral components of twentieth century societies in the West. The factory and the hospital are generally accepted as successful institutions. There may be arguments about whether American, Scandinavian, or Japanese styles of manufacturing are more efficient or socially desirable, or about iatrogenic diseases and "spiraling health care costs," but generally these institutions are viewed as being well designed to achieve their proper aims. Prisons are more problematic. They were developed in the West to achieve two aims—to punish and to rehabilitate. The problem is, these aims are not entirely compatible; the more a conscientious civil servant tries to achieve one, the more difficult it is to do the other.

In the case of the modern school, three distinctive aims have attended its development. It is expected to serve as a significant agency in socializing the young, to teach particular forms of knowledge that will bring about a realistic and rational view of the world, and to help realize the unique potential of each child. These goals are generally taken to be consistent with one another, somewhat overlapping, and mutually supportive. As shown later in this chapter, however, each of these aims is incompatible in profound ways with the other two. As with prisons' aims to punish and to rehabilitate, the more we work to achieve one of the schools' aims, the more difficult it becomes to achieve the others.

THE THREE OLD IDEAS

The First Idea: Socialization

Central to any educational scheme is initiation of the young into the knowledge, skills, values, and commitments common to the adult members of the society. Oral cultures long ago invented techniques to ensure that the young would efficiently learn and remember the social group's store of knowledge and would also take on the values that sustain the structure of the society and establish the sense of identity of its individual members.

Prominent among these techniques was the use of rhyme, rhythm, meter, and vivid images. Perhaps the most powerful technique invented, and the greatest of all social inventions, was the "coding" of lore into stories. This had the dual effect of making the contents more easily remembered—crucial in cultures where all knowledge had to be preserved in living memories—and of shaping the hearers' emotional commitment to those contents. One could ensure greater cohesiveness within the social group by coding the lore that was vital to one's society into stories—be it proper kinship relations and appropriate behavior, economic activities, property rights, class status, or medical knowledge and its application.

The young have a remarkable plasticity to adapt to an indeterminate range of cultural forms, beliefs, and patterns of behavior. The central task of socialization is to inculcate a restricted set of norms and beliefs—the set that constitutes the adult society the child will grow into. Societies can survive and maintain their sense of identity only if a certain degree of homogeneity is achieved in shaping its members; "education perpetuates and reinforces this homogeneity by fixing in the child, from the beginning, the essential similarities that collective life demands" (Durkheim, 1956, p. 70).

Whoever governs the initiation process—the storytellers or the ministry of education and the school board—acts to promote the norms and values that are dominant in the society at large. Their job is to perform the homogenizing task Durkheim refers to. If a school today in Cuba or Iran routinely graduated liberal, capitalist entrepreneurs, it would be considered a disaster. In Winnipeg, Wigan, Wabash, or Wollongong, this would not be considered so bad. Indeed, what would be considered outrageous in Iran is a deliberate aim of Wollongong schools.

The process of socialization is central to the mandate of schools today. Our schools have the duty to ensure that students graduate with an understanding of their society and of their place and possibilities within it, that they have the skills required for its perpetuation, and that they hold its values and commitments. While we might not feel comfortable with the term, we accept that a prominent aim of schools is the homogenization of children.

The spokespersons of governments, taxpayers, and businesses that require the schools to produce a skilled workforce of good citizens today echo those who learned long ago the techniques for reproducing in the young the values and beliefs, the skills and lore, that best contribute to the untroubled perpetuation of the tribe. The public voices that associate education primarily with jobs, the economy, and the production of good citizens reflect a predominantly socializing emphasis.

