

Critical Study

Paul's *Critical Thinking*

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Paul, Richard. (1990). *Critical Thinking: What Every Person Needs to Survive in a Rapidly Changing World*. Rohnert Park, CA: Center for Critical Thinking, Sonoma State University. 608 pages. ISBN 0-944583-04-0. Paper. US\$19.95.

1. Introduction and Outline of the Argument

This book collects most of Richard Paul's previously published papers on critical thinking (along with some other relevant material) in one place for the first time. Given Paul's leading role in this rapidly developing field, and given the book's contents, it is certain to prove an invaluable source book for those working on critical thinking for many years.

Paul's title is a play on E. D. Hirsch's *Cultural Literacy: What Every American Needs to Know* and every word Paul writes is opposed to Hirsch's conception. As Paul explains in the Foreword, all the items in the volume

have been written with the express purpose of persuading educators and others concerned with education of the need to place critical thinking at the heart of educational reform.

Paul's basic premiss is that the prevailing mode of education in schools is too didactic, that it relies too heavily on rote memorisation, and that it makes teachers into authority figures. He argues that schooling of this kind fails in three respects: (1) it does little to develop that most desirable of

human qualities—rationality, (2) it does little to develop the kind of flexible thinkers that the modern world of work needs, and (3) it does not produce the kind of reflective citizens that are needed to ensure the proper functioning of democracy. His response is to propose radical educational reform—reform which aims at achieving these very objectives by placing the teaching of critical thinking at the core of the curriculum.

What Paul means by 'critical thinking' is best seen in the distinctions he draws between the 'uncritical' thinker, the 'weak' critical thinker, and the 'strong' critical thinker. The uncritical thinker is simply not very good at reasoning, and is easily deceived. The 'weak', or 'sophistical', critical thinker is skilled at reasoning, but uses that skill only in defence of his or her own interests and prejudices. By contrast, the 'strong', or 'fairminded', critical thinker is skilled at reasoning and uses that skill just as readily when his or her own interests and prejudices are threatened. What Paul wants to place at the core of the curriculum is the teaching of 'strong' critical thinking.

Paul has devoted much of his intellectual energy to articulating his conception of strong critical thinking and to contrasting this with other conceptions. What distinguishes his approach from others is his insistence on the importance of 'fairmindedness'—on seeing things from alternative points of view and taking those opposing views seriously. He argues that many of the problems people have to face—at work, at home, and as citizens—are 'multi-logical', and cannot be

solved within one perspective, hence the importance of seeing things from other perspectives. Many of the papers in this collection articulate these fundamental ideas and argue this fundamental case.

Paul not only theorises, he also wants to *change* the educational world. He is both an *evangelist* for critical thinking, and an educational *revolutionary*; he has both faith and organisational drive! Hence, besides theorising, Paul has also done three other things. Firstly, he has set out to rouse the educational world and to persuade it to his banner; to this end he has not hesitated to write what are essentially polemical pieces, several of which are to be found in this book. Secondly, he has addressed the practical problem of showing how to incorporate the teaching of critical thinking into an already crowded curriculum; here he has chosen the 'infusion' approach rather than the 'separate subject' approach of, for example, Matthew Lipman's *Philosophy for Children* programme; again, there are several items on this theme in the book. Thirdly, he has recognised the need to produce teaching materials which will assist teachers to infuse critical thinking into the curriculum; for this purpose he has produced a series of four *Critical Thinking Handbooks*; there are several representative selections from these in the present volume.

The chapters of this book then, are devoted to a large task and range widely in both content and style. Some were written for scholarly journals; others are mainly polemical pieces. Some are concerned with high theory; others with practical matters. Many of the items were written for particular audiences on particular occasions, so there is a good deal of overlap in their contents. Many of the chapters only outline what is explained in more detail elsewhere (in general the more polemical pieces only outline what is detailed in the more theoretical pieces). For these reasons, the book should not be read as a systematic treatise on critical thinking, from cover to cover, but as a source book showing how Paul's ideas and the critical thinking movement have

developed in the past decade. Given that the reader will want to 'dip' into the book, an index would have been helpful—or perhaps more descriptive abstracts at the head of each chapter. Having said that, the book contains a great deal of interesting reading, and in this review I shall help the reader to find his or her way about it.

