In presenting this thesis in partial fulfilment of the requirements for an advanced
degree at the University of British Columbia, I agree that the Library shall make it
freely available for reference and study. I further agree that permission for extensive
copying of this thesis for scholarly purposes may be granted by the head of my
department or by his or her representatives. It is understood that copying or
publication of this thesis for financial gain shall not be allowed without my written
permission.

Department of Social + Educational Studies

The University of British Columbia
1956 Main Mall
Vancouver, Canada
V6T 1Y3

Date October 19/1959
ABSTRACT

Thesis supervisor: Dr. Jerrold Coombs

Critical thinking is a widely shared educational goal which has been granted more explicit attention than ever in recent years. Five major approaches to this area of educational concern have been influential to the development of educational practices, research programs, and conceptualization in the field. Three of these approaches (the ‘process’ or basic skills approach, the problem solving approach, and the logic approach) are found to be based on unfounded assumptions about the nature of reasoning and thinking, and inadequate attention to the purposes which make critical thinking such a widely accepted educational goal. A fourth (the information processing approach) is found to involve instances of reductionism which render incoherent many of the terms with which we understand and assess our own reasoning, and that of others. The fifth approach (the multi-aspect approach associated with Robert Ennis) is not so essentially flawed, but is found to contain some significant problems. Most notably there is a problem with fixing the reference of ‘mental abilities’ (which is essential for the issue of generalizability of critical thinking abilities) and with understanding the relationship between judgment and the other aspects of critical thinking.

It is argued that writers in the field of critical thinking generally have tried to purchase objectivity for their conceptions by connecting them with the ideal of disengaged knowledge, either as exemplified by the study of formal logic or the natural sciences. It is argued that, in contrast with this approach, we ought to recognize that values and value judgments are at the heart of critical thinking.
The ideal of disengagement tends to interfere with our understanding of thinking as a normative (rule-governed) activity grounded in our social practices. This thesis argues for the adoption of a realist position with regard to values, an expressivist understanding of language, an interpretive stance toward the study of rationality, and a social constructivist conception of rules. Some consequences of these positions for instruction, teacher preparation, and future research are suggested.
# TABLE OF CONTENTS

Abstract .................................................................................................................. ii

Acknowledgements ................................................................................................ v

1. Approaches to Critical Thinking .................................................................... 1
   1.1. Five Approaches .................................................................................... 2
   1.2. Issues and problems .............................................................................. 5
   1.3. Summary and plan ................................................................................ 19

2. What is thinking? .............................................................................................. 22
   2.1. The nature of thinking ......................................................................... 22
   2.2. The purposes of inquiry into thinking ................................................ 34
   2.3. Preliminary conclusions ...................................................................... 42

3. Critical thinking as a social practice ................................................................. 45
   3.1. ‘Critical’ as a term of judgment ............................................................ 45
   3.2. Thinking as activity and result .............................................................. 49
   3.3. What a mental ability is not .................................................................. 57
   3.4. The search for the Cause ..................................................................... 64
   3.5. Summary .............................................................................................. 69

4. Two Standard Distinctions ............................................................................. 72
   4.1. Critical & creative thinking .................................................................. 76
   4.2. Theoretical and practical reason .......................................................... 82
   4.3. Interpretation and the practice of criticism .......................................... 103
   4.4. Summary ............................................................................................. 117

5. Rules and normative activities ....................................................................... 120
   5.1. Rules .................................................................................................. 121
   5.2. Grounds for the existence of rules ....................................................... 126
   5.3. Normative activities .......................................................................... 131
   5.4. Consequences for critical thinking ..................................................... 147

6. Conclusions, Consequences, and Future Directions ....................................... 152
   6.1. Five approaches revisited ..................................................................... 152
   6.2. Issues and problems revisited ............................................................... 155
   6.3. A more perspicuous conception ............................................................ 162

Bibliography ......................................................................................................... 172
ACKNOWLEDGEMENTS

I would like to thank the University of British Columbia for financial assistance during my graduate program in the form of the H.R. MacMillan Family Fellowship. I also express my indebtedness to the Practical Reasoning Assessment Project which provided the opportunity to do practical work and the context for intellectual stimulation as well as providing some income.

Members of my family also deserve thanks: my wife and children for putting up with vacant gazes and peculiar preoccupations, my parents for their continuing interest and support.

A number of friends and colleagues at the University of British Columbia have been of great help in wrestling with the ideas and words which make up this thesis. LeRoi Daniels originally stimulated my interest in mental concepts. Gaalen Erickson welcomed me into a group which helped keep me in touch with the practical concerns of educators. Roland Case, Linda Darling, and Murray Ross have made helpful comments on draft versions of this thesis. Jerrold Coombs has largely set the intellectual tone for this sort of work at our institution. His interests and insights formed the stimulus for this work; his careful and generous criticism of my work has forced me to clarify and reorganize my thinking on many of the issues discussed. Finally I would like to thank Shirley Parkinson who has been a friend, a lending library, and a source of understanding. Her grasp of normative/social phenomena has helped me greatly.
1. APPROACHES TO CRITICAL THINKING

A great deal of attention is being granted to questions of how people think. Such questions are being asked by researchers and practitioners of many persuasions and many different disciplines. In the field of education, much of the research and discussion has gone under the label of "critical thinking." There are several different conceptions of critical thinking employed and the term encompasses a wide variety of kinds of research and pedagogical strategies. I will argue that many of the existing conceptions of critical thinking are based on misunderstandings and unfounded assumptions and that, as a result, much of the research and some of the educational practices based on these conceptions are of dubious utility. In pointing out the deficiencies of existing work on critical thinking, I pay particular attention to the issues of terminology and how questions about critical thinking can be most productively framed. Because this thesis will not contain any new empirical data, and will make only sparing use of data collected by other researchers, there will be many interesting questions which will not be addressed. In particular, few conclusions about the effects of different educational strategies for improving the quality of thinking will be possible. The primary goal is to contribute to the ongoing development of a way of talking about thinking, especially critical thinking, which is intellectually responsible and perspicuous from an educational point of view.
1.1. FIVE APPROACHES

As a preliminary step in developing a conception of critical thinking, it is useful to survey existing conceptions and understand something of their strengths and weaknesses. For this purpose, I will identify five broad perspectives on critical thinking. Each may be found to encompass a considerable range of positions and significant areas of controversy. Further, some researchers and practitioners incorporate elements from more than one of these approaches into their theories, research programs, and teaching strategies. In spite of these complications, elucidating key elements in each of these conceptions will provide some means of establishing a frame of reference by which the progress of this inquiry can be traced.

For simplicity of reference, each of these conceptions will be named. They are:

1. the process approach
2. the problem solving approach
3. the logic approach
4. the information processing approach, and
5. the multi-aspect approach.

Each of these will be described briefly, then some of the major issues and problems related to the five conceptions will be discussed.

The first approach involves the identification of a limited number of processes

1. This use of 'process' should not be confused with the same word used to label approaches to philosophy of education based on the works of A.N. Whitehead and John Dewey.
which constitute thinking. It is thought by those who advocate this approach that students may, through practice, become skilled at these various processes. While there is disagreement about the processes involved, some examples are the categories of Bloom’s Taxonomy or such things as ‘inferring,’ ‘classifying,’ and ‘hypothesizing’ (Beyer, 1985, p. 76). This approach is widely adopted for use in elementary school programs.

The problem solving approach involves the identification of some set of steps which are held to lead to the solution of problems. Most often, these steps are derived from a reconstruction of scientific inquiry but some have attempted to establish the steps empirically, by examining how researchers in a variety of kinds of inquiry tend to proceed (Robinson, Ross, & White, 1985). In either case, the steps tend to resemble a Deweyan analysis of problem solving or reflective thinking, including such steps as ‘feeling perplexity,’ ‘defining the problem,’ ‘gathering appropriate facts,’ ‘formulating hypotheses,’ and ‘testing hypotheses on the basis of deductive elaboration’ (Dewey, 1939, p. 855).

The logic approach suggests that good thinking is to be understood as logical thinking. Students are typically taught to identify such logical categories as premises and conclusions, to convert arguments in ordinary language into deductive form, and to find missing premises or assumptions. Also, considerable attention is devoted to the study of fallacies, both formal and informal. Most college and undergraduate university level programs in critical thinking adopt this approach.
The information processing approach is not restricted to programs in critical thinking but is popular among many researchers interested in cognitive science and artificial intelligence. Typically, this involves the analysis of 'thinking tasks' into component bits of information and requisite processing steps. These steps are derived by hypothesizing about how the information must be treated in order to account for competence at various tasks (e.g. Shepard's study described in Gardner, 1985, p. 324-5). Often, analogies to computer hardware and programs are used as explanatory models.

The multi-aspect approach is called by that name here because of Robert Ennis's influential analysis of the constituent parts of critical thinking in terms of "aspects" (1967, 1980). He suggests that we can best understand critical thinking as the combination of a number of tendencies, abilities, and judgment. While Ennis and others have used various different terms to describe these various aspects (including inclinations, dispositions, or propensities for tendencies; and skills or proficiencies for abilities), under some set of names, this approach is shared by many philosophers of education who have written on this subject.

It is important for an understanding of the field to see that these approaches are not distinguished along any single dimension. The process approach, for instance, is largely an instructional strategy with little connection to serious research or theory development. The information processing approach, on the other hand, shares assumptions and language with work in cognitive science and with philosophical theories such as functionalism, but is not clearly identified with particular teaching strategies.
From even a quick survey of these differing approaches, it may be seen that they are not, for the most part, mutually exclusive, that is, it is conceivable that someone could accept elements drawn from two or more of these approaches. Some writers do. Beyer, for instance, provides a table which combines problem solving steps, "key critical thinking skills" described in terms similar to Ennis's aspects, and "micro-thinking skills" which are (largely) drawn from Bloom's taxonomy (1985, p. 76). Robert Sternberg suggests that there may be benefits when developing programs of testing to drawing upon more than one approach (1985, p. 41). While, in principle, there is nothing wrong with this, as the approaches are not competing answers for the same question so much as differing approaches to framing the inquiry, it should be realized that different and sometimes incompatible assumptions underly each of the general approaches. These assumptions will emerge in an account of the issues and problems in critical thinking.

1.2. ISSUES AND PROBLEMS

There is no one issue which has dominated inquiry in the field of critical thinking so much as the question of generalizability or transfer. While the issue may come up in different language in each of the approaches, and it is more central to some approaches than others, there is a sense in which it is crucial to the whole idea of teaching for critical thinking as understood by all of these approaches. The advocates of each approach would like to show that what they teach has wide utility - that is, that by learning some basic rules, skills, or procedures, students will be able to improve their performance in a wide range
of contexts in which thinking is required. This is most obvious in the case of those who advocate the process approach. Their whole approach to critical thinking is based on the assumption that practice at tasks which require the use of certain mental processes will transfer or generalize to skillful performance in a wide variety of contexts. Thus, students are given tasks such as 'classifying buttons' on the assumption that what they learn will have at least some transfer to classifying other sorts of things.

Those who advocate procedures for problem solving are inclined to suggest that students can learn to approach each problem as a series of steps. If they learn to do each of these steps, they will be able to solve problems 'in general.' (It should be noted that advocates of this approach tend to treat anything one wishes to do as a problem requiring solution, thus problem solving is taken to have extremely wide application.) Those who advocate the logic approach point out that all thinking, or at least all purposive thinking, ought to conform to logical standards, thus learning to think according to logical standards will apply to all situations in which we want to think for a purpose. (As with problem solving, logic is often construed very generally so as to include informal and inductive logic as well as reasoning with conditionals and counterfactuals, and practical reasoning.)

Those who take the information processing or multi-aspect approaches are more inclined to see the the issue of generalizability as an open question. Information processing theorists expect that developments in artificial intelligence, cognitive science, and/or psycho-linguistics will lead to an understanding of the mental
mechanisms or functional states and information codes which make possible human cognition. Paul Wagner refers to this goal of cognitive science as being "to model the language of thought" and connects this project explicitly with those of Stephen Stich and Noam Chomsky (1988, p. 181). Such inquiries will, it is thought, demonstrate which aspects of thinking are common and which are specific to certain operations. Nonetheless, there is optimism that "thinking is general and cross-disciplinary" and "the process of thinking appears more and more to be discipline-blind" (Wagner, 1988, p. 182). Sternberg suggests that although "transfer of training does not come easily" it is possible given that "explicit provisions are made in the program [of instruction] so as to increase its likelihood of occurrence" (1984, p. 48).

Those who advocate the multi-aspect approach have been the most inclined to debate this issue, rather than to assume or project that general skills or abilities exist or can be found. However, the debate has been characterized by disagreement not only about whether the various aspects of critical thinking apply across different domains of knowledge and kinds of inquiry, but also about what we should accept as evidence in the debate. Ennis (1987) and Norris (1986) argue that, while there appear to be general abilities which are important and useful, the issue cannot be settled without empirical research. McPeck (1981) suggests that the issue is a conceptual one, that because the ability to think well about anything is largely an epistemological affair, and because disciplines have different epistemic standards, thinking critically about anything is largely a matter of having knowledge and expertise which is specific to a relevant discipline. Significantly, this debate has focussed primarily on those aspects which
are described as ‘skills’ or ‘abilities,’ as opposed to tendencies or judgment.

One question worth considering is, "What difference does it make whether critical thinking is specific to each discipline (or other epistemological unit) or whether it is a more generalized capacity, skill, character trait, or what-have-you?" While somewhat different answers would be given by those who adopt alternative approaches, for many the issue is of vital importance. One reason for its importance is that instruction and research in critical thinking is often justified on the basis of efficiency. It is often suggested that there is so much knowledge in so many disciplines that no one can keep up. As the Royal Commission on Education in British Columbia puts it, "we live in an era in which knowledge is said to double approximately every two years..." (1988, p. 12). The best we can achieve is that students learn how to think well so that they will be well equipped to "process" information as they need it (e.g. Perkins, 1985, p. 4). Rather than spending time teaching students facts, it would be more efficient to teach students critical thinking skills, processes, or abilities. If these are found to be general, there is a prima facie reason for thinking that they can be learned independently of instruction in any particular content area. If they are found to be specific to content areas, hopes for radical improvement in educational efficiency would be reduced. In fact, it might be that current educational practices, based on instruction in subject areas, might be as efficient an approach as any.

Thus, one possible rationale for believing that the critical thinking movement will provide a major innovation in educational practice is linked with the notion that
there is utility to general instruction in thinking. This is most obvious in the process approach to critical thinking. If it is not the case that students can learn to classify or analyze in general (as opposed to classifying or analyzing particular sorts of things such as buttons, books, or conceptions) then there is no reason for pursuing the educational practices advocated. Unfortunately for the process approach, this appears to be the case. Being able to classify one sort of thing has little if any relation with classifying things which are radically different or are being classified for other purposes. Once we account for knowledge of purposes and relevant criteria, there is nothing left over to be accounted for by a general process or skill. Further, as Perkins notes, available empirical evidence suggests that "skills tend to be rather context bound" (1985, p. 351).

While the link between generalizability and usefulness of critical thinking programs is not so crucial for some of the other approaches, there is a widespread tendency to regard the two as linked. This is unfortunate when it leads to the unwarranted assumptions of the process approach or a more general failure to take seriously reasons other than efficiency by which critical thinking programs can be justified. Whether it is the case that one becomes a good thinker generally or in one area at a time, or whether the truth is somewhere in between, critical thinking is a desirable educational aim.

Arising from the issue of generalizability is the further issue of completeness. By completeness, I refer to the to the issue of whether 'problem solving' or 'logic' is a reasonable description of all of what is important to thinking critically. On the
face of it, it would seem that critical thinking could be involved in coming to understand an issue or being sensitive to the existence of a problem, not simply in trying to solve problems. What is typically missing from the problem solving approach (including Dewey's formulations of the steps of reflective thinking) is reference to the standards and criteria by which the adequacy of performance is judged.\(^1\) It should be noted also that there are better and worse solutions to many kinds of problems and therefore, 'arriving at a solution' in itself, ought not be conflated with good or successful thinking.

Similarly, it would seem that much of modern philosophy of science calls into question the extent to which logical considerations can account for instances of good scientific thinking. The work of Nelson Goodman, for example, demonstrates limitations of syntactic considerations in accounting for our practices of inference for claims such as counterfactuals and conditionals (1979).