The very structure of modern schools in the West, with its age cohorts, class groupings, team sports, and so on, encourages conformity to modern Western social norms. Such structures can accommodate only a very limited range of nonconformity. Students learn, more or less, to fit in for their own good. We need not see this process of socialization and homogenization as the de-humanizing, right-wing conspiracy it was "exposed" to be by 1960s romantic radical writers on education (e.g., Goodman, 1962; Kozol, 1967; Roszak, 1969; Young, 1971). Of course, pushed to extremes—which is where the radicals consider the typical public school to be—the socially necessary homogenizing process can become totalitarian in its demands for conformity. But most pluralistic Western societies try to build defences against those who are most eager to censor children's reading or restrict their behavior and shape their beliefs excessively.

The socialization of the young is also evident in the efforts to promote "useful" knowledge and skills through courses on consumer education, anti–drug use, and automobile maintenance. Sometimes the proponents argue that schools graduate students only when they are equipped to do a job. I have kept an old letter, published in an Ann Landers column, from someone who signed, sadly, as TOO SOON OLD—TOO LATE SMART. The letter expresses frustration with schools in which "our children are subjected to 12 years of 'education' without learning how to conduct themselves in real-life situations" and suggests that schools introduce a course on the consequences of shoplifting, that several days a week be devoted to the subject of the hazards of cigarette smoke, that there be instruction in the dangers of alcoholism, that sex education be a "must" in every school, and that there be courses on "life," with how-to instructions on settling arguments, expressing anger and hostility, handling competitive feelings involving brothers and sisters, coping with alcoholic parents, and dealing with "funny uncles" and passes made by homosexual peers. The writer acknowledges the importance of algebra and geometry in the curriculum but argues that information on how to handle one's life should take precedence.

TOO SOON OLD—TOO LATE SMART expresses very clearly how the curriculum would be changed if socializing were made more prominent in the schools' mandate. Those who share this view see the school as primarily a social agency that should accommodate society's changing needs. Recently their voices have been prominent in demands that students become familiar with computers and their range of applications. They support counseling programs and like to see school counselors working along with parents to help students adjust to the strains and challenges of modern society. Sports, travel, exchanges, visits to monuments and courts and government buildings, and social studies activities that help students understand their local environment all tend to be supported as helping to socialize the young. The teacher is seen as an important social worker, primarily valuable as a role model who exemplifies the values, beliefs, and norms of the dominant society; knowledge of subject matter cannot substitute for "character," wholesomeness, and easy and open communication with students.

The Second Idea: Plato and the Truth about Reality

Plato (c. 428–347 B.C.E.) had a radically different idea about how people should be educated. He wrote *The Republic* as a kind of elaborate prospectus for his Academy. Not conforming with the best modern advertising practice, he laid out his ideas in a manner that involved constantly arguing the inadequacy of the forms of education offered by his competitors. Plato wanted to show that the worldly wise, well-socialized, practical person equipped with all the skills of a good and effective citizen was not only an educationally inadequate ideal but actually a contemptible one. The assertive and confident Thrasymachus of *The Republic* and the worldly wise Callicles of the *Gorgias* are shown to be other than the masters of affairs they seem; in fact, they are slaves of conventional ideas. In contrast, the ability to reflect on ideas, to pull them this way and that until some bedrock of truth and certainty is established, was the promised result of the curriculum described in *The Republic* and offered in Plato's Academy. Plato certainly wanted the graduates of his school to be politically active and to change the world, but first they had to understand it.

Plato's revolutionary idea was that education should not be concerned primarily with equipping students to develop the knowledge and skills best suited to ensuring their success as citizens and sharing the norms and values of their peers. Rather, education was to be a process of learning those forms of knowledge that would give students a privileged, rational view of reality. Only by disciplined study of increasingly abstract forms of knowledge, guided by a kind of spiritual commitment, could the mind transcend the conventional beliefs, prejudices, and stereotypes of the time and come to see reality clearly.

Now this hasn't been everyone's cup of tea by any means. But Plato succeeded in expressing his central idea with such clarity, force, vividness, and imaginative wit that everyone who has written about education in the West has been profoundly influenced by it. Who, after all, wants to live and die a prisoner to conventional prejudices and stereotypes, never seeing the world as it really is? And how can one know when one is dealing with reality rather than with illusions and stereotypes? Plato's claim that his "academic" curriculum alone can carry the mind to rationality and a secure access to reality has been so influential that we can hardly imagine a conception of education without it.