2. The History of Education

Paul's views on the history of education are outlined in Chapter 1 (Chapter 2 contains similar material) and summarised in Chapter 3 (pp. 28-30). In Chapter 1, "The Critical Thinking Movement in Historical Perspective" (1985), Paul argues that US education has been more concerned with indoctrination and training for jobs than with teaching people to think. This is a largely polemical piece, rather than a scholarly defence of his viewpoint. He claims that if the public statements of many individuals and organisations concerned with US education are right,

our overemphasis on "rote memorization and recall of facts" does not serve us well. We must exchange our traditional picture of knowledge and learning for one that generates and rewards "active, independent, self-directed learning" so that students can "gather and assess data rigorously and critically". We need to abandon "methods that make students passive recipients of information" and adopt those that transform them into "active participants in their own intellectual growth." (p. 6)

He does not detail the case against existing educational methods, or consider possible criticisms of his position, though he cites some authorities in support of his view and the fact that,

At no point along the way, even to this day, were, or are, prospective teachers expected to demonstrate their capacity to lead a discussion Socratically, so that, for example, students explore the evidence that can be advanced for or against their beliefs, note assumptions upon which they are based.

their implications for, or consistency with, other espoused beliefs. (p. 5)

3. Why Reform is Needed

As I explained in the introduction, Paul gives three reasons why educational reform is necessary. Chapter 2, "Towards a Critical Society" (1984), is another mainly polemical piece, but it contains a number of classic statements of these reasons. For example:

Let me clarify the conceptual foundations of my argument. All rational learning presupposes rational assent. And though we sometimes forget it, all learning is not automatically or even commonly rational. Much that we learn in everyday life is distinctly irrational. It is quite possible—and unfortunately most human learning is of this character—to come to believe any number of things without knowing how or why. We can easily believe for irrational reasons: because those around us believe, because we are rewarded for believing and punished for doubt, because we are afraid to disbelieve, because belief serves our vested interest, because we are more comfortable with belief, because we have ego-identified ourselves, our image, or our personal being with belief. In all of these cases, our beliefs are without rational grounding, without good reason and evidence, without the foundation a rational person demands.

We become rational, on the other hand, to the extent that our beliefs and actions are grounded in good reasons and evidence; to the extent that we recognize and critique our own irrationality; to the extent that we are unmoved by bad reasons and a multiplicity of irrational motives, fears, desires; to the extent we have cultivated a passion for clarity, accuracy, and fairmindedness. These global skills, passions, and dispositions integrated into a way of acting and thinking characterize the rational, the educated person. (p. 13)

And again:

If we were to make a commitment to become a nation of educated people, the result would be not only a large pool of talented people to solve our technical and scientific problems, but also a citizenry with

the critical faculties and intellectual wherewithal to recognize and prevent wrong and wasteful allocations of life, money, and other resources. Imagine we had decided not to support a war in Vietnam some 25 years ago. The saving from that decision alone—some 200 billions of dollars, not to mention hundreds of thousands of lives, both American and Vietnamese—could have been used in the intervening years to raise the intellectual standards of our schools many times over. (p. 17)

And finally:

The key to usefulness of schooling is transfer. The key to transfer is generalization. The key to justifiable generalization is critical evaluation. Learning how to think about facts and experiences, to critically spell out their implications for theory and practice, is a necessary condition of "educated" generalization. The answer is not more vocational training, certainly not as traditionally conceived, but rather schooling that provides foundational thinking skills and develops the critical spirit: the foundation for educated learning. (p. 9)

Apart from these classic statements, this piece is programmatic and polemical and makes a number of points which are made more fully in many other places.