A more direct challenge to claims of those who adopt a logic approach is made by Gilbert Harman. He argues that "there is no clearly significant way in which logic is specially relevant to reasoning" (1987, p. 20). This can be contrasted to the claims of writers such as Robinson and Beyerstein who claim that "Logic is the systematic study of reasoning," and "Logic is the study of good reasoning - the sort that is likely to lead a person to the truth" (1987, p. 5). While part

\(^1\) Leaving the entire weight of success at problem solving to be determined by testing of individual hypotheses is obviously inadequate. Without adequate hypotheses and adequate conceptualization, testing alone cannot ensure the adequacy of a solution. Some aspects of this point will be brought up in a discussion of Lakatos's reconstruction of scientific knowledge in section 4.1. At present we might take note of the crucial importance of what Ennis refers to as "background purposes" in his account of the pragmatic dimension of critical thinking (1967, pp. 118-9).
of this disagreement may be terminological in that Harman counts only the rules of deductive argument as logic whereas Robinson and Beyerstein may include much more, including inductive reasoning, there does appear to be some ground for concern here.

In many, if not most contexts, it seems to be uncertainty or error about the premises, not the rules of implication, which prevent people from reaching well founded conclusions. Logic, on its usual interpretation, is not sufficient to preclude such problems. Further, and even more importantly, logic is of limited use in enabling people to make sense of the kinds of issues which are most often cited by educators as being the ultimate purpose for instruction in critical thinking, such as issues involved with "everyday" practical decision making or the responsibilities associated with citizenship.

Such considerations call into question whether logical standards are sufficient to cover all aspects of the range of issues relevant to critical thinking. Significantly, the pedagogical practices employed by many who adopt the logic approach emphasize explicit instruction in logical categories such as the identification of premises, argument forms, and fallacies. Thus, the further apparent assumption that explicit instruction in logical categories and standards is a necessary condition of critical thinking, arises. Initial consideration suggests that such instruction is not even a necessary condition of logical thinking: surely no one would want to suggest that none of Aristotle's thinking was logical, yet Aristotle

1. Even if we do not accept Harman's relatively radical position, we may agree with Coombs that "although practical reasoning has the structure of deductive argument, it is not primarily a matter of deducing what to do from a set of unquestioned premises" (1984, p. 7).
is generally credited with providing the first systematic approach to understanding logic. Obviously, there was no one who could give him explicit instruction in these categories. This being the case, the strongest claim which advocates of the logic approach can hope to establish is that instruction in logic is generally useful in contributing to good reasoning on the part of students. Notice this is an empirical claim. Its significance depends on whether there are other approaches which are equally effective.

Another issue which is particularly relevant to evaluating the information processing is whether or not there is a clear and broadly applicable way of distinguishing having information from being able to process information. Some who adopt this approach seem to simply assume that there is a clear and obvious distinction (e.g. Sternberg, 1981 or Nickerson 1981). That we should not accept an unproblematic separation between having the ability to process and having information *simpliciter* is made evident in the debate over ‘knowing that’ and ‘knowing how’. Given sufficient contextual information, claims about what someone knows (what information they have) warrant inferences about what they can do (including what they can figure out or otherwise ‘process’)) (Ryle, 1966; Martin, 1961; Selman, 1988a, p. 174). As is commonly accepted in educational testing, what someone can do may be perfectly acceptable evidence for what she or he knows, given certain knowledge of contextual factors. Recognition of this close link between ‘having knowledge’ and ‘being able,’ and the importance of context in the drawing of related inferences, ought to make us wary of claims that thinking ‘processes’ (or ‘abilities’ for that matter) can be characterized independently of context and content.
This problem is exemplified in Sternberg’s "process based approach" used to "to identify the mental processes used to solve [an] analogy" (1984, p. 40). The example analogy is "Washington is to one as Lincoln is to (a) five, (b) 15, (c) 20, (d) 50." As is particularly clear to any non-American, one’s ability to draw the analogy is dependent on having certain information. Further, it is dependent on familiarity with the context, i.e. such factors as, people who construct such analogies in these situations are not likely to be testing for esoteric knowledge, therefore the ‘correct’ solution is not likely to hinge on the number of children each president had or the number of times each visited a particular town, but rather on more commonly known facts. Sternberg says that we must, in order to solve the analogy, "decide what processes to use," "how to sequences these processes," then "use the performance components and strategy we have selected to ... solve the problem." But unless we lack the requisite knowledge, and the relevant strategies involve seeking out further information, it is not clear that we do select processes or sequences. Rather, possibilities suggest themselves and solutions occur to us, on the basis of what we know. In section 2.1 and 2.2, I will discuss further the issue of whether such changes in belief or intention are reasonably characterized as the result of particular processes, arguing that neither the general term ‘thinking,’ nor more specific terms such as ‘deciding,’ are names for processes.

Proponents of the information processing approach often speak as if knowing, or having information, is being in possession of something inert which must be "processed" in order to be useful. But in ordinary language claims about knowledge (including propositional knowledge), when conjoined with facts about the
context, warrant inferences about abilities. Sternberg and others appear to assume that it is the use of particular processes, as distinguished from what is known, which makes thinking critical. I will argue, especially in sections 3.2, 3.3, and 3.4, that this is a confusion resulting, at least in part, from a failure to distinguish between the language of causal explanation and the language of rules, standards, and procedures used in connection with rule-governed activities.

Another important issue in the field of critical thinking is the extent to which our conceptions of critical thinking as well as related programs of instruction and evaluation can be objective in the sense of being free from bias with regard to any particular cultural, ideological, or moral perspective. Sternberg suggests that there is empirical evidence that cultural groups differ extensively in how they approach certain sorts of tasks which are commonly taken as measures of mental ability, and in their judgments about how such tasks ought to be done (1983, p. 8). On this basis, he argues that programs aimed at improving people's thinking are appropriate only for certain cultures. Ennis argues (as a tentative conclusion) that we should "expect no correlation between critical thinking and political, social, and moral values" once we "partial out" factors such as mental ability as measured by I.Q. tests, age, instruction, personality type, and social class (1967, p. 145). While Ennis does not refer specifically to cultural differences, it seems reasonable to accept that these are closely related to such things as "social values" and that Ennis and Sternberg are expressing opposing viewpoints.¹

¹ Although Sternberg is an influential proponent of the information processing approach and Ennis has developed the multi-aspect approach, this disagreement is not intrinsic to these approaches.
Let us consider Ennis's position. Leaving aside the problematic suggestion that we could detach "political, social, and moral values" from factors such as mental ability as measured by I.Q. tests, social class, and personality type, there is a further question regarding the extent to which any conception of critical thinking or program of instruction and evaluation can avoid reflecting purposes, background interests, and assumptions common to a particular time and culture, including social and political values. When put this way, the obvious response seems to be that no conception can avoid representing the interests and values of a particular time and place. Ennis recognized, in his 1967 conception, that his decision to exclude the assessment of a certain category of statements from his conception was based on certain values. It was so "that prediction and control over students' behavior [could] be facilitated" (1967, p. 137). This choice, to emphasize the value of a conception as a means for prediction and control of students' behaviour over, for instance, a less easily applied but more complete conception, clearly reflects the interests of a particular culture at a particular point in history.¹

More broadly, one can see that Ennis's 1967 conception displays an interest in certain kinds of problems and issues, especially issues of logic and scientific reasoning. Considerably less attention is given to issues in political, aesthetic, religious, metaphysical, and moral domains.² But consider how someone from a

¹. Even if prediction and control are universal values, common to all cultures in one form or another, as Taylor (1982) argues, their pursuit has not always been taken as more important than the pursuit of other values, such as completeness in the sense used above.
². While this emphasis may in part be due to Ennis's explicit exclusion (at that time) of value claims from consideration, it is not the case that we can examine scientific statements without reference to values whereas statements of a political nature are value laden.
somewhat different culture and with a different set of political commitments might develop a conception of critical thinking. If, for instance, Habermas were to develop a conception of critical thinking based on his notion of "communicative rationality" (1979), one would expect to see somewhat different emphases. As an example, sensitivities to the range of speech acts found acceptable for use by different people in any given context might be a part of such a conception. The differences between Ennis's conception and the hypothetical Habermasian conception would be (at least in part) a result of differences in social and cultural values. Programs of instruction and evaluation which were based on such different conceptions would reflect such differences. Just as Ennis and Habermas are inclined to find certain sorts of problems and issues interesting and important, so would students engaged in such programs. Surely someone who thinks that the interesting and important problems of our time will be most productively addressed by scientific advances is going to react differently from someone who is primarily concerned with issues of political power and social inequity. While it is recognized that such differences are possible between individuals as well as cultures, they are certainly affected by cultural differences and it seems reasonable to suppose that they would be reflected in performance at at least some of the different tasks implied by each conception of critical thinking.

This is not to suggest that all attempts to be unbiased in teaching and judging critical thinking are bound to present a narrowly ideological viewpoint or that every critical thinking test item will discriminate according to the test taker's political stance. It does suggest that there are limits to how much we can
disentangle our views about critical thinking and rationality from our general worldview and background purposes, including social and political values. It seems more reasonable to defend choices about conceptions and programs of critical thinking on the basis that they reflect political, moral, or metaphysical views that we accept and for which we are willing to argue, rather than to suggest that they are neutral with regard to such views. Naturally, the question of how and on what grounds, we can argue for such positions is a crucial one. It will be discussed in sections 4.2 and 4.3.

Most writers in the field of critical thinking have seemed unwilling to take such a stance. Typically, they have tried to establish an approach which avoids expressing commitment to any particular worldview or set of background purposes. In our society, we have two ideals of knowledge which is disengaged from any particular cultural or political perspective. One is exemplified by the fields of logic and mathematics, the other by the physical sciences. It is no coincidence, I suggest, that many proponents of each of the conceptions attempt to derive an objective foundation for their approach through its relation to logic or science. (I ignore here the process approach for which I know of no serious attempt to provide a theoretic or philosophical underpinning.)

Thus, at least some of those who advocate a logic approach make exaggerated claims for the importance of logic to good thinking generally, perhaps partly to avoid dealing with more obviously value laden areas. Logic seems to provide an objective means of evaluating arguments and conclusions and this objectivity seems to be valued more highly than a more complete or realistic view of either
critical thinking or logic itself. Similarly, the problem solving approach emphasizes the importance of a scientific or quasi-scientific procedure, with little attention to the standards and purposes which are required to make sense of critical thinking. Advocates of the information processing approach are explicit about their faith in science, sometimes obscuring the normative and intentional aspects of their objects of study by using the language of processes and representations (e.g. Sternberg and Baron, 1985, p. 42).

Proponents of the multi-aspect approach to critical thinking are harder to categorize with regard to this issue. While I have raised objections to Ennis's suggestion that critical thinking tests based on his conception will be neutral (or will avoid correlating) with "political, social and moral values," Ennis is certainly not after an account which avoids the use of explicitly normative and intentional terms. His references to "background purposes" and to the importance of judgment, all make this clear. The same cannot be said about Stephen Norris who shares Ennis's general approach. Norris suggests that only scientific research can enable us to "say what we mean by" mental abilities or processes, by showing "how these processes arise from mental structures" (1986, p. 82). I will argue that the meaning of common mental concepts ought to be explained in terms of what we do and how we act not simply in terms of what goes on inside our heads.

1. By normative terms I am referring to terms which express judgment according to standards including standards of rationality and epistemic standards. By mental terms I am referring to such terms as beliefs, desires, intentions, and purposes.
1.3. SUMMARY AND PLAN

In reviewing five major approaches to critical thinking, several issues have emerged. A preliminary exploration of these issues has pointed out problems which, in some cases, have seriously undermined one or more of the approaches. This is most obvious in the case of the process approach which can be seen to rest on the unwarranted assumption that there are a few general processes which can be learned by practice and applied generally across different contexts and areas of knowledge. The logic approach has been seen to be more limited than is indicated by the claims of some of its proponents as has the problem solving approach. While nothing here has been said to impugn the utility of instruction in the rules of logic or in some general heuristics for clarifying arguments or addressing problematic situations, neither of these approaches appears adequate as a conception of critical thinking.

It has been suggested that a desire for an objective foundation for claims about thinking has led most researchers who have adopted an information processing approach, and some who adopt a multi-aspect approach, to postulate a set of internal processes that not only explain good thinking but which can be inculcated though training in order to improve thinking. As will be explored in more detail, there is considerable vagueness and ambiguity in the terms 'processes' and 'abilities' as they are used in discussions of critical thinking. Further, the concept of 'judgment' has been mentioned as an essential part of the multi-aspect approach, but one which has been virtually ignored as an instructional objective, as something for which we could test, or even as a
potential object of inquiry.

The project of this dissertation is to develop a responsible position with regard to these problematic issues, a position which takes cognizance of relevant philosophical work and the most basic purposes which motivate the widespread interest in critical thinking. Thus, the dissertation will not be directed primarily at the many and important practical problems facing those implementing critical thinking programs, but rather at issues involving basic assumptions and conceptualization.

The aim of the next chapter will be to examine the concept of thinking and to clarify the purposes which motivate such inquiry. Such moves will be useful in avoiding premature commitment to a particular conception, and the risk of failure to engage with fundamental issues and assumptions. The chapter's conclusion is that thinking ought to be studied, for our purposes, as a normative activity and a social practice.

The third chapter explores the consequences of studying thinking from this point of view. This approach is compared to that taken by those who employ the language of internal mechanisms, processes, and representations to explain critical thinking.

The fourth chapter is used to cast light on the relationships between different kinds of standards which are used in making judgments about reasoning. The first relationship explored is that between creative and critical thinking. The
second is that between practical and theoretic reasoning. In each case, some examples of ways in which misconstrual of these relationships has contributed to misunderstandings about the nature of critical thinking are examined. Emerging from discussion of the second relationship is an argument about the limits to which new theories and critiques of our existing understanding of rationality can be disengaged from our ordinary, practical understanding of what good reasoning is.

The fifth chapter explicates a conception of rules and normative activities. Having such a developed conception is crucial to being able to understand what is implied by the claim that those concerned with critical thinking ought to be concerned with thinking as a normative activity. It is argued that the conception offered has implications for distinguishing causal from normative explanation, for understanding the role of background purposes (to borrow Ennis's phrase) in critical thinking, and for understanding what judgment is and how it can be taught.

The final chapter revisits the approaches and issues raised in this chapter, concluding with some remarks about the implications for teachers and educational theorists and philosophers.
2. WHAT IS THINKING?

Having begun with a rehearsal of some of the major approaches to critical thinking research and instruction and related issues and problems, it will now be useful to grant explicit attention to a question which has often been overlooked or treated as as one of minor consequence. The question is, "What is thinking?" This question is important, not so much because an answer to it will tell us how to proceed, as because hasty acceptance of an inadequate or inappropriate answer may prejudge important issues. This chapter will proceed by clarifying possible ambiguities in the question itself and describing some aspects of 'thinking' which make it difficult to characterize. This will be followed by an examination of the purposes which underly inquiry into thinking, purposes which must be taken into account if we are to arrive at a perspicuous answer to the question about thinking. Once we have some understanding of the most promising way(s) to provide an initial characterization of thinking, we ought to be better equipped to answer questions about what kind of thinking is, or can be, critical.

2.1. THE NATURE OF THINKING

When we ask what thinking is, we face a certain ambiguity. This ambiguity can be expressed by analogy: if we ask, "What is science?" a large number of responses seem possible. Science is a profession or group of professions, a school subject, a form of inquiry, a body of knowledge, an explanation of natural phenomena, "any activity that appears to require study and method"\(^1\) and so

\(^1\) from the McGraw-Hill Heritage Illustrated Dictionary of the English Language.
on. Each could be said to answer the question from a particular point of view. Which point of view should be taken is determined by the context in which the question is asked. In order to answer the question usefully, it will be important to keep in mind the purposes which gave rise to the question in the first place.

If there is no single correct answer to the question about science, the question about thinking is clearly even more open to a multiplicity of interpretations. Not only do we use the word 'think' in many different ways, but we face the further problem that thinking seems to be peculiarly obscure. This apparent obscurity is often cited by writers about thinking as by Diane F. Halpern in *Thought and Knowledge: An Introduction to Critical Thinking*: "It seems that most people have little awareness of the nature or even the existence of the thinking processes that underlie their judgments, beliefs, inferences, and conclusions about complex issues (Nisbett & Wilson, 1977)" (1984, p. 15). Many times we seem only to infer that thinking is going on on the basis of overt and visible signs. Even when we consider our own thinking it seems singularly difficult to convey to others the true quality of our thoughts. Thoughts seem ephemeral and only sometimes subject to our conscious control.

These and other problems have led many writers to despair of providing an adequate definition of thinking. Too often, this abandonment of the problem has been accompanied by an uncritical acceptance of an inadequate or misleading characterization. Thinking has been discussed as a skill, a process, a phenomenon, or an innate capacity. Critical thinking has been discussed as problem solving, information processing, facility with interpreting and evaluating
arguments, the exercise of skills and propensities, and as the combination of abilities, tendencies, and judgment. Surprisingly, considering that many of these writers are quick to point out the need to be aware of unstated assumptions, very little consideration is given to the assumptions embodied in each of these purported answers to the question about the nature of thinking.