Indeed, nearly everyone today takes it for granted that schools should attend to the intellectual cultivation of the young in ways that are not justified simply in terms of social utility. We include in the curriculum a range of subject matter that we assume will do something valuable for students' minds and give them a more realistic grasp of the world. We consider it important to teach them that Saturn is a planet that orbits the sun rather than have them believe it is a wandering star erratically orbiting the earth and influencing their daily fortune by its association with other stars. We teach division of fractions, algebra, drama, ancient history, and much else for which most students will never have a practical need. The place of such topics in the curriculum is usually justified in vague terms such as "educational value." In Plato's idea, the mind *is* what it learns, so selecting the content of the curriculum is vital.

How, then, is the Platonic idea of education represented today? One prominent conception can be introduced through an image suggested by astronomer Carl Sagan. Sagan has been a prominent organizer of the search for signs of extraterrestrial intelligence with radio telescopes. This program assumes a vividly romantic picture of a conversation among intelligent beings in our galaxy, which we are just now developing the technology to enter. By plugging in, we might suddenly have access to a conversation of unimaginable richness and wonder. In a more immediately possible sense, modern proponents of the Platonic idea of education suggest that accessing a transcendent conversation is precisely what education does for the individual. Michael Oakeshott (1991), for example, represents education as entry into a conversation that began long ago in the jungles and plains of Africa, gathered further voices, perspectives, and varied experience in the ancient kingdoms of the East, added distinctive voices and experience in ancient Greece and Rome, and continues to accumulate value to the present. The conversation is now one of immense richness, wonder, and diversity.

An individual can live and die happily, be socialized harmoniously in her or his special milieu, but remain almost entirely ignorant of this great cultural conversation as we will likely do with regard to Sagan's imagined galactic interchange. But if it were really there in radio waves across the galaxy and we had the means to join it, would we not be foolish to ignore it? Would we not be impoverishing our experience? The task of education, in this view, is to connect children with the great cultural conversation that very definitely is there and that transcends politics, special milieus, local experiences, and conventional sets of norms and values. To pass up the chance to engage in this conversation is to be like Proust's dog in the library—possibly content, but ignorant of the potential riches around us.

Those who want the schools to connect children to this great cultural conversation, and to serve as bastions of civilization against the cretinizing mindlessness of pop culture (these are the kind of terms they like), who want students to be engaged by the disinterested pursuit of truth through the hard academic disciplines that will make them knowledgeable, discriminating, and skeptical, give new voice to the idea Plato bequeathed to us. These are people who value Plato's idea more highly than the other two ideas. For these people, school is properly a place apart from society: a place dedicated to knowledge, skills, and activities that are of "persisting value," transcending the requirements of current social life. Indeed, what students learn is to establish the grounds from which they can judge the appropriateness of the values, norms, beliefs, and practices of society. Schools dominated by this idea consequently tend to be called elitist. Knowledge is valued less for its social utility than for its presumed benefit to the mind of the student; thus, Latin has a higher status than automobile maintenance. Modern, neoconservative promoters of the Platonic idea (whose slogan is "excellence in education") direct their outrage particularly at students' ignorance of their cultural heritage (cf. the British Black Papers on Education during the 1960s and 1970s; Hirsch, 1987; Ravitch and Finn, 1987) and downplay programs that do not serve a specific academic purpose. Teachers tend to occupy a more distant, authoritative, and even authoritarian role because they properly embody the authority that comes from being an expert in the relevant subject matter.