4. Conflicting Theories of Knowledge

Chapter 3, "Critical Thinking in North America" (1989), is one of the most theoretical pieces in the collection. In it, Paul outlines "Two Conflicting Theories of Knowledge, Learning and Literacy: The Didactic and the Critical". In summary the contrast is this: on the didactic approach students are 'filled-up' with domain-specific knowledge—on the model of an encyclopaedia, whereas on the critical approach students actively engage in constructing their own knowledge through questioning—on the Socratic model. The didactic approach has an 'atomistic' view of knowledge, i.e., it sees knowledge as consisting of independent bits which can be 'added on'; it also sees 'transfer' as a side-

issue. The critical view on the other hand sees knowledge as systemic and holistic (adding a bit changes already existing bits) and teaches for transfer (p. 27).

In this article Paul also gives careful definitions of 'uncritical thinking', 'sophistic (or weak) critical thinking' and 'fair-minded critical thinking' (p. 32 ff.), and outlines what he calls the 'perfections and imperfections' of thought (clarity versus unclarity, etc.), discussing what they mean in different contexts. (It also has a useful bibliography.)

Chapter 4, "Critical Thinking: What, Why and How" (1988), contains a great deal of material which is also in the previous article. It adds little to what is there, except that it does begin to discuss 'infusing' critical thinking into the curriculum and it contains a statement of the *traits of mind* Paul associates with the 'strong' critical thinker, namely intellectual humility, intellectual courage, intellectual empathy, intellectual good faith (integrity), intellectual perseverance, faith in reasons, and an intellectual sense of justice.

5. 'Background Thinking'

In Chapter 6, "Background Logic, Critical Thinking and Irrational Language Games" (1985), Paul argues that we have a natural tendency to think both egocentrically and sociocentrically. He argues that if we are to be fairminded critical thinkers it is necessary to probe the 'background logic' of our manifest words and behaviour. He identifies and discusses four 'dimensions' of background logic:

- 1) the dimension of our thinking temporally prior to what we have expressed, 2) the dimension of our thinking logically presupposed by what we have expressed, 3) the dimension of our thinking implied by what we have expressed, and 4) the dimension of thinking developed when our thinking is challenged by others. (p. 74)

He claims that our 'background thinking' is not taken sufficiently seriously and offers

the following interesting explanation:

Another reason why background thinking is not taken seriously is our over-fascination with formal procedures and what we take to be scientific objectivity. In an age of science it seems to many that all important problems are questions that should be settled by some objective scientific process that transcends the "subjectivity" of thought. Our obsession with scientific formalism, our scientism, is actually quite old, ultimately traceable perhaps to Aristotle's logic.

Plato's method of intellectual give-and-take, of dialogical exchange between opposing viewpoints, was relegated by many to an inferior role, and formal syllogistic reason officially accepted as the exclusive means of acquiring true knowledge. In place of argumentation between conflicting points of view Aristotle's followers held that definite methods should be developed that lead more or less directly and objectively to the truth. This laid a foundation for a long history of formal approaches to logic: logic largely divorced from context, from the conceptual problems of everyday life and dispute, and from the practical problems faced in an irrational, multi-faceted, deeply disguised world.

Philosophy, in contrast to science, maintained dialectic as its fundamental means of enquiry. Bring opposing philosophers together and it is usually necessary to test each of their views against the objections of the other. This process is at its roots informal, for there are no hard-and-fast rules or formulas for deciding how and when to object to an opposing philosophical position. (p. 71)

This is a largely discursive article, but it is very suggestive and its ideas deserve to be developed further.

6. Strong Critical Thinking

One of the best papers in the volume is Chapter 7, "Critical Thinking: Fundamental for a Free Society" (1984). This paper was written originally for *Educational Leadership* and carefully articulates various of Paul's theoretical concerns besides giving practical advice on how to establish critical thinking teaching in schools (pp. 89-90).

This paper contains many pointed statements of Paul's ideas; for example, on the difference between 'weak' and 'strong' critical thinking:

I emphasize the need to recognize and highlight a fundamental difference between two distinct conceptions of critical thinking: a "weak" sense, understood as a set of discrete micro-logical skills extrinsic to the character of the person, skills that can be tacked onto other learning; and a "strong" sense, understood as a set of integrated macro-logical skills and abilities intrinsic ultimately to the character of the person and to insight into one's own cognitive and affective processes. If we chose the latter we concern ourselves not only with the development of *technical reason*—skills which do not transform one's grasp of one's basic cognitive and affective processes—but also with the development of *emancipatory reason*—skills and abilities which generate not only fundamental insight into, but also some command of one's own cognitive and affective processes. In the strong sense, we emphasize comprehensive critical thinking skills and abilities essential to the free, rational, and autonomous mind. In the weak sense, we are content to develop what typically comes down to "vocational" thinking skills which by themselves have little influence on a person's intellectual, emotional or moral autonomy. (pp. 87-88)