If we are to proceed with addressing this question in any useful and non-arbitrary way, it will be necessary to make some of the same moves we would have to make in answering the similar question about science. We will need to establish the purposes and context which will determine the most appropriate and useful answers. We must also be careful about exactly what question we are trying to answer. It is clear that the question, "What is thinking?" is very closely related to the question "What does the word 'thinking' mean?" There is, however, a widespread inclination to think that there is another question or another meaning of the first question which we ought to be able to answer. Beyond a question about the meaning of the word, which seems to be simply a matter of agreement about a convention and is often dismissed as being "arbitrary" by those interested in 'getting behind' the question of meaning, there is a question about the nature of the phenomenon itself. Before considering the purposes which determine how we can most appropriately answer the question, "What is thinking?" I would like to critically examine the notion that we can get behind the question of meaning by showing that it embodies assumptions which prejudge some of the very issues we need to discuss, and misleads the inquiry from the start. I take it that such an argument is required, if only because many philosophers and psychologists have taken for
granted that thinking is a phenomenon (or a process), the nature of which is to be discovered by conducting empirical research into people's mental events and states.¹

There are two confusions embedded in the notion that we could examine the phenomenon of thinking independently of what the word thinking means. The first is a very general epistemological point. Knowledge of the world is mediated by conceptual schemes. We cannot study the world in any pre-conceptualized or non-conceptualized way. If thinking is a phenomenon, the only way we could identify instances of the phenomenon is by appeal to the meaning of 'thinking'. It is not the case, as has sometimes been assumed, that all words, including thinking, serve as labels for natural categories of things. Thus, it must not simply be assumed that there are features or aspects of the purported phenomenon which could be discovered and used to identify them as being instances of thinking apart from the fact that they are identified by our use of the word. To think that it can be so assumed is to believe that the world is, by its nature, divided up into certain categories to which human conceptual systems may correspond.² At least since Kant, it has been recognized that

¹. That many philosophers and psychologists have treated thinking as a particular phenomenon or process is evident in even the briefest survey of theories about thinking. Some of the most influential examples are: Plato's notion that thinking consists of inner dialogue or the inspection of the Forms; the Kantian notion that thinking involves bringing concepts before the mind; and, Hume's idea that thinking is experiencing a sequence of images some of which are connected by habit. Almost all prominent psychologists writing about thinking and critical thinking refer to thinking as a process. The fact that "the process of thinking" has been construed in many different ways ought to serve as a warning that there is something odd about the notion that thinking is "a process." That the nature of thinking is something which can be empirically discovered is assumed by Stephen Norris, see footnote following.

². There are some philosophers who believe that some classes of concepts, especially those which refer to 'natural kinds' such as 'gold,' have a meaning
conceptual schemes are observer dependent, regardless of their relationship to what is being observed. Since Quine, it has been recognized that conceptual schemes are underdetermined by any combination of characteristics of the observer and the world. Conceptual systems are (at least partly) conventional and simply cannot be determined by facts about the world. The meaning of individual concepts and even the truth value of individual sentences can always be 'saved' or changed by adjusting other parts of the conceptual scheme. The conclusion is obvious: empirical research cannot determine the reference of 'thinking' apart from its place in our linguistic practices.

It should be added that our concepts are not immutable, nor is contemporary English usage the only possible or the best determiner of the categories into which inquiry can take place. In developing theories it may be useful to stipulate definitions and create new terms which do not correspond to those in current use. It should be remembered, however, that our purposes and the questions with which we initiate our inquiries often rely on ordinary language concepts. If our problem is to understand how thinking can be improved, for instance, our solution will not really be a solution to that problem unless it employs 'thinking' in the same sense as the question does. Since the questions being discussed in this thesis are of general interest, rather than being of interest only within one (cont'd) which is discovered as we discover (empirically) their essential nature. I know of no one who has argued, rather than assumed or implied, that 'thinking' is such a natural kind concept. Many have assumed it however. Stephen Norris is one example: according to Norris, claims about critical thinking ability are "categorical claims about people's either genetically or environmentally determined natures." Such abilities are "mental powers [which] arise from mental structures and processes in the same way that physical powers (magnetism is an example) arise from the internal structures and processes of physical objects." He also refers to "mental ability 'sort of stuff' which is responsible for ... behaviours" (1986, p. 81).
particular philosophical or psychological theory, I take it that the public, shared concept of thinking, rather than any more specialized conception or stipulated meaning, ought to guide the inquiry.

Because this point has been widely ignored, it will be useful to consider an example. Consider the notion of intelligence. Psychologists require a means of quantifying intelligence if they are to use differences in intelligence as an explanatory factor in success (or lack of it) at various tasks. They need something ‘more scientific’ than the rather vague and context dependent judgments which English language speakers ordinarily use. But all attempts to produce more reliable criteria have produced results of questionable validity. The intransigence of these problems led E.G. Boring to the somewhat desperate suggestion that intelligence is whatever it is that intelligence tests measure.\(^1\)

This suggestion is, of course, incoherent in an important sense. Without an independent notion of intelligence we have no way of deciding whether something is or is not an intelligence test. The result of accepting the suggestion would be that any test which claimed to measure intelligence would be as valid as any other, regardless of the relationship between the results it produced and what we ordinarily take ‘intelligence’ to mean.

As Michael Chapman has argued, Wittgenstein’s distinction between "symptoms" and "criteria" is useful in being clear about these matters, and has often been ignored (1987, pp. 111-117). A criterion of a concept is a phenomenon which exists in a rule-governed relation to the concept. Typically, criteria are the

phenomena by which the concept is learned. For example, having trouble keeping your eyes open is a criterion of 'being sleepy.' Being able to follow instructions or make appropriate responses are criteria of understanding a language.

There are, however, other phenomena which typically 'go along with' the state of being tired or the ability to understand a language. The phenomenon of parsing sentences according to semantic units rather than according to levels of acoustic energy, which Fodor claims is true only of competent language users, is a good example (1968, p. 79-85). Such a phenomenon is a symptom. Unless our linguistic practices regarding the grammar of the concept 'understanding a language' were to change on the basis of Fodor's discoveries, "parsing according to semantic units" would not be part of what the concept expresses. Notice that if "parsing by semantic units" did become a criterion of "understanding a language" we could not ask sensibly whether, in general, people who parsed, understood - except as a question of meaning. "Parsing" would imply "understanding" whether or not it was shown to correlate with other senses of 'understanding a language.'

Often, scientists alter the use of concepts by using symptoms as if they were criteria. This causes no problem if all involved remember that any conclusions apply only to the 'new' concept and not the concept in public use, but usually the questions which initiate the inquiry employ, and are interesting because of, the ordinary use. Sometimes, however, the 'new' use is taken to reveal what the concept 'really meant' all along. If our concept of understanding a language were reduced to "parsing according to semantic units" much of our motivation for
wanting to understand the concept would be lost. 1

The second confusion involved in construing "What is thinking?" as a question about the nature of a phenomenon is that thinking is not a phenomenon. 2 All instances of thinking are not identified by their sensory characteristics, and this is true for both my own thinking and that of others. No particular emotion, sensation, behaviour, mood, series of mental events under any description, or anything else, seems to identify all instances of thinking. Notice that this is not merely a matter of polymorphy in the sense that Ryle identifies 'obeying' as

\[ \text{As an additional point which, though not relevant specifically to the debates in critical thinking, is important to the broader debate about how mental concepts are to be understood, it should be noted that many attempts to operationalize mental concepts are characterized by a failure to escape reliance on concepts involving meaning, norms, or intentionality. In this hypothetical example, an explication of "parsing according to semantic units" would, of course, require reference to meaning and standards of intelligibility. Putnam demonstrates how even radical reductionists such as Paul Stich and the Churchlands are unwilling/unable to eliminate all intention-laden concepts as they would have us eliminate all connotations of intention from our vocabulary of mental terms (Putnam, 1988, pp. 57-60).} \]

\[ \text{2. Curiously, Alan White, who is aware of the large range of uses of the words 'thought' and 'thinking,' suggests that the question "What is thought?" can be a philosophical question about meaning or a psychological question about a phenomenon (1967, p. 87). The question we might ask is, "What phenomenon is to be studied?"} \]

Consider Wittgenstein:

\[ \text{I would like to say: Psychology deals with certain aspects of human life.} \]

\[ \text{Or: with certain phenomena. - But the words 'thinking', 'fearing', etc., etc. do not refer to these phenomena (Remarks on the Philosophy of Psychology, Volume II, Paragraph 35).} \]

And:

\[ \text{Thinking cannot be called a phenomenon, but one can speak of 'phenomena of thinking', and everyone will know what phenomena are meant (RPP, II, Para. 31).} \]

The extent to which Wittgenstein believed thinking to be a linguistic, rather than a 'natural' category is also evident in:

\[ \text{No one can think a thought for me in the way that no one can don my hat for me (Culture and Value, p. 2e).} \]

(Further references to works by Wittgenstein will be by abbreviated title and, where applicable, to paragraph or section numbers.)
polymorphic. For, while it is true that instances of obeying do not share any physical characteristic (or morphology) - that is, it is not possible to identify instances of obeying in physical object language, it is possible to characterize what it is to obey in terms of concepts like rules and commands. Thinking, on the other hand, is used in such diverse ways as to defy straightforward characterization in any single language game.

It is important to note that our inability to specify what makes something an instance of thinking, in general, as opposed to what makes for an instance in a specific context, is not simply a matter of having insufficient knowledge of the mechanisms of the brain or an inadequate understanding of the relationship between mind and brain. It is not an empirical problem which could be solved if we could see inside a brain while someone was thinking. Neural events in the brain have no more claim to be thinking than human actions have. They certainly cannot be what we really mean by thinking as that would imply we would never really know what someone was thinking except during brain surgery of a type not developed yet. Consider the following sentences:

1. Sorry, I did it without thinking.
2. I didn’t think much of that lecture.
3. I think she can do it.
4. I think I’ll wait a few more minutes.
5. I can think of an answer.
6. I need some time to think about it.
7. I can’t think of her name.
8. I can’t stop thinking about it.
9. I'm thinking about that fish I almost caught.

10. I had to think hard to understand what she meant.

Notice that many of these sentences could be used in a variety of contexts to mean rather different things. Is it even plausible that these sentences are used to refer to any single kind of event or sequence of events, either phenomenological or in the structure of the brain? Is there any common pattern of sensory events associated with all, or even most of these uses of the term?

One of the ways in which philosophers and psychologists have dealt with the unwieldy vagueness and ambiguity of 'thinking' as an object of research, is to identify, either explicitly or implicitly, different senses of thinking, and to treat one sense as if it were the name for a particular phenomenon or process. Most frequently, thinking in the sense that it is used to refer to engagement in trying to solve a problem is identified as the 'kind' of thinking of concern. But it should be clear that problem solving is not a phenomenon or a process either. Whether or not someone is trying to solve a problem is not (generally) determined according to whether certain sets of events are taking place. While it may be the case that solving certain sorts of problems typically involves a particular sequence of operations (as in long division) there are many kinds of problems for which there are no recognizable steps. Certain procedures, such as Dewey's list of steps, may have relatively wide utility, but none is sufficient to produce solutions. All of the steps in such procedures can be done well or poorly. None is required in every case. And given the range of human problems, from needing the solution to a math problem or a way to respond to an insult, to deciding on a career change or the extent of one's obligation to those less
fortunate, it seems unreasonable to suppose that any set of steps, mental events, or brain states, is involved in all cases.¹

Undoubtedly, it may be useful to focus our attention on certain uses of ‘thinking’ for certain purposes, but a degree of caution is required. As has been pointed out, we should not take for granted that any or all senses of the word ‘think’ are labels for particular phenomena or processes. It should also be noted that the different senses are not related the way that ‘bank’ as in riverbank, is related to ‘bank’ as in a place to borrow money. ‘Thinking’ is not one label which is used to express several concepts so much as one multi-faceted concept which has a wide variety of uses. The different senses of ‘thinking’ are closely related and it is not always easy or necessary to distinguish one from the other. Though, as the example sentences cited above indicate, ‘think’ may, in context, be used to mean a variety of things including attend, approve, believe, intend, come up with, figure out, remember, worry, daydream, and cogitate, these are not a list of the constitutive parts of thinking the way that planting, weeding, pruning, etc., form a list of the constitutive parts of the activity of gardening. ‘Believing’ that something is the case, ‘attending’ to something, and ‘figuring’ something out, to pick three of the multiple senses of ‘thinking,’ do not function in similar ways in our language. Believing is not an activity one engages in over time as figuring may be. One can make a mistake in figuring, but not in attending. One can attend well or poorly but not believe well or poorly. Yet, each of ‘believing,’ ‘attending,’ and ‘figuring out,’ has its own multiple senses as is evident in the difficulty encountered by anyone who has tried to explicate the

¹ In general, there is a further problem in distinguishing task and achievement senses of the terms such as problem solving, which will be discussed below.
But, in spite of their differences, each of these senses of thinking is related to the other senses.¹ What one believes is obviously related to what one will be able to figure out and how one will proceed. 'Paying attention' or 'having one's attention drawn' to certain features of a problem or a situation may be an important part of solving or coming to understand it, as is evident in the so-called *Meno* paradox. Often, our use of thinking does not distinguish clearly between these various senses. If I say, for instance, that I can think of an answer, I have not declared whether I am able to do so because I remember something or because I know how to figure out what the answer is.

What this suggests is that it may not be useful to restrict the inquiry to a particular sense in which the word thinking is used. Nonetheless, the purposes of our inquiry ought to be useful in determining which point of view we ought to take toward 'thinking'. It is to be expected that the point of view taken will render some of the senses of thinking more salient than others. Armed with some idea, however vague, of the sort of concept with which we are concerned, we can turn now to the question raised earlier regarding the purposes of this inquiry.

¹ Wittgenstein suggests, with reference to inquiry into the varied nature of our mental lives: "The treatment of all these phenomena of mental life is not of importance to me because I am keen on completeness. Rather because each one casts light on the correct treatment of all.[Z 465]" (RPP II, Para. 311).
2.2. THE PURPOSES OF INQUIRY INTO THINKING

Good or rational thinking has long been a goal of educators. Educators are expected to teach more than facts, judgments, and conclusions; they are expected to prepare students to go beyond the examples offered in class - to conduct their own inquiries, to make their own judgments, and draw their own conclusions. That members of a community should be able to do these sorts of things is tied up with a whole complex of our fundamental values including the notions of autonomy, democracy, equality, and freedom of thought and speech, among others. At an even more basic level, being able to arrive at true or well founded beliefs is fundamental to achieving our purposes, including continued survival. In the words of William James:

If I am lost in the woods and starved, and find what looks like a cow-path, it is of the utmost importance that I should think of a human habitation at the end of it.... The true thought is useful here because the house which is its object is useful. The practical value of true ideas is thus primarily derived from the practical importance of their objects to us (1955, p 134).

For these reasons, among others, I take it the value of seeing things clearly, or 'for what they are', being able to reason to correct or well founded conclusions, and coming to reasonable judgments and decisions, is unquestionable.¹

¹. As I have argued elsewhere (1988b), one cannot really offer a justification of rationality or critical thinking without presupposing the standards which one is trying to justify.
What is thinking? / 35

Notice the use of value terms in the last sentence. It is important that these terms cannot be omitted. There is no value in seeing, concluding, judging, or deciding except in so far as they have epistemic value, that is, that they generally lead to beliefs, values, and actions which meet certain standards and in the long run, serve our purposes. Illusions, false beliefs, distorted values, and ill-chosen actions tend to be counter-productive. This leads us to the conclusion that, contrary to much sloganeering and the titles of many workshops for teachers, we are not trying to teach students to think. Any degree of care with the language suggests that educators ought to be concerned with teaching students to think well. While this seems like a rather modest point, it does have two important consequences. First, it means that claims to have recognized or identified relevant instances of thinking will be normative judgments. To use an analogy, recognizing which examples of thinking ought to serve as models and which ought to be avoided will be more like recognizing seaworthy boats than it will like recognizing square-rigged boats. Second, as will be explored in more detail in the following sections, some uses of thinking do not refer to things which are appropriately judged against standards and will therefore, be ruled out as the primary objects of this inquiry.

Speaking very generally, we are interested in thinking as it is related to changes in beliefs and intentions, including the degrees of confidence or certainty with which they are held. One word which is commonly used to refer to much of what is involved in changes of belief and intention is ‘reasoning.’ The clearest cases of reasoning involve deliberate attempts to answer a question, solve a problem, or sort out a confusion. Many changes in belief and intention are not
like this however. Often, one changes his or her mind without deliberating or thinking about it. My eye is caught by a clock in a window and I realize that I'd better get going if I am going to be home in time to make dinner. All this may happen instantaneously, without any effort or 'willing' on my part. (I may in fact wish that I hadn't noticed the clock.)