The Third Idea: Rousseau and Nature's Guidance

Jean-Jacques Rousseau (1712–1778) viewed current educational practice as disastrous. He was happy to acknowledge that Plato's *Republic* "is the finest treatise on education ever written," but he concluded that when dull pedagogues took hold of Plato's idea, they took the forms of knowledge that made up the curriculum, organized those into what seemed the best logical order, then beat them into the students. The typical result was misery, violence, and frustration: a syndrome not unknown today, though we may mark some success, influenced by Rousseau, at reducing the physical violence inflicted on children in the name of education.

Pedagogues, Rousseau observed, "are always looking for the man in the child, without considering what he is before he becomes a man" (Rousseau, 1911, p. 1). In *Émile,* he focused attention instead on the nature of the developing child, concentrating less on what ought to be learned and more on what children at different ages are capable of learning and on how learning might proceed most effectively. He saw his book, *Émile,* as a kind of supplement to *The Republic,* rectifying its major omission and updating the master's work. But, as we'll see, *Émile* was built on assumptions profoundly at odds with Plato's.

"The internal development of our faculties and organs is the education of nature," Rousseau wrote. "The use we learn to make of this development is the education of men" (p. 11). So, to be able to educate, we must first understand that internal development process. The most important area of educational study, then, is the nature of students' development, learning, and motivation. The more we know about these, the more efficient and humane we can make the educational process. The key is that underlying natural development: "Fix your eye on nature, follow the path traced by her" (p. 14).

As nature was to be our guide, and Rousseau clearly believed the nature of males and females to be significantly different, nature dictated a quite different education for Sophie from that of Émile—an education that encouraged the "domination and violation of women" (Darling and Van de Pijpekamp, 1994).)

Émile, published in 1762, was promptly ordered to be burned in Paris and Geneva. This no doubt helped sales considerably, as it went from printing to printing. The sentimental image of the child likely helped the book's popularity, too (Warner, 1940), even while Rousseau himself was dispatching his own unwanted children to foundling hospitals. But the rhetorical force of *Émile* carried Rousseau's ideas across Europe. In more recent times, John Dewey and Jean Piaget have been profoundly influenced by Rousseau, and the degree to which their ideas have affected practice is one index of his continuing influence.

Careful observation and study of students, recognition of the distinctive forms of learning and sense-making that characterize different ages, construction of methods of teaching that engage students' distinctive forms of learning, emphasis on individual differences among learners, the encouragement of active rather than passive learning, the insistence that a student's own discovery is vastly more effective than the tutor's "words, words, words," are all features of Rousseau's educational scheme. While it would be false to claim him as the originator of all these ideas, he did bring them together into a powerful and coherent conception of education.

These are ideas that have become a part of the "common sense," taken-for-granted folklore of so many educators today. It would now be considered strange not to recognize the importance of students' varying learning styles, the value of methods of teaching that encourage students' active inquiry, and the significant differences among students at different ages.

The modern voices that encourage schools to focus on fulfilling the individual potential of each student, that emphasize that students should "learn how to learn" as a higher priority than amassing academic knowledge, that support programs in "critical thinking," that evaluate educational success not in terms of what knowledge students have acquired so much as in terms of what they can do with what they know, reflect this third educational idea. Here, the focus of education is the experience of the child. The construction of a common core curriculum for all children therefore is not simply undesirable but actually impossible. Each child's experience, even of the same curriculum content, is necessarily different. We should recognize this, and let the unique experience and needs of each child be the determiner of the curriculum, even to the radical point of making the curriculum a response to the questions students raise (Postman and Weingartner, 1969). The educator's attention should be focused on the individual development of each child and on the provision of the experiences that can optimally further this development.

The commonest expression of this idea today combines the variously interpreted progressivism of John Dewey (Kleibard, 1986) with Piaget's developmentalism and the psychologizing of the study of children—the modern form of discovering their "nature" that Rousseau recommended. In the classroom, and outside it, "discovery learning" is valued, manipulables and museums are recommended for students' exploration, discussion is encouraged, project work by individuals or groups is provided for. Careful attention is given to the results of empirical studies of children's learning, development, and motivation, and teaching and curricula are adjusted to conform with such "research findings." Teachers are not authorities so much as facilitators, providers of the best resources, shapers of the environment in which students will learn.