Also in this paper, Paul carefully draws the distinction between 'technical' and dialogical reasoning and between the different associated kinds of 'problem-solving'. He criticises Dewey and Polya for suggesting that all problem solving is of the same kind:

For example, Dewey thought that one could approach all problems through the following ordered scientific steps: 1) identify the problem, 2) establish facts, 3) formulate hypotheses, 4) test hypotheses, and 5) evaluate results. Polya formulated a similar general procedure: 1) Understand the problem. What is the unknown? What data are given? What are the conditions? 2) Devise a plan. Find the connection between the data and the unknown. You may be obliged to consider auxiliary problems if an immediate connection cannot be found. 3) Carry out the plan. Check each step. Can you see clearly

that the step is correct? Can you prove that it is correct? 4) Look back. Check the result. Check the argument. Can you derive the result differently? (p. 95)

He concludes:

Dialectical thought is the master-principle of all rational experience and human emancipation. It cultivates the mind and orients the person as technical training cannot. It meets our need to bring harmony and order into our lives, to work out an amalgamation of ideas from various dimensions of experience, to achieve, in short, intellectual, emotional, and moral integrity. The proper doing of it is our only defense against closed-mindedness. (p. 105)

Again, this article contains a useful bibliography.

7. The Critical Person

Chapter 8, "Critical Thinking and the Critical Person" (1987), is an interesting paper for several reasons. In this paper Paul stresses the value of making 'strong' critical thinking part of one's whole character (and thereby escaping egocentricity); he also argues the *social* importance of strong critical thinking (which can save us from sociocentricity). He characterises strong critical thinking succinctly (p. 110); he quotes from and establishes interesting connections with the work of Ennis, Siegel, Scriven, and Peters; and he draws a clear picture of the Socratic ideal which so clearly inspires much of his thinking:

The concept of strong sense critical thinking, of critical thought integrated into the personal and social life of the individual, is not new. It was introduced into Western intellectual tradition in the chronicles of the life and death of Socrates (470-399 BC), one of the most important and influential teachers of ancient Greece. As a teacher, he was committed to the importance of ideas and their critique in the conduct of everyday human life. It is to him that the precept "the unexamined life is not worth living" is attributed. It is in him that the ideal of conscientious civil disobedience and critical

autonomy of thought is first to be found. He illustrated the possibility and the value of sharpness of mind, clarity of thought, and commitment to practical insight based on autonomous reason. He championed reason, the rational life, and a rationally structured ethic, the intimate fusion of reason and passion. He disclaimed authority on his own part but claimed the right to independently criticize all authoritative beliefs and established institutions. He made it clear that teachers cannot be educators in the fullest sense unless they can criticize the received assumptions of their social groups and are willing to nurture a climate of questioning and doubt among their students. (p. 113)

In this chapter, Paul also discusses American sociocentricity with respect to its perceptions of the Soviet Union, using some very instructive examples.

8. Prejudice

Chapter 10, "Critical Thinking and the Nature of Prejudice" (1988 by Paul and Adamson), discusses some of the literature on prejudice, recommending in particular William Graham Sumner's *Folkways* (1906), which argues that prejudiced belief is the norm in human societies, rather than the exception. By 'prejudice' is meant the human tendency "to form prejudgments and preconceptions without adequate reasons or before the relevant evidence is in, and then to feel and act accordingly to the detriment of others" (p. 138).