Some have assumed that cases of this sort imply that thinking must be a very fast process which can take place subconsciously or tacitly. Such an explanation, however, goes beyond the facts. For purposes of this inquiry, it will not be assumed that some such series of events takes place. It is simply suggested that there are some cases of changing beliefs and intentions which do not seem to involve reasoning in the sense of a deliberative attempt to think things through. Either because of natural capacities or training, people are sensitive or receptive to events in their environment. Such cases are important because thinking clearly or responsibly often involves noticing significant features and drawing appropriate inferences. Training or other kinds of experience do affect our sensitivity to certain aspects of our environment and there are standards of awareness or attentiveness which we expect people to live up to. That there are consequences for failure to modify one's action on the basis of a stop sign or a flashing blue light is evidence of this fact. Thus, the kinds of thinking in which we are interested will not be limited to the deliberative or to conscious reflection. The 'thinking' in which we are interested may or may not take the form of sequences of phenomenological events.

Given that concern about the quality of students' thinking is based in a desire
What is thinking? / 37

that they be able to hold their beliefs and form their intentions on a rational basis in a wide variety of contexts, it is important to recognize some differences between encouraging students to be good thinkers and, for example, good high-jumpers. As has already been pointed out, thinking well is not a matter of engaging in a particular series of mental steps. Nor is it clear that there is anything equivalent in mental and character development to the notion of muscular development. But there is another difference. A great high-jumper is someone who can "make the big jump," that is, she can perform exceptionally well on particularly significant occasions. But educators concerned with thinking want their students to think well 'in general' or 'as a rule.'

Robert Ennis has suggested that critical thinking involves tendencies or inclinations as well as abilities (1980, 1985). Passmore makes an important point about such tendencies. He shows that critical thinking is not the result of (only) having formed certain habits (1967). The requisite tendencies are a matter of coming to care about certain things and appreciate certain standards. In the long run, becoming a critical thinker is like becoming morally responsible; both are aspects of one's character. Thus, taken together, Ennis and Passmore make a crucial point. Being a critical thinker is not a matter of exercising a skill or set of skills, nor is it simply a capacity or a collection of abilities or habits. Being

1. In fact, being morally responsible especially in new situations or complex and uncertain contexts involves being able to think critically regarding moral issues at least.

2. Hilary Putnam argues convincingly that there are several problems with characterizing reason as a capacity (1983, p. 232). A major problem has to do with the fact that "there are no sharp lines in the brain between one capacity and another (Chomskians to the contrary)." How the lines get drawn between capacities (or abilities, for that matter) depends on what "seems natural" in a given way of speaking. But these lines do not remain constant across different levels, or kinds, of analysis. Thus the sense in which reason is an epistemic
a critical thinker involves valuing certain things and seeing them as significant.

Another point about the purposes of this inquiry and the purposes which underly current interest in thinking has been presupposed by the foregoing remarks. It bears mentioning because of the recent history of philosophy and its influence on how people think about rationality and thinking. I have taken for granted in these remarks that one can have more (or less) reasonable desires, values, and intentions as well as true (or false) or more (or less) rationally assertible beliefs. We can think rationally about our purposes and about the standards by which we judge value as well as about means for accomplishing our purposes or other matters subject to empirical verification. I make these remarks not in order to sort out some area of controversy. In fact, people widely agree that there are shared public standards about right and wrong as well as true and false, and that it is rational to reflect on one's ends as well as the means for achieving them.\(^1\) There are however, two related traditions with considerable importance to how people, especially educators, think about thinking, which have tended to emphasize reasoning about facts and means over values and ends.

The first of these is a holdover from positivism. It can be characterized loosely as a narrowing of the field of rationality to that which can be asserted as a tautology (logical truth) and that which can be verified according to the senses of capacity (as learning is too) does not translate intelligibly into capacities measured in 'brain' units or information processing units. The problem of quantification of abilities and capacities, that is, the problems associated with analyzing the constituent parts of them, is one to which we will return.

\(^0\)(cont'd) capacity (as learning is too) does not translate intelligibly into capacities measured in 'brain' units or information processing units. The problem of quantification of abilities and capacities, that is, the problems associated with analyzing the constituent parts of them, is one to which we will return.

\(^1\). See Coombs (1984, p. 5) for an account of why restricting practical reasoning to reasoning about means only is to accept "an unnecessarily restrictive conception of practical reasoning."
(empirical truth). While positivism has been widely rejected as an epistemological theory, and in many circles is commonly reviled, its general tenets and the way it was used to frame certain problems have continued to have influence. As a result, many accounts of critical thinking have tended to focus on questions of logic and empirical verification at the expense of questions of value.

The other tradition, which is especially prominent in psychological approaches to the study of thinking, is to divorce questions of cognition or reason from those of affect or emotion. This makes a mockery of both reason and the emotions. Reason becomes what Charles Taylor has referred to as "bloodless thinking" and emotion becomes an intrusion on the rational self (lecture at the Department of Psychology, UBC, February, 1988). Richard Rorty connects this non-cognitive stance to the emotions with the positivist reliance on the fact/value distinction:

It [the distinction] suggests that once 'all the facts are in' nothing remains except 'noncognitive' adoption of an attitude - a choice which is not rationally discussable. It disguises the fact that to use one set of true sentences to describe ourselves is already to choose an attitude toward ourselves, whereas to use another set of true sentences is to adopt a contrary attitude. Only if we assume that there is a value-free vocabulary which renders these sets of 'factual' statements commensurable can the positivist distinction between facts and values, beliefs and attitudes, look plausible. But the philosophical fiction that such a vocabulary is on the tips of our tongues is, from an educational point of view, disastrous. It forces us to pretend that we can split ourselves up into knowers of true sentences on the one hand
What is thinking? / 40

and choosers of lives or actions or works of art on the other (1979, pp. 363-4).

There is no place in such a dichotomized schema for the appropriateness of justified anger, appreciation of an elegant argument, disgust towards an act of wanton cruelty, or caring based on reasons. Yet surely these emotions are part of being sensitive to one's environment and having the character traits one would hope to encourage as part of an education.

This raises a final point about the purposes for inquiry into the nature of thinking. Unlike the previous points which apply generally to concern about thinking and education aimed at encouraging good thinking, this point is specific to this particular inquiry at this point in the development of our ideas about thinking. Despite the fact that now, as always, it is widely believed that becoming educated involves (or ought to involve) becoming a good, or a critical thinker, and that there is more interest than ever in addressing this educational goal directly, there is widespread disagreement and confusion about what thinking is, how it is to be recognized or judged, and what can be done to improve it. In spite of the fact that the nature of rationality has been a major focus of philosophical discussion over the last two or three decades, even philosophers working in the area of critical thinking have not tended to be concerned with conceptual questions. It is generally asserted that thinking, or critical thinking, is a skill, or a process, or a set of abilities and dispositions, or whatever, without argument and without taking cognizance of the fact that decisions about how thinking is characterized will have consequences for what we can find out about it.
Even amongst those who agree about a general point of view, or initial characterization, of thinking, there is often disagreement on basic definitional questions. To cite two of many such examples, those who agree that critical thinking or good reasoning is essentially a matter of argument analysis and evaluation, disagree about whether arguments ought to be taken to include explanations.¹ Other points of view encompass other disagreements. Those who agree that thinking or critical thinking is a skill or set of skills, disagree about the number and kind of skills involved. Even when writers feel pressed to argue for the existence of cognitive skills, rather than simply asserting their existence, there is little indication that clear criteria for what counts as a skill exist. Thus, Perkins feels free to argue from the fact that we can ask the question "Why not?" with regard to the existence of general cognitive skills, to the conclusion that there is a general cognitive skill, that is the ‘skill’ of asking "Why not?" (1985, p. 339).

In addition, many writers in the field seem remarkably unconcerned with heeding their own advice with regard to the standards of good thinking. A good example is given by in the work of Diane F. Halpern, who, in spite of devoting a chapter to the issue of finding and questioning assumptions, asserts (without further clarification or support) that the belief that adult students "know ‘how to think’ is unwarranted because "Psychologists have found that only 25% of first

¹ See Stephen N. Thomas (1973, pp. 6-7) and either Blair and Johnson (1983, pp. 10-1) or Scriven (1976, pp. 95-7). To complicate matters further, Gilbert Harman, in Change in View: Principles of Reasoning wants us to distinguish between the rules of inference which apply in arguments and the "rules of revision" which apply in reasoning (1986, p. 3-4). While some of these distinctions may be attributable to the differing points that authors are making in differing contexts, my point is that central concepts such as ‘reasoning’ and ‘argument’ are used a bewildering variety of ways.
year college students possessed the skills needed for logical thought (McKinnon & Renner, 1971)" (1984, p. 3).

So while there is general agreement about the importance of critical thinking as an educational goal, the field suffers from a lack of conceptual sophistication and from a confusing use (and misuse) of common language terms which have been adopted to fulfill specialized purposes within a variety of theoretical positions. While it is recognized that no one study is going to sweep away all misunderstandings and confusions or address the issues in terms which are persuasive to the range of theorists and practitioners interested in the field of critical thinking, the need for work in this area seems clear.

2.3. PRELIMINARY CONCLUSIONS

While little has been said to provide a positive characterization of how we should answer the question "What is thinking?" in a productive and appropriate manner, several of the points raised are suggestive. The broad purposes involved in current interest in thinking imply that the inquiry should deal with the shared, public concept of thinking rather than a particular conception. Initial conceptual inquiry suggests that the concept of thinking does not label a phenomenon or a process. Given that interest in thinking is largely motivated by practical concerns, such as the desire for an informed and competent citizenry, the primary object of inquiry is 'good thinking'. Good thinking is not simply an internal affair, nor can it be characterized independently of aspects of our mental lives such as feelings and emotions. Certain uses of the concept which do not refer to
anything which is evaluated according to standards will not be of primary concern. Those senses which do refer to that which is the centre of concern are those which refer to both reasoning and sensitivities, *i.e.* deliberative thinking and tendencies to be affected appropriately.¹

The fact that it is 'good thinking' which is the object of the inquiry highlights the importance of normative or evaluative judgments, a category of claims which has often been overlooked or treated as of minimal importance in accounts of critical thinking. This inquiry will place normative judgments in a central role. Perhaps the best initial characterization of the point of view from which this inquiry proceeds is that it will consider thinking as a normative activity, that is, an activity constituted by, and judged according to norms or rules.² However, the acceptance of this characterization as adequate depends on some degree of indulgence on the part of the reader. It is not meant to imply that there is one activity of thinking in the way that it has already been denied that there is one process of thinking. It might be best to consider thinking as a set of normative activities with varying degrees of interrelationship. At any rate, the use of "normative activity" is not meant to prejudge this issue.

Further, the use of the word activity is not meant to imply that thinking is something one does independently of other activities. As has been argued by Ryle

---

¹ This is to be distinguished from the view expressed by Norris and Ennis which stipulates that only thinking in which "a person consciously and deliberately seeks and uses good reasons" can be critical (1989, p. 16).
² This use of 'normative activity' is consistent with Thomas Green's description of teaching as "a rule guided activity" or as being "norm-regarding," in "Teaching, Acting, and Behaving" (1958, p. 117). As Green points out, an activity of this sort "is not simply norm-conforming; it is norm-obeying."
and his successors, thinking while you work is not necessarily like whistling while you work.\(^1\) Contrary to the notion that thinking is some kind of private, internal activity, it will be recognized that the fact that there are public norms by which thinking is evaluated implies that this is not (simply) the case. It will be recalled that thinking is of interest as it concerns the forming and changing of beliefs and intentions, both of which are clearly related to how people act. Partly in order to forestall any such misunderstandings, another initial characterization of thinking will be introduced, that is, that thinking will be considered as a social practice. Because of the connection between "norms" and "social practice" which has been made most forcefully by Wittgenstein in *Philosophical Investigations*, these two notions are closely related. As in the case of "normative activity," the use of "social practice" is not meant to imply that there is anything singular about thinking. While there does not seem to be any clear way of quantifying practices, it is meant to be left as an open question whether thinking is best characterized as a practice or a set of practices.

\(^1\) As will be seen in the next chapter, this terminology is also not intended to prejudge Ryle's distinction between thinking as activity and result.
3. CRITICAL THINKING AS A SOCIAL PRACTICE

This chapter is intended to develop the major themes of the opening chapter, especially the centrality of normative judgments to the practice of critical thinking, and the relationship of the "normative" aspect of thinking with its "social" aspect. In addition, the relationship between mental abilities, the results of thinking, and theories about mental structures and mechanisms are explored.

3.1. 'CRITICAL' AS A TERM OF JUDGMENT

What is it that we mean when we praise people for being critical thinkers, or simply for 'being critical'? The fact that we can use such phrases to praise is evidence that they have normative force. John Passmore conveys something of this force in saying, "Critical thinking as it is exhibited in the great traditions conjoins imagination and criticism in a single form of thinking; in literature, science, history, philosophy, or technology the free flow of the imagination is controlled by criticism and criticisms are transformed into a new way of looking at things" (1967, p. 201). 'Critical thinking' is used to express a judgment about the worth of something, to evaluate something against some set of standards. A critical thinker is one who makes rational judgments, who sees things clearly. To accept an idea uncritically is to have failed to measure up to the standard of accepting only that for which we have good reasons. To examine something critically is to be thorough and to employ appropriate standards. Which standards are the 'appropriate' ones is a matter of judgment, a matter to be determined by purposes and context. As can be seen from these examples, there is a dual
sense in which ‘being critical’ implies judgment. It is used to express a judgment against standards, and the relevant standards are those of rationality or good judgment.

There are many other uses of the word ‘critical,’ not all of which express a positive value judgment. Sometimes it is used to refer to the habit or disposition to identify flaws and shortcomings exclusively. ‘Being critical’ in this sense is a perjorative term in the same way that ‘being judgmental’ is perjorative, but this is only one use among many for either ‘critical’ or ‘judgment’. Other uses of ‘critical’ express notions such as gravity or seriousness (as in ‘critical condition’), significance (as in ‘critical mass’ or ‘critical issue’), or the taking of an evaluative stance (as in ‘critical notice’). These uses lend credibility to the wide variety of interpretations of the phrase critical thinking. For example, the last mentioned "evaluational" sense of ‘critical’ accords well with Robert Ennis’s earlier formulations of critical thinking as the evaluation of statements. I take it however, that while there is no single correct interpretation of such a phrase, some interpretations may be more useful than others given our purposes. Given that we are interested in thinking as a normative activity and given the broad educational purposes mentioned in the preceding chapter, Passmore’s strong normative sense of ‘being critical’ seems most useful.

Returning to the examples cited in the opening paragraph of this section, we can see that one way we could address the problem of what it means to be critical, would be to think about the standards implied by various uses of the term.

1. ‘Critical’ as it is used in the phrases ‘critical theory’ or ‘critical pedagogy’ is discussed briefly in chapter 5.
Terms like thorough, appropriate, clear, rational, and good, are in the same family of words as the word critical. Other words which function in similar ways are responsible, careful, balanced, sensible, discriminating, perceptive, and imaginative. Each of these words expresses a somewhat different range of standards. Critical, like good and rational, tends to encompass a rather broad range of other, more specific, terms of judgment. Just what range of standards 'being critical' refers to is a question to which we will return.

There is an important difference between normative terms, of the sort we have been considering, and descriptive terms. Descriptive terms identify their referents according to their functions and their properties, both formal and material; they are not used to express appraisals. Thus, to refer to an argument with a descriptive term, for instance as being 'deductive,' is to identify the form of the argument but does not judge its quality, whereas, to refer to an argument as being 'clear' expresses a positive judgment about it, at least according to one particular standard. It is important that 'critical,' as it is used in "critical thinking," is used to express a normative judgment.

Consider the conditions which must obtain in order for questions of judgment to be appropriate. One condition is that whatever is being judged must be measured against some standard or purpose. Another way of saying this is that every judgment implies some standard or purpose. Whatever is being judged is rated as good or bad, flawed or flawless, inspired or mundane, etc., with reference to what it is for, with regard to its utility in achieving some desired goal, or against some relevant standard. Another condition is that judgments can only be
made on the basis of evidence. Each judgment implies that something is known about that which is being judged. Wittgenstein has drawn an analogy between making a claim (or a judgment) and shooting a gun at a target. For the claim to have meaning, or to serve a purpose, it must be possible for it to be wrong or infelicitous in some way. Otherwise it is like aiming a gun which is attached to the target. The whole notion of aiming (and target) is lost in this case. Similarly, with making a judgment, there must be a target (goal, purpose, or standard) and there must be some risk taken, some possibility of going wrong, of being mistaken, or misinterpreting the evidence.