INCOMPATIBILITIES

Are these three ideas really incompatible? Can we not find a way of addressing these somewhat distinct aims for education without having them undermine one another? Why can we not socialize students to prevailing norms and values, ensure that they accumulate the kind of knowledge that will give a truer view of the world, and help them to fulfill their potential at each stage of development? A rigorous academic program surely does not conflict with society's needs, and facts about learning, development, and motivation surely can help us better implement both the academic program and socialization. At least, Plato's concern with the *what* of education does not seem to be at war with Rousseau's concern with the *how*. Don't they properly complement one another?

Looked at in sufficiently general and vague a manner, it may indeed seem that these distinctive ideas are not as incompatible as I have been suggesting. The everyday business of schooling in Western societies has been going ahead on the assumption that evident problems are caused by improper management, poor teaching, genetic constraints on students' abilities to learn, or flawed curriculum organization, not to some profound theoretical incompatibility. But I think the incompatibility is there, and it is at the root of our practical problems. Let us consider each idea in turn with the others.

Plato and Socializing

The homogenizing aim of socialization, which is to reproduce in each student a particular set of beliefs, conventions, commitments, norms of behavior, and values, is necessarily at odds with a process that aims to show their hollowness and inadequacy. They do, after all, form the glue that holds society's foundations in place. If Socrates was Plato's ideal of the educated person, it is evident why the democratic citizens of Athens condemned him to death: the radical skepticism that his kind of education engendered threatened the foundations of society. He was condemned for corrupting the youth. What he was corrupting, or corroding, was their acceptance of the tenets of society. His fellow citizens saw his behavior as a kind of treason.

No one now believes that Plato's ideal aim of direct knowledge of the real, the true, the good, and the beautiful is attainable. What is attainable, though, is the skeptical, philosophical, informed mind that energetically inquires into the nature and meaning of things, that is unsatisfied by conventional answers, that repudiates belief in whatever cannot be adequately supported by good arguments or evidence, and that embodies the good-humored corrosive of Socratic irony. This kind of consciousness has not often been greatly valued by those who govern societies because it is a disruptive force. Everyday social life, particularly in complex modern economic systems, proceeds more smoothly and blandly without the irritant created by following Plato's educational prescription too closely. If people continually ask themselves "Is this really the best way to live?," they simply can't get on with day-to-day business in a single-minded, efficient manner.

Of course, we want the promised benefits of both educational ideas. We want the social harmony and the psychological stability that successful socialization encourages, but we also want the cultivation of the mind, the skepticism, and the dedication to rationality that Plato's program calls for. Designing schools to achieve either one is difficult. But our schools today are supposed to do both.

Rousseau and Plato

If we see Plato as dealing with the *what* of education and Rousseau with the *how,* then must the two ideas be considered incompatible? This common resolution of apparent conflicts would be fine were it not the case that it falsely represents both ideas. The above compromise, leaving Plato's descendants with the content and aims of education and Rousseau's with the methods, appeals to many as a neat division of labor. The educational philosophers can deal with content and aims, drawing on the knowledge generated by the educational psychologists about learning and development. It seems obvious that facts about students' development can blend with philosophers' research into the nature and structure of knowledge to yield a more easily understood math or history curriculum. It seems obvious that such collaboration should be common; the fact that we see so little of it suggests there is something preventing it from taking place.