Paul and Adamson argue that it is very difficult to "cultivate and nurture people who habitually think rationally" (p. 145) but that the answer is to instill the intellectual skills and virtues of critical thinking. For example, they say:

Intellectual fairmindedness can be fostered by encouraging students to consider evidence and reasons for positions they disagree with, as well as those with which they agree. Students can also be encouraged to show reciprocity when disputes arise, or when the class is discussing issues, evaluating the reasoning of story characters, or discussing other cultures. (p. 160)

It is not at all obvious to me, even on Paul's own terms, why this should foster fairmindedness, rather than skill at outwitting your opponents. Paul seems here to fall into the trap of intellectualising the emotions; it seems unlikely to me that, for example, many people's racial prejudices will be touched by intellectual considerations.

Surprisingly, Paul claims:

Critical thinking does not compel or coerce students to come to any particular substantive moral conclusions or to adopt any particular substantive moral point of view. Neither does it imply moral relativism. (pp. 179-80)

But surely, on his own terms it ought to imply that racial prejudice is wrong. Could one really be a racist critical thinker? As is well known, Paul believes one could be a critical thinker and *either* atheist *or* Roman Catholic (Cardinal Newman is one of his models of a critical thinker).

There are two interesting tables on pp. 188-89, the first listing the *Moral Reasoning Skills* and the second the *Essential Moral Virtues*. The main problem with the *Moral Virtues* is that it is not at all clear how one would inculcate them; as I have asked above, why should trying to see things from someone else's point of view (being fair-minded) foster concern for them? The *Moral Reasoning Skills* correspond quite closely to the lists of critical thinking strategies which are to be found in Paul's *Critical Thinking Handbooks*, except that they are related specifically to the moral domain—'fostering moral reciprocity', 'examining moral assumptions', etc. Though what is meant by most of them is intuitively clear (or is explained in the *Handbooks*), it is not clear how Paul would distinguish S-16 'engaging in Socratic discussion', S-17 'practicing dialogical thinking' and S-18 'practicing dialectical thinking'.

9. Dialogical and Dialectical Thinking

Paul says a great deal about 'dialogical' and 'dialectical' thinking, about 'monolog-

ical' and 'multilogical' problems, and about Socratic questioning, but it is not easy to see what the relations are between these ideas. I had hoped that Chapter 14, "Dialogical Thinking: Critical Thinking Essential to the Acquisition of Rational Knowledge and Passions" (1987) would explain what dialogical thinking is, but it is a mainly polemical piece, telling us what a *good* thing dialogical thinking is, rather than *what* it is. However, Paul does usefully explain that a 'monological' problem is one which is

settled within one frame of reference with a definite set of logical moves. When the right set of moves is made, the problem is settled. (p. 205)

And he then explains that

philosophers concerned with critical thinking and rationality are drawn to a very different kind of problem,

in short, problems which are difficult to define, which cluster with other problems, which are conceptually messy, where the evidence is controversial and the interpretation arguable, and where the appropriate frame of reference is arguable too. Paul calls such questions 'multilogical' (p. 205).

Another connection among these related notions can be established through Chapter 17, "Dialogical and Dialectical Thinking" (1990), which is another essentially polemical piece. In this paper Paul argues that didactic teaching methods, which encourage monological thinking, need to be replaced by Socratic questioning which encourages dialogical and dialectical thinking. It is not easy to see what the difference is between these two, but Paul puts it thus:

Dialogical and dialectical thinking involve dialogue or extended exchange between different points of view or frames of reference. Both are multilogical (involving *many* logics) rather than monological (involving *one* logic) because in both cases there is more than one line of reasoning to consider, more than one "logic" being formulated. Dialogue becomes dialectical when ideas or reason-

ings come into conflict with each other and we need to assess their various strengths and weaknesses. (p. 246)

And at the conclusion of the article he adds:

Socratic questioning is one form of dialogical thinking. *Dialectical thinking* refers to dialogical thinking conducted in order to test the strengths and weaknesses of opposing points of view. Court trials and debates are dialectical in form and intention. They pit idea against idea in order to get at the truth of the matter . . . (p. 254)

10. Socratic Questioning

One of the most useful items in the collection is Chapter 19, on "Socratic Questioning". It is clear that Socratic questioning is at the very *heart* of critical thinking, and this chapter explains what Socratic questioning is. The most useful part of the chapter is the Taxonomy of Socratic Questions (p. 276 ff.) which divides typical Socratic questions into (1) questions of clarification (e.g., What do you mean by . . . ? What is your main point? etc.), (2) questions that probe assumptions, (3) questions that probe reasons and evidence (Why do you believe that? etc.), (4) questions about viewpoints or perspectives (You seem to be approaching this issue from a . . . perspective. How would it look from a . . . [different] perspective?), (5) questions that probe implications and consequences (What does that imply?), and (6) questions about the question (Is the question clear? Do we understand it? etc.). This provides a useful checklist of the sort of questioning one should employ in Socratic questioning. The list is derived essentially from the standard conception of reasoning which is employed by critical thinking theorists and which was originally articulated by Ennis (1962).