This analogy may be used to point out two areas of confusion which have plagued discussions of thinking. The first concerns what it is about thinking that can be judged. Just as some instances of shooting a gun, because they do not involve aiming, cannot be sensibly judged according to standards of accuracy, some instances of thinking cannot sensibly be judged according to rational or critical standards. Typically, when we use the word thinking to express what someone is doing, or what activity someone is engaged in, judging according to critical standards is inappropriate. When thinking is used to describe someone's results in achieving (or failing to achieve) some purpose, such standards are relevant. What this suggests is that it is the standards and purposes, as opposed to the process (or kinds of processes) which makes instances of thinking candidates for being critical.

The second area of confusion can be identified by noting that neither thinking nor the passage of a bullet are visible events. It might be thought that
judgments or actions provide evidence of series of unobservable mental events in the same way that holes in targets provide evidence for unobservable physical events. This might lead one to think that judgments about competence on the part of thinkers are based on inferred facts about mental events in the same way that judgments about competence at shooting are based on inferred physical events. Without questioning that we do judge competence at thinking on the basis of judgments and actions, I note that the fact that 'thinking' only sometimes refers to mental events, suggests that caution is required if we are to avoid confusion.

As will be seen both of these sorts of confusion are evident in current discussions of thinking and what it means to be competent at a mental task or to have a mental ability. These two areas of confusion will form the topics of sections of this chapter.

3.2. THINKING AS ACTIVITY AND RESULT

Having recognized that 'critical' is, when used in the relevant sense, a term of judgment and that its use is appropriate only to some instances of thinking, we are equipped to return to a longstanding problem in the field of critical thinking. The problem has often been stated in terms of whether we evaluate the processes or the products of thinking. Though some philosophers and most psychologists believe that we evaluate the "process" of thinking, I will argue that this position is based on a misunderstanding, one which is perhaps associated with the fact that 'thinking' can be used to refer to an activity, that is,
something which happens over time, or to a result or outcome.

To review: we do use the words 'thought' and 'think' to refer to events and activities which take place 'in our heads.' I can answer the question, "What are you doing?" with, "Oh, just thinking about what it would be like to win the lottery." I can report that a certain thought occurred to me at a given time or that my attention was occupied for a certain period of time. I may even be able to describe the form that a thought took as an image or a set of words. Many such reports, it may be noticed, are not of a sort that provide grounds for judging success or failure, or anything else about the quality of thinking which has taken place. The fact that someone has thought "of" something or "about" something, does not, in the absence of other information, indicate that anything has been accomplished which can be judged. It is simply a report. Recalling the analogy mentioned in the first section of this chapter, it is like a fact about where the bullet struck without knowing where, or if, the gun was being aimed.

However, if I claim to think that a certain painting is derivative or that a certain solution is adequate, I am not necessarily reporting on some event or making a claim about what occupied my attention at any given time or for any particular duration. There are (public) criteria for judging whether such beliefs are justified or such solutions are adequate. I may be wrong about this in a

1. If one thinks "about" the consequences of accepting a claim, or "of" a solution or an explanation, the relevant standards are given as being epistemological by virtue of the epistemological character of the predicate.

2. Ennis claims that Dewey uses psychological rather than logical criteria for the solution of problem solving, (1967, p. 115). While this seems to be at least treading on the borderline of not having public criteria, the issue is made
way in which I cannot be wrong when I report on what I am thinking about. While this distinction is highly context dependent, in that many sentences can be used to express either the activity or the result of thinking (and it is not always important to distinguish between them) the distinction does have a certain significance for being clear about critical thinking. The foregoing considerations suggest that thinking is assessed on the basis of results. When we say that someone is a clear thinker, it is the quality of the reasons she offers and the conclusions she draws which are being judged, not the crispness of her mental images or any other quality of her experience while thinking.

This is a point which has caused considerable difficulty. It is noted that one may arrive at a satisfactory conclusion by means which are inadequate, as a result of fortuitous but faulty reasoning, for example. This is cited as grounds for rejecting the conclusion that it is the results of thinking which are evaluated in favour of the claim that we evaluate the process of thinking. Some go so far as to suggest that success at certain sorts of tasks is dependent on having an appropriate mental mechanism. Thus, critical thinking is thought not to be reliably identified by examining the results of thinking (judgments or actions), but rather through the identification of the use of a relevant mechanism or process.

(cont'd) somewhat more complex by the fact that Dewey often draws attention to the blend of "objectivity" and "subjectivity" in our judgments. Thus, Dewey may have understood psychological criteria as being socially mediated.

1 See Norris and King (1984, pp. 29) for an account of the role of such mechanisms in both in their own and in Robert Sternberg's work. Norris's work will form the object of critique for much of the remainder of this chapter. This is not because Norris adopts a uniquely wrongheaded position so much as the fact that he discusses explicitly a position which is implicit in the work of many others, especially those interested in measurement and empirical research into thinking. This includes many of those who adopt an information processing approach and some who, like Norris, adopt a multi-aspect approach.
Norris and King, in regard to assessing the validity of their test of the ability to appraise observation claims, state, "...that in order to judge the validity of the test there has to be some attempt to access the mental processes which determine people's performances on the test. The test is then judged valid to the extent that suitable mental processes lead to good performance and unsuitable ones lead to poor performance" (1984, p. 30). There are several problems with this account.

First it may be noted that ordinary attributions of abilities do not depend on knowledge of processes or mechanisms. If I see someone lift something or play a piece on the piano, I am quite entitled under normal circumstances to the belief that they can (or have the ability to) lift such and such a weight or play the piano. Admittedly there are exceptions. Sometimes we say that success is achieved by luck rather than ability. In such cases we look for consistency of results to rule out the possibility of luck as an explanation for success. Again, knowledge of a process is not a necessary condition for the warranted attribution of an ability.

Second, there is considerable ambiguity in the notion of a mental process. This will be explored in the following section, but even if we accept the authors' interpretation as unproblematic, a further, and familiar problem exists. Norris and King describe such processes as consisting of a series of steps. Examples of such steps include encoding "relevant attributes of the terms of an analogy" (Sternberg, 1984, p. 40) and looking "for all relevant differences ... between the speakers [making observation claims] ... the conditions under which observations
Critical thinking as a social practice / 53

were made, or between the types of statements that were made" (Norris and King, 1984, p. 29). Notice that such steps can be taken carefully or carelessly, and successfully or unsuccessfully. One may not correctly identify the relevant attribute or find the relevant differences even if one 'engages in the relevant process.' As we saw in the case of the problem solving approach to critical thinking, the occurrence of series of steps, however appropriate they might be, is not sufficient to bring about success. Therefore, the fact that they occur is insufficient to demonstrate that the ability exists. What the use of the word relevant in the examples quoted indicates is that the real issue here is one of meeting particular standards. It is the meeting of these standards, rather than the existence of particular processes or the fact that certain mechanisms are operative, which makes thinking critical.

As a third and final point, it is significant what Norris and King took as evidence for the existence of a mental structure or process. The source of evidence for the hypothesized processes was a series of reports by test takers on their thinking while they did the test. "Examinees were asked only to tell all they could about their thinking as they were choosing their answers" (1984, p. 43). Notice the ambiguity in this instruction. If the examinees take this to mean that they should report on their reasons for choosing one alternative over another, their response is relevant to judging whether their choice was based on careful thinking or on luck. It is not clear, however, that such a report is evidence of any particular process or sequence of steps. Reasons need not occur in any particular series of steps, or indeed, occur at all, in order to count as
reasons for a choice.¹ Reasons are not mental events.

On the other hand, if examinees take the instruction as a request for a phenomenological report, then a sincere response would provide a description of some kind of a mental process. At least it would refer to something which is undeniably mental and something which is a sequence of events with a certain duration. However, the relevance of such a report to judging the quality of reasoning is unclear. Reasons can be appropriately judged according to epistemic standards such as adequacy, whereas mental events cannot. ²

To summarize this critique of the notion that we can reliably identify instances of good thinking only on the basis of the existence of mental processes or mechanisms, I have suggested that knowledge of the existence or use of mental processes is neither necessary nor sufficient to warrant such judgments. Further, I have suggested that any plausibility that such claims have relies on

¹. Should it be supposed that a reason must ‘occur’ in order to affect one’s reasoning at all, and a fortiori, to affect the quality of one’s reasoning, consider the case of a doctoral student searching for the right way to finish a chapter in his thesis. A reason for his choosing any particular ending will be that it will be found satisfactory by the examining committee, but thoughts of the examining committee need not occur and arguably should not occur in his deliberations.

². Certain qualifications are required here. As Jerrold Coombs has pointed out, ordinary usage is not definitive on this point. There are what I might call symbolic processes, such as the process of elimination, which are employed in reasoning, although they are clearly not the sort of processes for which Norris and King are searching. Further, there are occasions when reports of mental events can be relevant to judging the adequacy of reasoning: if someone is contemplating taking some action it is relevant whether they have thought of how it might affect others. Failure to even have the thought that others might be affected is presumably a more basic error than to have failed to do so realistically. However while these considerations are important, they do not impugn the central point that reasoning cannot be conflated with mental processes without confusion.
equivocation with regard to two different meanings of the word thinking. ‘Thinking’ as it is used to refer to mental events or sequences of mental events does refer to a process but the process cannot be judged according to rational or epistemic standards. Thinking as reasoning is judged according to relevant standards but is not a mental process, at least not in the sense a series of events experienced by the thinker.

Perhaps one way to help correct the widespread notion that we judge the process rather than the products of thinking is to be clear about the distinction between a process and a procedure. While the word process is used to refer to all sorts of sequential events or stages, procedures are clearly normative sets of steps. Notice that processes occur whereas procedures do not occur but can be followed. Procedures are created by human beings and human beings can try to follow them. Their attempts may succeed or fail. This is in marked contrast to many processes, especially naturally occurring processes such as digestion or radioactive decomposition.¹

In many contexts, one may appeal to the following of a relevant procedure in justifying a conclusion, a decision, or a judgment. For instance, one might accept an estimate of the amount of material required for a certain job because it had been worked out according to a particular procedure which was known to be reliable. As has been pointed out, the fact that a certain procedure has been followed is not proof that the estimate is correct but it may provide sufficient

¹. A more complete description of the place of procedures in normative activities is given in chapter 5. The distinction between normative and causal explanations is discussed in section 4 of this chapter.
reason to accept the estimate in some particular context.

If we were to substitute the normative term ‘procedure’ for the descriptive ‘process’ in the account by Norris and King, a much clearer picture would be obtained. It would then be seen that Norris and King are testing to see whether their examinees follow a particular procedure in assessing observation claims. A case could be made that the procedure for which they are testing is the most appropriate given the constraints of the testing situation. The test would no longer be seen as a test of the ability to appraise observation claims in general, but rather as a test of whether people were inclined and able to apply certain useful principles in certain sorts of contexts.¹ Rather than asking test takers to report on their thinking, they could be asked to give reasons for their choices.² Responses could be evaluated according to whether those tested made the right choices and were able to give good reasons given certain prompting. I suggest that such changes would make for more modest claims, but claims which are more defensible. These changes would make clear that we are interested in assessing of the results or the products of thinking in the form of reasoned judgments and would avoid the ambiguities and false assumptions which have plagued approaches which attempt to evaluate thinking processes.

¹. Not any ‘application of principles’ is accurately described as following of a procedure. One could however, sensibly describe a very ‘loose’ procedure which involved checking to see if any of the fifteen principles which Norris and King suggest are relevant to the item in question.

². Notice that the reasons need not have occurred consciously to the test takers to count as their reasons nor need they have been sought out deliberately, as is suggested by Norris and Ennis (1989, p. 16). They may have been assumed. What is crucial is that test takers recognize them as reasons that were relevant to their decision.
3.3. WHAT A MENTAL ABILITY IS NOT

Norris and King are hardly alone in having difficulty with the concept of mental abilities. The concept has great importance in critical thinking, partly because of the prominent place of abilities in the multi-aspect approach to critical thinking and also because of the close relation between 'understanding,' 'knowing,' and 'being able.'\(^1\) Having a clear idea of what abilities are is important, especially if it sheds light on the concepts of knowledge and understanding. Unfortunately, the concept of ability, and more specifically, the concept of mental ability have been misconstrued in a number of ways. This section will demonstrate several confusions related to the understanding of what an ability is. One of these confusions (which will be referred to as vehicle reductionism) plays a prominent part in the information processing approach to critical thinking, although it is laid out most explicitly by Stephen Norris. Further, it will be pointed out that there is an ambiguity in analyzing an ability in terms of various sub-abilities which are thought to make up the ability in question. This realization has consequences for our understanding of the multi-aspect approach to critical thinking.

Many philosophers and others have tried to understand abilities as entities of one kind or another. While there is no merit in cataloguing all of the ways in which the term has been misunderstood, it may be useful to point out three significant ways in which we can go wrong. One possible error is what Baker and Hacker

\(^1\) This relation was mentioned in the section on thinking as a social practice in connection with 'knowing a rule.' The idea can be traced to Wittgenstein: "The grammar of the word 'knows' is evidently closely related to that of 'can', and 'is able to'. But it is also closely related to that of 'understands'." (PI, Para. 148).
describe as transcendentalism (1980, p. 337). This is the error that Wittgenstein refers to as thinking that "the possible movements" of a machine must already exist within the machine (PI, Para. 193-4). Baker and Hacker point out that this leads to the notion that inference from "a performance to 'a power capable of producing it' is one from effect to cause" (1980, p. 338). They go on to describe two possible reactions to transcendentalism, both of which are reductionist.

The first is to conflate a power with its exercise. They associate this error with Hume, quoting his statement that "The distinction which we often make betwixt power and the exercise of it is ... without foundation [and] is entirely frivolous"¹ (Baker and Hacker, 1980, p. 338). Stephen Norris also associates this error with Hume (1983, p. 55) and with logical positivism (1985, p. 172). Norris’s particular concern with this form of reductionism is that it fails to provide a "realistic" interpretation of 'ability,' that is, it fails to identify some thing to which ‘ability’ refers.

There are at least two other reasons for rejecting this form of reductionism. First, we are often justified in our attributions of ability without any knowledge of past or present 'doings' on the part of the possessor of the ability. I know that my car can go 100 miles per hour even though I have never driven it that fast. Further, I know that I can fit any round peg into any round hole of greater surface area whereas I am not entitled to make the same claim regarding triangular pegs in triangular holes. In short, attributions of an ability are not the same as accounts of its exercise. In addition, knowledge of the

¹. From the Treatise, Bk. I, Pt. iii, Sect. xiv.
exercise is not the only acceptable support for ability claims.

Second, the fact that someone has done something does not mean in all cases that they can do it. The ‘doing’ may have been a fluke or the ability may have been lost. A change in the condition of the possessor of an ability may lead to a revision of an ability claim without any testing of the exercise. An example is, if a weight lifter had slipped a disk, we would no longer expect him to be able to lift what he had before, even if he had not actually attempted it.

In recognizing Hume’s mistake, Norris realizes that choosing the correct option on a test is insufficient evidence of the ability in which he is interested. A student might choose correctly based on irrelevant considerations. Further, a student might have ‘the right idea’ but be mixed up about a minor point or have misread a relevant phrase. In either case, accepting the choice as an indicator of the ability would be misleading. However, Norris is convinced that there must be some ‘thing’ to which the word ability refers. He associates this belief with his acceptance of scientific realism and a correspondence notion of truth. Thus, he searches for something other than the exercise of an ability to which the word ability corresponds. "It is only probing into the internal structures and processes of things which can determine whether or not a set of proficiencies arise from the same power" (Norris, 1985, p. 174).¹ "To say that a person can do a certain thing is to ascribe a power to that person, which in turn is to say something categorical about the person’s constitution" (Norris, 1985, p. 172). In

¹ Since Norris uses ‘competencies’ and ‘powers’ interchangeably, and asserts that competencies are powers, there is a certain ambiguity in the notion of "arises" in this context.
another place, he suggests that claims about the ability to think critically are "categorical claims about people's either genetically or environmentally determined natures" (1986, p. 81).

But, in reaction against the fallacious reduction of an ability to its exercise, Norris has fallen into Baker and Hacker's third kind of error, that is, to reduce ability claims to claims about the structure of whatever has the ability.¹ Baker and Hacker identify this as a form of "vehicle reductionism" (1980, p. 339). They associate this error with Descartes who noticed that "one form of scientific explanation is by reference to structures. He mistakenly thought that explanation is reduction and held that the geometrical properties (the spatial structure) of a material object not only explained but constituted its powers (and that all its 'remaining properties' were only effects of its structure upon percipients)" (1980, p. 340).