One problem for the neat compromise is that, in the Rousseauian and Deweyan view, the means and ends of education are tied together. The means used in Rousseauian and Deweyan instruction are *parts* of their educational ends. They favor discovery procedures, for example, not because they are more efficient means to some distinct educational ends, but because they are a component of their educational ends. For example, in Rousseau's terms discovery procedures disclose nature and in so doing stimulate the development of a pure, uninfected reason. Or, as Dewey adapted the idea, discovery procedures mirror the scientific method whose acquisition by students is a crucial component of their education. We have incorporated this idea of intertwined means and ends into our currently dominant conception of education. Put crudely, we recognize the inappropriateness of beating children who have failed to memorize a text on compassion; we feel a bit uncomfortable about compelling attendance at institutions that try to teach the values of liberty and democracy; and it is increasingly clear that choice of teaching method is not a simple strategic matter disconnected from our educational ends. In our educational means are our ends; in our educational ends are our means.

Another problem follows from Plato and his descendants' having their own conception of educational development. Students progress, in Plato's scheme, from the stages of *eikasia,* to *pistis,* to *dianoia,* to *noesis.* But these stages are interestingly different from Rousseau's and Piaget's. Plato's stages represent greater clarity in understanding. Education, in Plato's view and in that of modern proponents of the academic idea, is marked by students' ability to master increasingly sophisticated knowledge, regardless of their supposed psychological development. For Rousseau and Piaget, the stages of psychological development are precisely what mark education and determine what kind of knowledge the student needs; as the development of the body proceeds almost regardless of the particular food it eats, so the mind will develop almost regardless of the particular knowledge it learns. For the Platonists, the only development of educational interest is the particular knowledge learned; the mind is not much else.

So Rousseau and his modern followers are not simply making methodological or procedural recommendations that might allow us to do the Platonic academic job more efficiently. They are actually recommending a different job. Rousseau's idea is not one that yields an easy accommodation with Plato's. These ideas conflict—most profoundly in identifying the cause and dynamic of the educational process. In the Platonic idea, learning particular forms of knowledge carries the educational process forward; knowledge drives development. In the Rousseauian idea, education results from an internal, developmental process unfolding within a supportive environment; development drives knowledge, determining what knowledge is learnable, meaningful, and relevant. For Plato education is a time-related, epistemological process; for Rousseau it is an age-related, psychological process.

We could design schools to implement either of these conceptions of education, but instead we require our schools to implement both. Our practical difficulties arise from accepting that both the Platonic and the Rousseauian ideas are *necessary* for education, but the more we try to implement one, the more we undermine the other.

The conflict between these two ideas has been the basis of the continuing struggles between "traditionalists" and "progressivists" during this century. One sees them at odds in almost every media account of educational issues—the Platonic forces argue for "basics" and a solid academic curriculum, and the Rousseauians argue for "relevance" and space for students' exploration and discovery. A key battleground now is the elementary social studies curriculum in North America. The progressivists are defending the "relevant" focus on families, neighborhoods, communities, and interactions among communities, and the traditionalists are pressuring for a reintroduction of history and geography as mainstays of the curriculum. The progressivist forces argue that history and geography require abstract concepts and are not "developmentally appropriate" for young children; the traditionalists respond that any content can be made comprehensible if presented sensibly.

Socializing and Rousseau

When socialization is the primary aim of education, we derive our priorities from society's norms and values. In the Rousseauian view, however, we should keep the child from contact with society's norms and values as long as possible because they are "one mass of folly and contradiction" (Rousseau, 1911, p. 46). If we want to let the nature of the child develop as fully as possible, we will constantly defend her or him against the shaping pressures of society. An aspect of this conflict is apparent today in many educators' attitudes to the general influence of television on children. TV is a powerful instrument in shaping a set of prominent social norms and values, but educators resist much of this shaping in favor of activities that seem to them less likely to distort proper or "natural" development. "Natural" is not, of course, the term much used today, but it lurks around the various ways the Rousseauian position is restated, as in a number of books that appeal to a conception of a more natural kind of childhood that is being distorted or suppressed by current forms of socialization (e.g., Elkind, 1981; Postman, 1982). Some of the 1960s radicals were even plainer—Paul Goodman put it this way: "The purpose of elementary pedagogy, through age twelve, should be to delay socialization, to protect children's free growth. . . . We must drastically cut back formal schooling because the present extended tutelage is against nature and arrests growth" (1970, p. 86).