This very helpful article could be even more so if Paul explained where factual questions belong in the process of gaining knowledge through questioning (e.g., 'What is the molecular structure of water?') and described related kinds of questioning

which are not Socratic. Both of these would help to clarify the idea by drawing contrasts.

11. Strategies for Teaching Critical Thinking

One of the best places to begin reading in this collection is Chapter 21, "Strategies: Thirty-Five Dimensions of Critical Thinking". Given the tasks Paul has set himself, (1) to change educational *objectives*, and (2) to change *what teachers do*, it is clear that Paul has to *detail* what must be done and why. The main way in which he has done this is to write four *Critical Thinking Handbooks* (*K-3*, *4-6*, *6-9*, and *High School*) which actually guide teachers and help them to remodel their lessons so that they can realise the objectives of teaching for critical thinking. Each of these four volumes contains something like the list of strategies presented in this chapter. Each volume then goes through a large number of lesson plans and shows the teacher how to remodel them, employing these strategies in appropriate places. Examples showing this are presented in Chapters 22-25, and slightly revised versions of these chapters are now to be found, along with many other examples, in Paul's *Critical Thinking Handbooks*, so these chapters give a good sense of the details of Paul's approach.

12. Lesson Plan Remodelling

In sixteen succinct and compelling pages, Chapters 27 and 28 spell out Paul's approach to developing staff skills with a view to infusing critical thinking into the curriculum. The objective is both to develop the critical thinking of teachers themselves and to help them transform their teaching from a didactic to a critical, dialogical model. Paul aims to achieve this through his *Critical Thinking Handbooks* which

explain the basic ideas and then exemplify them in numerous remodelled lesson plans, and through running extensive in-service training courses for teachers.

The basic idea behind lesson plan remodeling as a strategy for staff development in critical thinking is simple. Every practicing teacher works daily with lesson plans of one kind or another. To remodel lesson plans is to critique one or more lesson plans and to formulate one or more new lesson plans based on that critical process. It is well done when the remodeler understands the strategies and principles used in producing the critique and remodel, when the strategies are well-thought-out, and when the remodel clearly follows from the critique. The idea behind our particular approach to staff development in lesson plan remodeling is also simple. A group of teachers or a staff development leader with a reasonable number of exemplary remodels and explanatory principles can design practice sessions that enable teachers to begin to develop new teaching skills as a result of experience in lesson remodeling. (p. 379)

Chapter 28, "The Greensboro Plan", was written by Janet Williamson, a practicing English teacher, who took a leave of absence to write a Ph.D. under Robert Ennis in Illinois, and then returned to Greensboro, North Carolina, to lead a project aimed at infusing critical thinking into the curriculum. This chapter makes compulsive reading, mainly because the whole project is teacher directed and implemented. The project began by taking seriously the problems of the teacher in the classroom, their anxieties, doubts, and hopes; the teachers themselves then chose to use Paul's lesson remodelling approach; the paper is an inspiring account of the careful and tentative way in which one school district found its own way forward, entirely in accord with the precepts of critical thinking (and with the help of Paul's guidance). It will ring true with schoolteachers and should be compulsory reading for anyone who is interested in infusing critical thinking into the curriculum.

13. McPeck's Mistakes

Three of the most theoretically interesting articles in the collection are grouped under the heading "Contrasting Viewpoints". The first of these is a critical review of John McPeck's *Critical Thinking and Education*; it is called "McPeck's Mistakes: Why Critical Thinking Applies Across Disciplines and Domains" (1985).