But attributions of ability do not, in general, say something about the constitution of that which possesses that ability. To see that this is true consider the following: if you know that something can go ninety miles per hour, what do you know about its constitution? Is it a car, a cheetah, or a baseball? Is there some underlying structure, process, or mechanism, which explains the fact that each of these things can go so fast?² Further, is there any sense in which

¹. One might note the parallel between Norris's reaction against reductive tendencies in positivism and Chomsky's reaction against Skinner's behaviourist reductionism. In both cases, the result has been confusion based a misunderstanding of attributions of ability.

². Norris is perfectly aware that there need be no single 'structure' which underlies any particular ability as he makes clear in "Competencies as Powers" (1985, p. 171).
we need to know anything about the structure of any or all of these things in order to know what it means to go ninety miles per hour or that something is able to go ninety miles per hour, in the way that Norris suggests that scientific research is needed to understand "the meaning of the claim that the child has the ability to do sums? (1984, p. 81).

We might ask whether there is something particular about mental abilities which means that they do imply something about structures or processes. Part of the problem in addressing this issue is the ambiguity of a ‘mental structure’ or ‘process.’ We have seen that processes understood as series of phenomenological events are not necessarily related to mental abilities. There seems to be no better reason for assuming that there must be series of brain states or brain structures which correspond to descriptions at the level of mental abilities, as noted in section 2.2. Even if one construes ‘mental structure’ as referring to something such as a conceptual structure, there seems to be no reason to accept that the correct ascription of an ability warrants claims about any particular kind of knowledge be it knowledge of facts or of a procedure of some sort.¹

To see how this is true, consider an actual instance in which an attribution of a mental ability is warranted. Take the case of a builder who is able to estimate the amount of plywood he will need for the subfloor of a house he is building. Consider how he might accomplish this task. He could scale out the various floor areas on the plans, calculate each area and add them up, then

¹ As Jerrold Coombs has pointed out, there are exceptions to this general rule for certain sorts of ability. That someone can add, for instance, implies knowledge of what adding is.
divide by the area of a sheet of plywood and add some factor for waste. Alternatively, he could cut out a rectangular piece of paper which was the size of a sheet of plywood according to the scale of the drawings and use it as a template to mark out where each sheet would go, keeping track of the number of times he had to use it. Then again, he might say, "Oh, that's just a little bigger than the last house on the main floor but the second floor has that bit out of it so I'll need about 65 sheets." Any number of procedures might be reasonable ways of estimating and might lead to successful performance. What needs to be known in each case, is different. But, given that the builder does reasonably accurately and reasonably reliably predict the amount of plywood required, we must credit him with the relevant ability.

The fact that there is no single procedure or single set of facts which must be known in order to produce successful results at many tasks has an interesting consequence for talk about abilities, including the abilities which are thought to constitute part of what it is to be a critical thinker. Abilities are often labelled by the relevant result or objective. We say, for instance, that the builder in the example has the ability to estimate. In what sense, however, can we say that the ability to estimate is constituted by any particular knowledge or mental structures, or even by the sub-abilities of multiplying and dividing, or utilizing a template, or simply judging on the basis of experience? Given that we can go on imagining a host of other methods, increasingly farfetched perhaps, which could be used to generate correct estimates, in what sense can we say that 'the ability to estimate floor areas' is, in general, constituted by anything, including any set of sub-abilities? Further, the problem becomes more severe as the ability
in question becomes less clearly specified. It becomes difficult to make sense of the notion of 'the ability to estimate' without some idea of what is to be estimated. In what sense then can we understand the ability to think or to think critically as a set of sub-abilities?

Notice that this has serious consequences for the multi-aspect approach to critical thinking, even when it is not interpreted as providing names for various processes or mechanisms involved in thinking critically. At the least, it leads us to take a list such as Ennis's list of critical thinking abilities as a list of tasks at which critical thinkers ought to be proficient, rather than understanding it as a list of skills, or properties of critical thinkers. Critical thinkers ought to be able to do those things well, but possession of the power to do these things well is not the cause of 'being critical'. The list ought to be read as set of standards or criteria, not as a list of the constitutive parts of an overarching ability - the ability to think critically. Notice that this ambiguity may be avoided by being careful with one's language. When we speak of someone 'being able' to do certain things, there is little likelihood of such confusions. As soon as we start speaking of the relevant 'abilities' or worse still, 'skills and abilities,' the chance for confusion is increased.

A more perspicuous understanding of the nature of abilities, mental or otherwise, is given by Israel Scheffler when he notes that "In context, then, it would seem

1. There are special cases in which an ability may be defined adequately as a conjunction of sub-abilities, for example, the ability to recognize the primary colours may be constituted by the sub-abilities of recognizing red, blue, and yellow. These inferences seem warranted only, however, when the ability is related to something which can be divided into a denumerable number of discrete sets."
that ability attribution typically serves to deny that some particular preventative condition obtains" (1985, p. 93). This way of explaining ability attributions avoids treating abilities as entities, either as actual entities with causal powers or as hypothetical constructs which can only be understood by "probing internal structures and processes." Rather than explaining what abilities are, or what the term ability refers to, it explains an important role of ability attributions in our language.

3.4. THE SEARCH FOR THE CAUSE

The considerations raised in the last two sections make it possible to reevaluate the proposed analogy between judging the accuracy of a shot by the location of the hole it leaves in the target, and judging the quality of thinking by the evidence of a person's subsequent words and actions. In this section, some of the ways in which this analogy could mislead us are examined. It will be suggested that the kind of explanations in which concepts such as abilities, rules, and reasons are used appropriately are unlike the sorts of scientific explanations which some theorists take as an ideal to which all explanations should conform. The notion that some kinds of phenomena are best understood by approaches which differ from attempts to provide a scientific explanation is introduced.

In spite of the fact that the hole left by the bullet and the considered judgment or action of the thinking person can each serve as the basis for judging the quality of the shooting or the reasoning of the relevant person, there is at least one significant difference. In the case of the target shooter, there is always an
identifiable series of events which is known to have produced the evidence. The aiming of the gun and the pulling of the trigger cause the bullet to travel in a certain direction and, in conjunction with certain facts about the bullet and the environment, cause the hole in the target. These events can be explained with reference to theories of physical science. But when I say that I think that the argument was a good one, or that Helen obviously thought the ice was thick enough to skate on, or that the family pet thinks he has the same rights as the rest of us, there need be no corresponding set of mental events in myself, Helen, or Fido.

There is, however, a widespread tendency to search for a link to the sort of physical laws which govern the trajectories of bullets which will explain intelligent action or speech on the part of human beings. It is thought by some that linguistics, psychology, and/or neurology will, given time, discover covering laws (or theories) which will explain the processes which take place between input in the form of sense data and output in the form of actions including speech. However, as Putam argues, if this is taken to mean "saying in reductive terms what 'thinking there are alot of cats in the neighborhood' is, and 'remembering where Paris is' is...we are asking a great deal (1987, p. 14). This is vastly more ambitious than "reducing color or solidity or solubility to fundamental physics" (1987, p. 14) and these problems have proved insurmountable. This line of argument should lead us to be skeptical of claims such as those of Norris or Sternberg, that mental terms refer to to yet to be discovered 'mental mechanisms' or processes. These claims seem to be based on a rather narrow conception of what can count as an explanation and as what can count as being
real. Norris makes this explicit in his references to scientific realism. As we shall see, there are all sorts of concepts which do not refer to entities and a concept need not refer to an entity in order to have meaning. Examples of such concepts include ‘belief,’ ‘reason,’ and ‘rule,’ as well as the now familiar ‘ability.’

Any of these concepts may play a perfectly useful and respectable role in explanations. I may explain that Helen went out on the ice because she believed that it was thick enough to skate on. I may explain that I am not in a rush because I am able to make it across campus in plenty of time for my class. In either example, the explanation offered may be useful and does not wait on scientific discovery to be meaningful.

To return to the analogy of the bullet for a final time, we can see that the invisibility of the speeding bullet is of a different kind from the invisibility of the ‘thinking’ which leads up to a judgment. The bullet unequivocally causes the hole in the target. It may be invisible but is obviously a physical entity covered by physical laws. Attempts to describe thinking as a parallel process have been seen to involve various types of confusion. Rules, beliefs, and abilities are not invisible because they are going too fast, as bullets are, or because they are too small, as electrons are, or because they are inside our heads, as neural firings are. They cannot be seen because they are not entities at all. This realization, however, should not lead us to think that they have no role in perfectly useful kinds of explanation.

Part of research into critical thinking must be an examination of the norms or
Critical thinking as a social practice / 67

standards of good thinking. Unlike the standards by which one judges the accuracy of target shooting, the standards for judging thinking are complex, not obvious, and potentially in conflict with one another. The task of describing the standards of good thinking is problematic in that they vary depending on the subject matter, one's purposes, and one's culture. Nonetheless, being clear about what critical thinking is, is having some sort of understanding of these standards. But it should be kept in mind that this is an understanding of standards, not causes. When we explain what someone is doing by making reference to the rules which she is following or the standards of adequate performance at her task, we are not identifying the causes of her actions. So, while standards and causes may both be invoked as elements in explanation, and both have to do with observed regularities, there are many ways in which they are unlike each other. Standards are referred to; they are interpreted and consulted. They are part of our practices of justification and criticism. While standards may guide action, they do not necessitate occurrences nor are they attributed on the basis of constant conjunction. Following a rule or acting according to a standard can be done only by agents, that is, by entities which can make choices, whereas many other kinds of entities can cause and be caused.

Often, the result of accepting only scientific explanation as explanations and only concepts which refer to physical entities as meaningful has been to distort the nature of mental and normative phenomena. The desire to operationalize concepts, to reduce the extent to which their use is dependent on context and the judgment of individuals, results in the use of new criteria (a new concept) which
may not be translatable into the original concept (as we saw in section 1.1 with the examples of ‘intelligence’ and ‘understanding a language’).

Given that there are perils associated with adopting the methodology of scientific inquiry for inquiry into normative phenomena, particularly with regard to the elimination of the intentional and normative aspects of the concepts with which our inquiries are initiated, the question arises: what methodology is appropriate to the study of normative phenomena? If we are not after causal explanation with predictive power, what are we after? A brief answer might be that we are after a perspicuous understanding. Wittgenstein used the analogy of coming to know an unfamiliar city. By wandering through the streets, one gradually develops an awareness of the relationships between different areas and comes to recognize familiar areas from new perspectives. This might be contrasted to a social scientist trying to explain why certain areas had come to have certain characteristics.

The analogy could be extended by suggesting that various theorists have been over the relevant territory and have provided a variety of explanations for how things are. Sometimes, caught up in enthusiasm for their theories or new methods for measuring and identifying things or simply confused by different perspectives and atmospheric conditions, their accounts have been misleading. Ideally, we should correct these misunderstandings by showing how things might have looked that way under those conditions but that really it is thus and so.

By analogy (again) this inquiry has proceeded by examining some of the major
areas of debate regarding critical thinking and rationality, pointing out wherever possible, how certain positions reflect a distorted or confused understanding. In particular, this inquiry has been concerned with the ways in which attempts to provide an objective foundation for claims about critical thinking by appealing to cannons of logic or ideals of scientific reasoning have led to misunderstandings about the nature of normative and intentional concepts. Understanding these concepts is of central importance to being clear about critical thinking.

3.5. SUMMARY

To recapitulate the major points of this chapter, it will be recalled that, of the many senses in which the word critical can be used, the one which is most consistent with the purposes which motivate instruction and inquiry into thinking is the strong normative sense. This use of ‘critical’ refers to thinking not for any particular purpose but rather to thinking which meets certain standards of adequacy. The relevant standards are public ones, generated historically in social interaction.

This understanding of standards as social constructions is in opposition to conceptions of rules as internal structures, mechanisms, or any other kind of entity. Thinking is judged as critical or not, on the basis of the results of thinking (actions, judgments, and reasons), not on the basis of the existence of ‘thinking processes.’

The notion of an ability, especially a mental ability, was found to be something
of a philosophical minefield. Abilities are not mysterious entities already existing in potential form in each possessor of an ability; nor are abilities to be identified with the exercise of an ability; nor are ability attributions claims about the state, the structure or the constitution of that which possesses an ability. These facts about 'ability' are devastating for the information processing approach to critical thinking, which takes for granted that there are mechanisms or processes of one type or another which will be found to explain the true nature of any given ability. What this chapter suggests is that there is no reason to believe that inner processes will correspond in any intelligible way to mental abilities.

Abilities cannot even be reduced to sets of sub-abilities without risk of confusion. This suggests that some caution is required in interpreting the multi-aspect approach as well. Specifically, the list of abilities which Ennis suggests are constitutive of critical thinking ability are best understood as a list of tasks at which a critical thinker must be competent. The list is then taken as a set of criteria for the attribution of the term critical thinking rather than an analysis of the constitutive parts of an ability.

It was noted that at least part of the appeal of approaches such as Norris's and Sternberg's, is based on a misunderstanding of meaning and explanation. The most obvious misunderstanding of meaning is associated with the idea that words must get their meaning from their reference - that any meaningful word (including 'ability') must refer to an actual entity. The most relevant misunderstanding of explanation is to overlook the multiplicity of kinds of explanation and think that every explanation ought to conform to the ideal of
certain kinds of scientific explanation. It is suggested that these misunderstandings and confusions demonstrate that the most urgent need in the field of critical thinking instruction and research is not more highly developed theories and testing so much as a more perspicuous understanding of the relevant purposes, standards, concepts, and procedures.
This chapter is devoted to the exploration of two much debated distinctions: that between critical and creative thinking and that between practical and theoretical reasoning. Besides being useful for its own sake in establishing responsible ways of understanding these distinctions, the inquiry will contribute to our understanding of related issues. It is of interest, for example, whether there is one overarching set of standards, or one ideal model of rationality, to which all good thinking ought to conform. If it could be established that there is some such set of standards which applied across both disciplinary and cultural boundaries, this fact would have significant consequences for the issues of generalizability and universalizability raised in section 1.2.

Also of interest is the extent to which the standards of good thinking can be fixed and the related question of whether they can rationally be criticized or changed. If such standards are fixed, coming to think critically may be largely a matter of learning what these standards are and how they are to be applied. If, on the other hand, the standards of good thinking are created rather than discovered, and are subject to revision through history, being a critical thinker will be understood, at least in part, as playing a role in the ongoing construction of the standards of good thinking.

I will argue that there is not a dichotomous relationship between creative and critical thinking - that rather than identifying two categories of thinking, 'critical' and 'creative' are used to express two related sets of standards. Inquiry into
practical and theoretic reason will show that they also, are not in a dichotomous, or even a bi-polar, relationship. Each is used to express a cluster of loosely related values. Several examples of confusion on the part of writers about critical thinking related to the use of the term theoretic will be examined. The conclusion drawn is that the traditional conception of theoretic reason, which involves disengagement from any particular perspective or any particular set of values, is somewhat misleading for inquiry into rationality.

From this latter examination will emerge a further conception of reason which is like the traditional conception of theoretic reason in being contemplative (not aimed directly at a decision about what to do), but unlike the traditional conception in that it involves no attempt to disengage from or transcend the perspective of a given culture or worldview. Of particular importance is the realization that neither disengagement nor transcendence are necessary features of an approach which is aimed at revising, as well as understanding, existing practices. Put negatively, a more interpretive stance need not be a conservative stance.

Before taking up these issues, however, it will be useful to return briefly to the question of how we can examine normative standards which are not stated explicitly by practitioners. If, as I have suggested, the standards by which thinking is assessed are inherent in social practices and are the basis on which actions are criticized and justified, one obvious way to discover the standards is to ask practitioners for their reasons for acting as they do. Their reasons for choosing to do some things and rejecting others ought to make reference to these
standards. An immediate problem arises, however. Many people who can engage successfully in practices, such as speaking a language or doing a trade, are unable to state many of the relevant standards or rules. Even collectively, people have been unable to enumerate the rules which govern any significant human practice. This seems to be a paradox. How can it make sense to say that people are following a set of rules or acting according to certain standards if they cannot produce the standards when asked? But this is to make the same mistake discussed in the previous chapter - to think that 'following a rule' implies 'being able to produce a rule' in the way that 'using a ruler' implies 'having a ruler.'

Why should it be surprising that people can follow a set of rules without being able to state them? Surely it is only a result of trying to assimilate all rule following under the example of obeying an explicit instruction such as, "Keep your elbows off the table." But most of the practices in which we are interested are not learned exclusively, or even primarily, through explicit instruction. Many aspects of most social practices are "picked up" by being around competent practitioners, seeing how they act, and listening to their judgments of products and performances. The fact that competent practitioners may be unable to produce the relevant rules or standards ought not lead us to believe that the rules are hidden; it simply implies that competence at a practice need not include competence at giving the rules of the practice. For at least some practices, coming to be competent implies not having to think about the rules anymore, so it is only to be expected that practitioners need not be "practiced" at expressing the rules. Competence implies that one can act in accordance with
standards but not necessarily that one can express, much less explain them.