No one, of course, is simply on the side of Rousseau against socialization, or vice versa. We all recognize that any developmental process has to be shaped by a particular society. Our problem originates with the attraction of Rousseau's ideas about a kind of development that honors something within each individual, something uninfected by the compromises, corruptions, and constrictions that social life so commonly brings with it. We do not have to share Rousseau's own disgust with society (which returned him high regard and money) to recognize the attraction of his ideas.

There doesn't seem room for much compromise here. We can't sensibly aim to shape a child's development half from nature and half from society. To try to do so creates the same problems as half punishing and half rehabilitating a prisoner. Such treatments interfere with each other; by trying to compromise, we ensure only that neither is effective.

There are, of course, a number of ways of seeing this conflict that do not lead to the conclusion of incompatibility I am arguing. We can "solve" the problem by observing that our nature is indeterminately plastic in our early years and socialization is a condition of our nature being realized. We are, after all, social animals; there is no natural form that we will develop toward if we are kept apart from society. We can "solve" this conflict also by seeing it not as one between nature and society but, much more simply, as the kind of disagreement one must expect in a pluralistic society. But the incompatibility I am concerned with arises only within the conception of education, and seems to me unavoidable so long as people conceive of children as going through some regular, spontaneous process of intellectual development that can be optimized if we shape their learning environment to suit it. One cannot derive one's educational principles both from some conception of an ideal developmental process and from some current norms and values of adult society; they are bound to be incompatible unless one lives in a perfect society. They are incompatible because socializing has a distinct end in view and is a shaping, homogenizing, narrowing process toward that end, whereas supporting the fullest development of student potential involves releasing students to explore and discover their uniqueness; this is an individualizing process that encourages distinctiveness even to the point of eccentricity, if necessary, and is expansive without predetermined ends.

TIDYING UP

Some readers might consider "tidying up" a particularly unsuitable subheading on the grounds that the scheme presented so far is much too tidy: three neat ideas and three crisp incompatibilities. What it needs is roughing up; enormously complex processes cannot adequately be represented by such a simple scheme. Also it has long been recognized that "tensions" exist among competing values in education—between, say, the need to socialize and the academic curriculum. Clearly, when there is a conflict for curriculum time between consumer education or a new family life curriculum and drama or Latin, for example, no single criterion of educational value can be invoked to help us make a decision. These are "value issues," necessary tensions that follow from education's being one of those "essentially contested concepts"; ultimately such issues are reflections of large-scale political conflicts. So perhaps this talk of profound theoretical incompatibilities is simply an old truism dressed up in fancy language and made to look excessively dramatic?

In "tidying up" I mean to address objections like these, even if very briefly, and to summarize my point about the three ideas before I go on to introduce the fourth. Also, just before quitting the old ideas for the new, I will point out that each of the old ideas carries problems of its own for education, even beyond incompatibility.

Now nobody holds exclusively to any one of these ideas. Educational discourse during this century has been largely made up of arguments about which idea should be valued more highly. The persisting "traditionalist" vs. "progressivist," "subject centered" vs. "child centered" disputes may be reinterpreted in these terms as representing preferences for Plato's idea over Rousseau's or vice versa. Conflicts between those promoting vocationally oriented studies and those promoting more purely academic subjects may be seen as preferences for socializing over Plato's idea, or vice versa. Radicals, meanwhile, are identified by their simple solution of discarding two of the ideas. This does solve the theoretical problem, and does usually mean that they can speak with a clearer and more urgent voice, and so accumulate disciples, but at a harsh practical cost.