McPeck's key argument against the possibility of critical thinking, as is well known, is this:

It is a matter of conceptual truth that thinking is always thinking about X, and that X can never be "everything in general" but must always be something in particular. Thus the claim "I teach my students to think" is at worst false and at best misleading.

Thinking, then, is logically connected to an X. Since this fundamental point is reasonably easy to grasp, it is surprising that critical thinking should have become reified into a curriculum subject and the teaching of it an area of expertise of its own

In isolation it neither refers to nor denotes any particular skill. It follows from this that it makes no sense to talk about critical thinking as a distinct subject and that it therefore cannot profitably be taught as such. To the extent that critical thinking is not about a specific subject X, it is both conceptually and practically empty. The statement "I teach critical thinking", simpliciter, is vacuous because there is no generalized skill properly called critical thinking. (in Paul, pp. 412-13)

Paul rightly dismisses this argument with the observation that one might as well argue against the possibility of teaching general writing or speaking skills on the ground that one always has to write or speak about some particular thing! On McPeck's account, it would seem to follow that because one has to learn to drive in a particular car, one doesn't learn *general* driving skills!

Paul also criticises McPeck for resting too much on 'conceptual analysis':

He does not consider the full range of uses of the word "critical" as they relate to various

everyday senses of the predicate "thinks critically". He does not consider the history of critical thought, the various theories of it implicit in the works of Plato, Aristotle, Kant, Hegel, Marx, Freud, Weber, Sartre, Habermas, and so forth. He does not consider the implications of such classic exemplars as Socrates, Voltaire, Rousseau, Thomas Paine, Henry David Thoreau, or even of an H. L. Mencken, or Ivan Illich, to mention a few that come to mind. He fails to ask whether their critical thinking can or cannot be explained by, or reduced to, specialized knowledge or domain-specific skills. He neglects the rich range of programs that have recently been developed in the field (he has it in mind that in principle there cannot be a field of research here). (p. 415)

He rightly criticises McPeck's picture, wherein only 'experts' can judge issues, partly because this suggests no one could judge the kind of 'multi-categorical' problem which Paul sees as being at the heart of the 'considered life' and partly because:

It depends upon the plausibility of placing any line of thought into a "category", "domain", "subject area", or "field", which placement provides, implicitly or explicitly, criteria for judging that line of thought. It tacitly assumes that all thinking is in one and only one category, that we can, without appealing to an expert or experts, tell what the appropriate category is, and thus what specialized information or skills are unique to it. Each discrete category requires specialized concepts, experience, skills, etc. Thus, only some limited set of people can develop the necessary wherewithal to think critically within it. Since there are many logical domains and we can be trained only in a few of them, it follows that we must use our critical judgment mainly to suspend judgment and defer to experts when we ourselves lack expertise. (p. 417)

He also rightly criticises McPeck's treatment of Ennis, D'Angelo, and Scriven. This is a good statement of the case against McPeck's arguments—all the more important because they still have a wide following (at least on this side of the Atlantic!).

14. Bloom's Taxonomy and Critical Thinking

Chapter 31, "Bloom's Taxonomy and Critical Thinking Instruction: Recall is Not Knowledge" (1985), carefully charts some points of agreement and disagreement between Bloom's famous taxonomy and ideas in the critical thinking tradition, especially concerning 'analysis, synthesis, and evaluation'. The main point of disagreement concerns the relationship between recall and knowledge. Two points of agreement are worth mentioning, firstly, what Bloom says about *analysis*:

Skill in analysis may be found as an objective of any field of study. It is frequently expressed as one of their important objectives by teachers of science, social studies, philosophy, and the arts. They wish, for example, to develop in students the ability to distinguish fact from hypothesis in a communication, to identify conclusions and supporting statements, to distinguish relevant from extraneous material, to note how one idea relates to another, to see what unstated assumptions are involved in what is said, to distinguish dominant from subordinate ideas or themes in poetry or music, to find evidence of the author's techniques and purposes . . . (*Cognitive Domain*, p. 144, in Paul, p. 423)

Secondly, on higher-order thinking in the *Affective Domain*, Bloom advocates that the student:

Deliberately examines a point of view on controversial issues with a view to forming opinions about them.