If one is trying to understand the standards and rules of a practice, it may be instructive to consider the practice not only from the point of view of the competent practitioner, for whom the standards are most likely to be part of their 'worldview,' but also from the points of view of teacher, judge, and critic. Teachers must be able to identify shortcomings in student performances and explain or demonstrate to students the ways in which their efforts fail to measure up or how they could be improved. Judges not only make judgments about people's behaviour, but must justify their decisions with reference to rules and standards. Critics point out strengths and weaknesses of products and performances with reference to standards and frequently must interpret the objects of criticism in terms which enhance the understanding of a broader audience.

These remarks have obvious significance for a consideration of critical thinking, especially one which is intended to be educationally perspicuous. The central role of judging or judgment has already been commented upon, but the remarks about teaching are suggestive. They suggest that being good at teaching critical thinking requires a more self-conscious understanding of the standards of good thinking than being good at reasoning does. While this implies little about how critical thinking should be taught, it may provide insight into the question of "what teachers ought to know to be good at teaching critical thinking."

The fact that critics and criticism hold a special relationship to standards of
practice is hardly surprising, but it may be useful in illuminating the way in which ‘critical’ is used in talking about thinking. Although an analysis of the use of the word ‘critical’ will not determine the standards of critical thinking, or tell us what critical thinking ‘really is,’ it will be useful in preventing certain misunderstandings and ensuring that certain features are not overlooked. While extensive analysis is not required, a few points do require attention. They can be brought out in discussion of the relationship between critical and creative thought.

4.1. CRITICAL & CREATIVE THINKING

The phrase ‘critical thinking’ has often been taken to refer to a purely evaluational activity, or the identification of flaws in arguments. Robert Ennis’s original characterization of critical thinking was "the correct assessment of statements." He referred to it as being a "kind of thinking" which could be distinguished from other kinds of thinking such as creative thinking, whether or not they could be distinguished in practice (1967, p. 117).\footnote{In later formulations he recognized that "critical thinking is a practical activity" which includes "creative activities" (1985, p. 45).} A teacher whom I met recently suggested that his school had adopted a program of "productive thinking" because it covered the full range of critical thinking, creative thinking, problem solving and the like. Sharon Bailin, citing theorists such as Glaser and de Bono, suggests that the "prevailing" or "standard view" of critical thinking (mistakenly) "sets up a sharp separation between" critical and creative thinking (1986, pp. 2-3). But, while there is no reason that we could not adopt this "standard view" it is not consistent with the conception of ‘critical thinking’...
which I have begun to elucidate, nor does it capture the full range of what educators in general wish to accomplish under the label of critical thinking. As was pointed out above, 'critical,' as it is used in 'critical thinking,' does not refer to a special kind of thinking, but rather to thinking which is judged to meet certain standards. It is recognized above that 'critical' is sometimes used to refer to the habit of identifying flaws and shortcomings exclusively, but that is not its only use and it is argued, is not the most useful way to conceptualize critical thinking.

In many contexts, the distinction between the creative or productive aspect of inquiry, and the critical or evaluative aspect, is overstated or used misleadingly. Positivist philosophers of science developed a distinction which is usually referred to under the the labels 'context of discovery' and 'context of justification.' Some philosophers of science have suggested that discovery, or the creation of novel hypotheses, is essentially mysterious and intuitive - perhaps inexplicable, but that justification, or the evaluation of hypotheses, proceeds according to established rules. Others are simply suggesting that there are two distinguishable phases of scientific discovery. Consider the words of Israel Scheffler, "Objectivity, in general, is a matter of test, control, and critique, and it characterizes the processing of ideas that have been independently and freely generated" (1967, p. 68), and "Creation is free; discipline enters in the evaluation of a theory's empirical adequacy, its logical coherence, and its relative simplicity" (p. 69). An incautious interpretation of such phrases could lead one to think that discovery is completely free and unconstrained and that justification is according to some definitive procedure. It would suggest that critique was categorically different (or,
a different "kind of thinking") than creation or discovery. If such a view could be justified, it might suggest that criticism and evaluation were thinking of a different sort than creative thinking, that critical thinking was not only an evaluative phrase, but also one which identified 'thinking for a particular purpose' and 'according to a particular procedure.' There are many reasons for rejecting such a model for understanding the progress of science or the way in which people undertake other sorts of tasks. The following section explores some considerations from the philosophy of science which demonstrate that, to the extent that discovery can be usefully distinguished from justification, the distinction is more one of degree than a distinction between categories. We may have more developed and better articulated standards for justification than for discovery, but they are closely linked and both are rule-governed.

We might begin by recognizing that the range of possible novel hypotheses is not infinite; in fact it is determined by our linguistic practices at any given time.¹ Nelson Goodman has argued that only those concepts which are suitably entrenched in our linguistic practices are suitable as predicates in conditionals, predictions, and counterfactuals (1983). He suggests that we could invent the predicate 'grue' which would be used to refer to anything which has been green in the past but will be blue in the future (or after any particular point in the future). Although it seems as though 'grue' is a ridiculous predicate, requiring a miraculous change in colour at some arbitrary point in time, this is true only in relation to our existing stock of colour concepts. Relative to a set of concepts

¹. Our practices may change but there are limits to how much of our existing practice we can give up without becoming incoherent: there are limits to how radically we can change.
including *grue*, *bleen*, and *purlow*, all our colour concepts would exhibit this disquieting transformation. But any evidence that we have for an object being green will serve equally well as evidence for an object being *grue*. Given this problem, how can one explain that everyone is willing to accept the statement (1), "If I mixed blue and yellow paint I would get green paint," but no one accepts (2), "If I mixed blue and yellow paint I would get *grue* paint,"?\(^1\) Goodman's answer is that 'green' has been entrenched in our language whereas 'grue' has not.\(^2\) Thus, our ability to predicate can be seen to be constrained by the history of our linguistic practice.

A rather different objection to drawing a sharp distinction between discovery and justification, or creative and critical thought, is apparent in Imre Lakatos's account of the progress of science.\(^3\) Lakatos supports Popper's position that "scientific change is rational or at least rationally reconstructible" (1970, p. 93). Science is "'revolution in permanence', and criticism is at the heart of the

---

\(^1\) Notice that this kind of inference, a kind of inference which is common in scientific reasoning, escapes formalization in syntactic rules. All premises in support of statement 1 equally support statement 2, yet sufficient support of 1 is not taken to be sufficient to establish 2. Short of simply prescribing that 'logic' will be taken to refer to any sort of systematic reasoning, it is hard to see how a logic approach could be interpreted as a comprehensive approach to reasoning.

\(^2\) As Kripke has pointed out, this is (pretty much) the same point that Wittgenstein makes when he discusses the impossibility of private language (1982). In Wittgensteinian language, our practices incline us 'to go on' in some ways but not in others. Once one has accepted the private language argument, the notion that the production of novel hypotheses is not rule-governed but that justificatory claims are, is implausible. The fact that a new hypothesis can be expressed in words shows that it is part of a rule-governed practice.

\(^3\) It may be interesting to note that Scheffler accuses Kuhn of ignoring the distinction between justification and discovery and suggesting that psychological factors were involved in justificatory, as well as creative, aspects of science, while Lakatos accuses Kuhn (p. 93) of failing to recognize that there is a logic of discovery not simply a psychology of discovery.
Two Standard Distinctions / 80

scientific enterprise" (p. 92). As Lakatos goes on to say, his account of the evolution of scientific knowledge (sophisticated methodological falsificationism) is "a theory of criticism" (p. 114) according to which a theory cannot be falsified "before the emergence of a better theory" (p. 119). In Feyerabend’s words (quoted on the same page) "The best criticism is provided by those theories which can replace the rivals they have removed."

On these accounts, criticism is inseparable from the creation of new hypotheses and the evolution of science. While all falsificationist theories are theories of criticism, Lakatos describes the result of his particular formulation as follows: "... the distinctively negative character of naive falsificationism vanishes; criticism becomes more difficult, and also positive, constructive" (p. 120). The sense in which Lakatos uses criticism recognizes the intimate relation between creation and criticism. It does justice to the fact that critique can involve the imaginative use of counter-examples or the construction of plausible alternatives as well as the fact that novel creations can only be judged as novel or worthwhile against a set of standards and within a relatively stable worldview. While particularly significant new ideas may shift the way we look at some aspect of the world and even alter the standards by which ideas of a certain type are evaluated, the same holds true for particularly cogent critiques of important ideas.

Having recognized that no heavy black line can be drawn between creative and critical thinking, it can be noted that the two words are not used interchangeably. It is far more natural to use the word ‘critical’ to refer to the works of a theoretical scientist, a philosopher, or an historian, than it is to the
work of a sculptor or a dancer. 'Critical,' at least in the sense that it is used in 'critical thinking,' seems to find its natural home with reference to standards of rationality. Like the word creative, however, the word critical is not generally applied to the mundane or mechanical following of procedures, no matter how correct the result may be. Most commonly, 'critical' is used to indicate that there is some evidence of good judgment or even inspiration in the application of standards. As Passmore suggests, "A critical person ... must possess initiative, independence, courage, imagination, of a kind which may be completely absent in, let us say, the skilful critic of the performance of a laboratory technician" (1967, p. 198).

It has been noted that the standards to which 'critical' in this sense, refers are the standards of rationality. Unfortunately, this fact is of little assistance in simplifying the task of coming to understand it. Debate about the nature of rationality has been extensive and, in many ways, inconclusive. Even a survey of the ways in which rationality has been the focus of philosophical debates could be a thesis in itself. There is one issue, however, which is of central importance to becoming clear about critical thinking. It concerns the relationship between theoretical and practical reason.

1. Art critics and literary critics evaluate according to aesthetic standards (and possibly other standards as well). Notice that critics may be creative in their own right and that their insights may be constructive as well as 'critical.'
4.2. THEORETICAL AND PRACTICAL REASON

One of the most longstanding debates about the nature of rationality has focussed on the distinction between \textit{teoria} and \textit{phronesis}, or theoretical reason and practical reason. Like many other distinctions, this one has been construed in different ways for different purposes. In its most general use, it refers to the distinction between reasoning about what is, or what is true, and reasoning about what is good, or right, or what course of action ought to be pursued in a particular context. This is, of course, an outrageously vague way of characterizing the distinction. Obviously, there are some claims about what is good or right which are questions about what is the case, rather than being questions about what ought to be done in any given context. However, given the nature of the problem at hand, that is, establishing some general features of the standards of rationality, a more precise definition is not required; in fact, this broad characterization will permit a wider exploration of some issues.\footnote{For those interested in the lively debates about how one can specify the distinction between practical and theoretical reasoning in a more precise way, especially focussing on the nature of the conclusions of practical reasoning, Donald Davidson, H.P. Grice, and Gilbert Harman are three philosophers who have offered such specifications (references to all three can be found in Harman, 1987). Discussion of this issue with regard to problems in critical thinking can be found in Jerrold Coombs "Response to Alan Pearson" (1988). While these issues are interesting and may be important in sorting out some questions, this inquiry is a very general one and does not seem to be affected by the adoption of any particular interpretation of the distinction.}

Much work in critical thinking, as well as much philosophical work, has displayed a marked tendency to either ignore issues distinctively related to practical reasoning or to attempt to subsume questions of practical reasoning under a theoretic model. Sometimes, theoretical reason has been taken to be the...
highest form of reason and practical reason has been understood to be a less perfect, less developed, or less rigorous form of reason.

This section will begin by characterizing a positivist approach to understanding this distinction, showing its inadequacies and its apparent influence on literature in the field of critical thinking. Reasons will also be offered for rejecting some aspect of alternative approaches (such as Norris's scientific realism or some versions of 'naturalized' epistemology) which involve the attempt to reduce intentional and normative terms to theoretic entities. An example of this is the common attempt to treat beliefs as representations. Some other confusions in writing about critical thinking related to a misunderstanding of the relationship between theoretic and practical reason are catalogued. These include the tendency to understand all practical reasoning as the application of covering laws to instances and confusion of explicit knowledge with theoretic knowledge.

Drawing on the work of Kovesi and Lovibond, I argue for a reinterpretation of the relationship in question, one which does away with a dichotomized view of facts and values without attempting to collapse practical reasoning into a special type of theoretic reasoning. This lays the groundwork for the following section in which I suggest an alternative to the goal of developing a theoretic understanding of critical thinking. This is important, I argue, especially to the extent that 'theoretic' understanding is taken to involve disengagement from our purposes and values.

Positivist doctrines about meaning and epistemology, which restrict the kinds of
claims which are meaningful to those which can be empirically verified and those which are logically true, leave no room for rational evaluation of desires, values, and intentions or of the ends for which actions are undertaken. Normative judgments, which form the major premises and conclusions of practical arguments, are regarded according to this stricture, as either being meaningless or as expressing facts (verifiable by observation) about the relevant person's attitudes or desires. If they are meaningless, practical reasoning cannot be rational. But understanding normative judgments as facts about attitudes or desires is no more satisfactory.

Any superficial plausibility such an account might have when used to analyze the practical reasoning of others disappears if one considers one's own practical reasoning. Neither one's preferences nor one's values are established or verified to oneself on the basis of observation. One does not look into one's self and discover one's desires or the conditions for their satisfaction. One may, in fact, reason about which of one's desires ought to take precedence or whether the realization of some desired state would be a good thing, all things considered. Some desires can be changed at will, and many others can be altered over time. We can often distinguish between what we want the most and what we believe is in our best interests or what we ought to pursue. Reductionist approaches which attempt to understand practical decisions in terms of theoretical reasoning are hardpressed to account for these distinctions which seem so commonplace in considering one's own reasoning.

The foregoing is particularly important if one is considering critical thinking from
If our goal is to develop a way of talking about critical thinking which makes sense to students and is useful in helping them to think better, it ought to make sense in a first person account. It ought to be perspicuous from the point of view of someone trying to reason as well as they can, not merely from the external standpoint of someone considering another person’s reasoning. One of the kinds of tasks important to reasoning responsibly about one’s own actions involves the choosing and balancing of various desires and other values. But, we do not seek evidence for or against our desires as we do for a theoretic claim. Nor do we experiment to see what values we hold or what our reasons are, although we may reason about our values and change them on the basis of experience. A useful account of critical thinking ought to do justice to these distinctions.

If one glances through the literature of critical thinking from the 1950’s and 1960’s, it is striking the extent to which the strictures of the logical positivists are represented in the choice of problems to be addressed. This is not meant to imply that those writers subscribed to logical positivism, merely that positivism had influenced intellectual thought in ways that were still evident in the writing of the 1960’s. More than three quarters of Max Black’s book, *Critical Thinking*, is devoted to deductive logic and the scientific method, and the balance is concerned with informal fallacies and problems of meaning. While Black certainly recognizes the importance of context to determining the meaning, and therefore the truth value, of statements, there is no section devoted to understanding.

1. That there is a difference here is well marked by the grammar of our language. As Wittgenstein has pointed out, “It is correct to say ‘I know what you are thinking’, and wrong to say ‘I know what I am thinking.”’ (PI, II, p. 222).
normative judgments. In 1967, Robert Ennis still used a definition of critical thinking as "the correct assessing of statements" and, although he recognized that value statements should be included as being worthy of evaluation, he explicitly refrained from including them in his list of aspects of critical thinking.¹

While he has since amended his conception to include judging value statements, it is instructive to see what an extensive problem it was for his account. One of the consequences of setting aside value statements is that Ennis's paper can give no guidance in the area of second order reflection on the conclusions in several of the 12 aspects of critical thinking which he does identify. To give an example: if one is "judging whether a definition is adequate" (aspect #11) one's conclusion will be a value judgment according to some standard of adequacy. If Ennis's paper does not cover "the judging of value statements," it does not cover this judgment, but this type of judgment is typically involved in any critical thinking. Critical thinkers, if they are to remain critical, must ask, "Is this assessment fair? Are my reasons good enough? Have I grasped the most important point?" All these questions demand answers which are value statements and making well-founded judgments about these statements is fundamental to being a critical thinker.

A possible explanation for Ennis not being inclined to see this as being as much of a problem as I make it out to be may be that he does not regard judgments of adequacy, reliability, and the like, as being value judgments. In

¹. See Ennis (1967, p. 117) for his list of aspects and the mention of value statements. As is well known, he later (1980) amended his definition of critical thinking to include reasoning about what to do.
In conversation, he suggested that "value statements" implies reference to moral or aesthetic standards. I (following Paul Taylor, 1961 and, more directly, the work of Jerrold Coombs) have been using "value statements" or "normative judgments" to refer to claims made with reference to intellectual or rational standards as well as moral, prudential, and aesthetic standards. But, this is not simply a disagreement over definitions. In his most recent book, *Evaluating Critical Thinking*, Ennis indicates that there are "three basic types of inference": deduction, induction, and value judging (Norris and Ennis, 1989, pp. 6-7). If this is so, it is presumably a matter of some import that the appropriate type of inference is employed. Given these choices, it seems clear that the questions asked in the preceding paragraph demand answers which involve the judging of values.