At the "chalk face" level of classrooms in the local school, the Plato-influenced teachers, who want to put in place more rigorous exams and to "stream" students so that learning disciplined knowledge can be maximized, come frequently into conflict with the Rousseau-influenced teachers, who want to remove exams and even grading and focus on opening up the range of exploratory opportunities for students. The former argue for a more structured curriculum, logically sequenced and including the canonical knowledge of Western "high" culture; the latter argue for activities that encourage students to explore the world around them and, in as far as they are willing to prespecify curriculum content, they propose knowledge relevant to students' present and likely future experience. The former are likely to prefer desks in neat rows and orderly lessons while the latter are likely to prefer varied work-centers, circled desks or no desks, and flexible interdisciplinary lessons.

Clearly few teachers adhere to one position to the exclusion of others; most teachers try to balance all of them in practice. So, for example, even Rousseau-inclined teachers tend to acknowledge the importance of the canonical content of the Plato-influenced curriculum; their compromise between incompatibles means that they feel it is important to "expose" students to the "high culture" curriculum content but they feel no imperative to persist with it for students who do not take to it. That is, each idea is allowed scope enough to undercut the other.

Most educational administrators feel pressure from groups who prefer one or another of the ideas; thus they seek to find a balance among them. This is the common-sense response to recognizing these competing "values" and it is the response that has given us the schools we have. They struggle to ensure a reasonably adequate socialization of students, provide a reasonable academic program, and enable as many students as seem suited to it to progress as far as possible, and attend to the different needs and potential of each student, allowing as much flexibility and choice among programs as resources allow.

Apologists for the general performance of schools in the West commonly point to the array of social ills that afflict the schools, arguing, reasonably, that given the circumstances schools are doing a heroic job. But such voices tend to be drowned by critics who argue that schools would do a much better job if only they would elevate one of the old ideas in importance over the others—put greater emphasis on developing the basic values and skills that will lead to good citizenship and economic productivity, or increase the time and conditions that will put greater pressure on students to master disciplined knowledge, or design curricula and teaching practices that are more relevant to students' experience. From a purely pragmatic point of view, it seems extraordinarily unlikely that any of these emphases, or any combination, or any finer balance among them, will do the trick for us. The traditional social efficiency, liberal academic, and progressivist proposals have been tried and tried again; continuing to wobble from one to another will only exacerbate the confusion about schools' roles and perpetuate the blaming and the now stale and futile arguments about how to make things better. At best, schooling is a set of flaccid compromises among these three great and powerful ideas.

Great and powerful they undoubtedly are, but each carries baggage that creates problems for education even before we try sticking them together into an unworkable system. I want to dispense with some of the baggage these ideas come with and to *reconceive* education in a way that preserves adequate socialization, academic cultivation, and individual development disconnected from the educational ideas we have inherited. We have to hang onto the babies while tossing out their dirty old bathwater.

That there is bathwater to be thrown out seems to be generally acknowledged. Socialization to generally agreed norms and values that we have inherited is no longer straightforwardly viable in modern multicultural societies undergoing rapid technology-driven changes. The Platonic program comes with ideas about reaching a transcendent truth or privileged knowledge that is no longer credible. The conception of individual development we have inherited is built on a belief in some culture-neutral process that is no longer sustainable.

Yet a problem for any paradigm-shifting ambition to displace currently dominant ideas is that the new idea must initially be looked at through the perspectives it is trying to displace. What I must persuade you to do, if only provisionally, is to let go of the old ideas and consider what sense of education is generated by taking "kinds of understanding" as the primary category for thinking about education. In viewing education through this lens, children may be seen as picking up intellectual tools from society in an effort to make sense of the world. In the process, children become, willy-nilly, socialized. The criterion at work here, however, is not "What does the child need to learn in order to share the norms, values, and conventions of adult society?" but rather "What does the child need to learn to develop most fully each kind of understanding?" The former question, relatively straightforward for oral societies long ago and even for more homogeneous, class-based societies up to the mid-twentieth century, is problematic for modern multicultural societies undergoing rapid and seemingly accelerating change. What are the norms and conventions of adult life today? What are the values? How does the answer differ if asked of those whose prime educational criterion is the accumulation of disciplined knowledge? Tackling the