[Develops] faith in the power of reason in methods of experimental discussion.

Weighs alternative social policies and practices against the standards of the public welfare rather than the advantage of specialized and narrow interest groups.

[Achieves] readiness to revise judgments and to change behavior in the light of evidence.

Judges problems and issues in terms of situations, issues, purposes, and consequences involved rather than in terms of fixed, dog-

matic precepts or emotionally wishful thinking.

Develops a consistent philosophy of life. (pp. 181-85, in Paul, p. 424)

—which sounds very like Paul speaking!

15. Against Hirsch

The third of the "Contrasting View-points" pieces (1989) critiques E. D. Hirsch's *Cultural Literacy*:

Hirsch argues that there is a discrete, relatively small body of specific information possessed by all literate Americans and that this information is the foundation not only of American culture but also the key to literacy and education. Hirsch reasons as follows. Because there is a "descriptive list of the information actually possessed by literate Americans" (xiv), and because "all human communities are founded upon specific shared information" (xv) and because "shared culture requires transmission of specific information to children" (xxvii), it follows that "the basic goal of education in a human community is acculturation" (xvi). Furthermore, because,

Books and newspapers assume a "common reader", that is, a person who knows the things known by other literate persons in the culture. . . . Any reader who doesn't possess the knowledge assumed in a piece he or she reads will in fact be illiterate with respect to that particular piece of writing. (p. 13)

In his reasoning, Hirsch links the having of a discrete body of information not only with learning to read but also with becoming educated and indeed with achieving success. ("To be culturally literate is to possess the basic information needed to thrive in the modern world.") (xiii) Hirsch plays down the need for critical thinking and emphasizes instead that the information needed for cultural literacy does not have to be deeply understood.

The superficiality of the knowledge we need for reading and writing may be unwelcome news to those who deplore superficial learning and praise critical

thinking over mere information. (p. 15)
[Paul, p. 429 ff.]

Needless to say, Paul is sharply critical of this appalling view.

16. Concluding Comment

In summary, 'There's gold in them there hills' but you have to dig it out! It is worth noticing that most of this book's forty-one chapters and nearly six hundred pages have been written since 1985, so it represents a formidable amount of work in a short time. Paul is a man in a hurry. He has a vision and he wants to do something about it—now! His drive and energy are well known, as are his organisational skill and his crusading zeal. These are sources of strength in many respects, but they can lead to too much haste. This book certainly deserves and will repay careful scrutiny but, especially in view of the diverse, polemical, and overlapping nature of its various chapters, it is a pity that more editorial work was not done in pulling the material together as a book. In particular it is to be hoped that any second edition will contain an index (it already contains a very useful *Glossary* of terms) and will prune out much of the repetition and at least some of the polemic. Even better, Paul will find the time to produce a careful and systematic theoretical statement of his position—which draws together the threads in his thinking which I have identified above. Much of the raw material is here in this volume (though important questions

remain to be answered) and it is time Paul addressed this need. Gerald Nosich has written an excellent *Introduction* to the present collection, which focusses on the theoretical issues surrounding Paul's writings and which indicates some of the controversies which need to be addressed.

Of course, the acid test for Paul is whether his proposals work. The passion and the commitment are unmistakable. So are the sheer hard work and remarkable productivity. Besides writing much of the material in the book, he organises a huge annual conference on critical thinking and has conducted scores of in-service training sessions for teachers in North America and abroad. However, it is safe to assume that Paul would be the first to grant that the real test is whether his approach *works*, whether teachers can be taught to use his strategies, whether pupils can acquire them, and whether fairminded critical thinking results. So far as I am aware, there has not yet been any independent evaluation of the results of implementing Paul's ideas, though this would be very interesting (and Paul himself has initiated some work in this direction—see Fisher (1991)). Perhaps Greenboro would provide a good test-bed? Just as Matthew Lipman's Philosophy for Children Program has been subjected to scrutiny by Educational Testing Service, with notably favourable results, so it is to be hoped that the results of implementing Paul's ideas will soon be similarly evaluated. His work has progressed far enough now for this to be feasible and he deserves to be taken thus seriously.

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