Many critical thinking texts and programs still follow the format of addressing problems of logic and theory (the relating of observation claims to theoretic conclusions) with little or no attention to normative issues or the specific character of practical reasoning (e.g. Harnadek, 1980). Significantly, none of the recognized tests of critical thinking even attempts to measure competence at the tasks which are distinctive to practical reasoning (e.g.'s the ability to test one's

---

1. I would suggest that this is a much narrower interpretation of the term than is usual. In fact, I believe that Ennis is not consistent in using the term this narrowly himself. One example from his own work which implies a more general understanding of what values are is from the authors' preface of a recent work by Norris and Ennis: "Since one element common to all evaluations is that decisions must be made about the relative value of things, we urge that value judgments cannot be avoided (1989, p. xvii).

2. I accept this characterization of the relationship between deduction, induction, and value judging simply for the basis of this argument.
principles or to reflect constructively regarding one's intentions). But, restricting critical thinking to problems of logic and the relation of observation to theory is no more sensible than restricting the category of meaningful statements to those which are unambiguously true or false according to observation statements and tautologies.

Choice of content, or the nature of the problems which are taken to be significant, is only one of the ways in which an emphasis on theoretic over practical reason has adversely affected research into critical thinking. A variation of this position, sometimes adopted by those enamoured with a model of scientific reasoning, is exemplified by the tendency to see all reasoning as subsumable under a theoretic framework in which all practical judgments are dependent on the application of general theories to specific cases. Those who reason without explicit reference to theories are thought to be using tacit theories. When practical reasoning is pictured in this manner, it seems like an inferior form of theoretic reasoning - inferior because it involves the assumption of theoretical positions which are not amenable to critical reflection.

The notion that reasoning about specific instances involves necessarily the application of general laws has, no doubt, been a contributing factor to a variety of rather dubious practices in the teaching of critical thinking as well. Most obviously, it reinforces the widespread notion that, in order to learn how to think critically students must learn the 'forms of argument' or forms of explanation,

¹ Some questions on the Cornell tests are framed as questions about what to do but in each case the point at issue is one of belief rather than one which depends primarily on arbitrating between competing values.
disengaged from the distractions provided by content and context, then learn to apply the lesson learned with abstract forms to the practical, contextualized problems of the real world. This problem is most clearly demonstrated by those who adopt the logic approach.

The dubious assumptions underlying this strategy are many. The most obvious is displayed in the realization that most people learn an enormously complex set of practices governing inferences (including inferences in practical argumentation, inductive reasoning, conditionals and counterfactuals, none of which can be expressed in formalized systems of rules) without even meeting a ‘p’, a ‘q’, or a modus ponens. Assuming that this approach is the only or the best approach is like thinking we should teach children the language by starting with the rules of grammar.

Yet other problems are manifest in the tendency of those interested in critical thinking as argument analysis, to refer to any "rigourous" or "explicit" knowledge as 'theoretical.' For example, Johnson and Blair refer to those unacquainted with the names of fallacies as "not be[ing] conversant with fallacy-theory" (1983, p. 34). This apparent confusion of ‘explicit’ knowledge with theoretic knowledge has been widespread and destructive. It leads people to misunderstand the role of knowledge in a variety of practices including the practices of thinking and teaching. It is important to realize that knowing the rules of a game or knowing a reliable procedure for making pastry is not having ‘theoretic knowledge’ regardless of how explicitly one can express the relevant rules or procedures.¹

¹ Perhaps some degree of caution is required in claiming that knowledge of the rules of a game is not theoretic knowledge. It is, in fact, knowledge about what
Thinking that all explicit knowledge is theoretic leads people to think that the only expressible knowledge about practices (including both thinking and teaching) must come from theory based on research of a scientific kind, rather than simply on accounts of good practice. This leads to a denigration of important and reliable sources of knowledge.  

Another manifestation is displayed in Stephen Norris's suggestion, criticized by John McPeck, that we establish what we mean by claims about abilities by examining how mental processes "arise from mental structures" (1986, p. 1981). This notion, that we cannot be clear about what we mean with perfectly ordinary language until we explore the relevant phenomena experimentally or make it scientifically respectable in some other way, is unfortunate, if all too common. As has been pointed out, making our concepts conform to the standards of conceptualization necessary for many kinds of scientific inquiry involves

\[\text{(cont'd)}\] is the case, and therefore fits the criterion of theoretic knowledge according to one of the common formulations of the concept. Further, it is possible that one could watch people playing a game one did not know and develop a theory about the rules by which they were operating. In cases such as this, the relevant knowledge is more like a typical example of theoretic knowledge in that the truth of the theory is tested against evidence gathered by observation. But in more ordinary cases, in which the ultimate test of the authority of the rules is their provenance and their acceptance as displayed in the practices and judgments of competent players, knowing the rules of the game is not having theoretic knowledge of the game.

In philosophy a parallel problem has existed over the question of the need for 'theories of meaning'. A.J. Ayer has discussed this briefly in noting that while Wittgenstein's influence on philosophy has been profound, much of the debate about theories of meaning has ignored one of his central theses - that the kind of understanding we are most in need of in philosophy, especially in regard to concepts like meaning, is not theoretical (1985, pp. 137 & 142-3). Ayer, as well as some more sympathetic critics of Wittgenstein, is not impressed by Wittgenstein's stated preference for description over explanation, arguing that it is more of a pose than a principle which guided Wittgenstein's own work. The next section may be useful in seeing how a more constructive interpretation of Wittgenstein's distinction could be made.
changing them. With these new, changed concepts, one may be able to do something interesting and worthwhile, but it will not involve establishing the meaning of the ordinary language concepts in which the original problem was framed.

This tendency is also displayed by those who imply that we cannot be said to understand epistemology or rationality unless they can be reduced to a set of more scientific concepts. One way of expressing this tendency is as the attempt to produce a "naturalized" epistemology or theory of rationality. This attitude is prevalent among those interested in artificial intelligence and cognitive science, including philosophers Fred Dretske, Jerry Fodor, and John Perry. Another philosopher who at least approaches the brink of confusing such normative issues with theoretic ones is Gilbert Harman in his book entitled *Change in View*.\(^1\) Because radical positions in favour of both the need for, and the possibility of, a naturalized theory of rationality are so obviously at odds with the account being developed in this thesis, there seems little need to explicate the differences in detail. Treatment of major parts of Harman's more subtle and self-aware accounts goes beyond my immediate objectives. Nonetheless, one general objection which applies to Harman, as well as the more obvious advocates of naturalized versions of normative enterprises, can be made.

It seems significant that almost all attempts to produce a naturalized account of reason rely on a reduction of the concept of belief to the notion of representation. Harman's account is somewhat more sophisticated in that he

\(^1\) Whether Quine should be included on this list is a complex question, as is made clear by Putnam (1983, pp. 240-5).
allows that there are "implicit beliefs" as well as beliefs which are "explicit mental representations." Nonetheless, it is explicit beliefs, or representations, which must do most, if not all of the work in his theory. For example, it is explicit beliefs to which his "principle of clutter avoidance," applies. But there is little reason to accept that a theory of how we do, could, or should revise "mental representations" is a theory of belief revision. By this, I am not saying that beliefs may not be accompanied by mental representations - we often associate a certain mental picture (for instance, the colour and shape of a book located amongst other books) with a certain belief (for instance, that the book is in a certain location). Sometimes the representation may take linguistic form, as a string of phonemes or perhaps as visual symbols.

We may note that sensations are like representations in this regard, i.e. they may be typical accompaniments of certain beliefs. The belief that I am about to taste a delicious meal, for instance, may bring on a whole complex of pleasant sensations. But neither the representation, in whatever form, or the sensations, are the beliefs. It is easy to imagine situations in which one might experience

---

1. Implicit beliefs are not to be confused with beliefs which are held subconsciously or unconsciously. The examples of categories of implicit beliefs given by Harman include those beliefs which are implied, or otherwise inferrable, or in some other way presupposed by one's explicit beliefs (1987, p. 13.). A hostile critic might construe these as 'unrepresented representations'.

2. "Clutter avoidance" is the notion that we do not/should not form, or hold on to; trivial beliefs. This idea plays an important role in his account of how beliefs become vulnerable to revision.

3. This is quite different from the potential objection which Harman attempts to forestall, that might be made by a logical behaviourist such as Daniel Dennett. His objection would be to the idea that there are such things as explicit beliefs. Harman addresses this behaviourist objection although it is not clear that his response is adequate. In particular, it is not clear what is being referred to by the phrase, "whatever explicit thing underlies belief." If it is behaviour or brain states which underlie belief (surely the most obvious choices for Dennett), it is difficult to make sense of the word 'explicit' in this phrase.
the same mental representation or the same sensation without having the same belief. Similarly, one might have the belief without the sensation or the representation. One might, for instance, believe that one was attending a fascinating lecture without ever experiencing any particular "being fascinated" sensation or having the phrase, "This is a fascinating lecture," occur.

The mistake of conflating beliefs with representations seems to be a result of trying to turn beliefs into entities of the sort which are amenable to the kind of theorizing which Harman, Sternberg, and others wish to do. But the notion that beliefs take up space, be it mental or otherwise, in any more than a metaphorical sense, seems a questionable assumption. Further, the notion that we can quantify beliefs in any way which is relevant to their "taking up space" is also questionable. The fact that we can individuate a belief under a "content" description (as the belief that X) does not mean that it can be individuated at some other level of description, for instance, at the level of neural activity. Thinking of beliefs as representations makes it easy to think, however, that beliefs exist as identifiable objects in the mind.

Yet another consequence of seeing scientific or theoretic knowledge as the highest or best form of rationality is manifest in the assumption that increases in knowledge are brought about by bringing our understanding of more and more aspects of the world under a theoretic model. If, however, a theoretic approach is appropriate or productive in only some kinds of inquiry or for the study of some areas of human interest, this belief is ungrounded. The development and application of theoretical understanding of some aspects of our world may be
Two Standard Distinctions / 94

unproductive or run contrary to other human values. In the words of Charles Taylor:

The kind of thinking favoured by the modern understandings of freedom and reason is disengaged. That is, it is the kind which strives to draw as little as possible on our implicit understanding of the context of practice in which we act, so that discourse is as far as possible comprehensible independent of particular life experiences and cultural settings.

While Taylor recognizes the worth of striving in this direction for certain purposes, he warns:

... this ideal distorts practical reason beyond all recognition. By its very nature practical reason can only function within the context of some implicit grasp of the good, be it that mediated by a practice to which this good is internal or by practices which contribute to it as cause and constituent, or by contact with paradigm models, in life or story, or however (1988, p. 18).

In a variety of traditions of social theory and philosophy, writers have sought an account of rationality which is more inclusive than the positivist, or as Taylor more broadly labels it, the ‘modern’ conception. While there is much debate and disagreement about some aspects of such an account, there is general agreement that it must proceed from within the structure of existing norms and beliefs (rather than from some Archimedean point or outside source of revelation) and
that it must include a range of normative, as well as logical and empirical dimensions. Philosophers are less inclined to see their own particular historical and cultural context as being irrelevant, or as being interference with, doing good philosophy or thinking clearly. In general, the possibility of a truly disengaged perspective is denied.¹ Further, the generally pragmatic trend in recent philosophy emphasizes the extent to which questions of truth or adequacy of claims are dependent on human purposes.

Among other factors, these trends in philosophy have led to a deemphasis on the disengaged theoretical perspective and a recognition of the importance of contextual and normative issues - those issues which characterize practical reasoning. Conceptions of critical thinking which do not do justice to the normative element are based, I would suggest, on an obsolete conception of rationality, one which has been criticized quite relentlessly by a range of philosophers since the 1920's.

Not surprisingly, one of the areas of study which has been most concerned with developing an adequate account of practical reason which emphasizes its rationality is the field of ethics. Ethics has a special concern with decisions about what one ought to do. Thus, ethics provides a rich field in which to find ideas which lead to a more constructive construal of the relationship between theoretic and practical reason than the one criticized above. Of particular interest are ideas from the work of Julius Kovesi and Sabina Lovibond. Together, they

¹. There are exceptions. Thomas Nagel, for instance, argues that it is possible to abandon one’s own point of view and adopt The View from Nowhere (the title of his 1986 book).
outline what I will refer to as an ‘expressive’ approach to understanding language,¹ which can be contrasted to the representational, or ‘picture-theory’ of language adopted by the logical positivists from Wittgenstein’s early work.

Kovesi attacks the purported dichotomy between descriptive terms and evaluative ones. He points out that, while the term "yellow" functions very differently than the term "good," that the difference is not attributable simply to the fact that one is a descriptive term and the other is evaluative. It is the case, for instance, that one can have two objects which are exactly the same in terms of perceptual characteristics except that one is yellow and one is not. But one cannot have two objects (or actions) which are exactly the same but one is good and the other is not. Goodness is not an independent quality in the way that yellowness is.² But this should not lead us to imagine that there is a difference in metaphysical status between evaluative and descriptive claims - that descriptive qualities are real in a sense that evaluative qualities are not. As Kovesi demonstrates, neither "yellow" nor "good" are typical examples of descriptive and evaluative terms.

The terms "table" and "murder" are also a pair of descriptive and evaluative terms, but "table" is more like "good" than "yellow" in this respect - that is, one cannot have two objects which are exactly the same except that one is a table and one is not. In the case of neither "tables" nor "murders" can one

¹. The term is Lovibond’s (1983).
². One would need to specify some sort of ceterus paribus clause specifying that the same sort of goodness was being judged in the same sort of context, in order to counter possible objections, but as we will see, some such specifications would be required in the case of descriptive terms which share this characteristic of lacking independence from other qualities.
specify what makes them the same in terms of their physical characteristics or phenomenal qualities.¹ What makes one table "come to the same thing," to use Kovesi's felicitous phrase, as another, is its use or its place in our lives—the fact that people generally find it useful to have level surfaces on which to set things and predominantly planar surfaces on which to work. What makes one "murder" come to the same thing as another is the importance in our lives of blaming people or invoking sanctions of various types as a means of controlling people's actions.

Kovesi notes that Hume, one of the founders of the tradition of modernity which has been criticized as providing inadequate conceptions of practical reasoning, was correct in pointing out that "we cannot find that 'matter of fact or real existence' which we call vice" (1967, p. 18). But neither do we "perceive something called 'table' over and above the material elements that have to be present in order that something should be a table" (p. 19). He continues:

In an important sense, in the world there is no value and there are no murders, tables, houses, accidents or inadvertent acts. But our language is not about that world in which there is no value or no tables, houses, accidents or inadvertent acts. That world, the world of raw data, cannot be described for the sense of that world also lies outside it and the very description of it, likewise, lies outside of

¹. Kovesi uses the phrase "material elements" to refer to these characteristics while Coombs draws a similar distinction by speaking of the "experiential meaning" of a concept. The contrasting terms are, respectively, "formal elements" and "relational meaning."
Lovibond expresses the reverse side of this realization. She argues that, contrary to the position of 'non-cognitivist' writers in the field of ethics, our evaluative judgments are not glosses or interpretations laid over our "descriptive" or factual perceptions. To return to Kovesi's example, our perception that something is a murder is as direct as our perception that something is a table. Neither is a raw or unconditioned perception of reality, nor is either necessarily based on an inference from some more basic level of perception. Both are coloured by human interests, as all our perceptions are. Lovibond argues that some moral claims express directly perceivable facts in the same way that anyone standing in front of an appropriate piece of furniture would accept that, "This is a table," states an empirical fact directly verifiable through the senses. Thus, in terms of the world which human beings inhabit and make sense of, things such as 'kind acts' or 'murders' are as real as, or are of the same metaphysical status as, things such as tables and collisions of billiard balls.

To be clear, it is important to point out that acceptance of the 'realist' position argued for by Kovesi and Lovibond and sketched briefly in this account, does not necessitate accepting the claim that evaluative terms cannot usefully be

---

1. He goes on to say that the closest analogy we have to words that would mirror the world of data are colour words.

2. This kind of realism is to be differentiated from the scientific realism of Stephen Norris and of the earlier works of Hilary Putnam. The realism of Kovesi and Lovibond is the recognition that the metaphysical status of murders or values is the same as that of collisions of billiard balls or electrons. That any of these things form meaningful categories is similarly dependent on human purposes and ways of life.
distinguished from descriptive terms, or that normative discourse operates according to the same rules and standards as theoretic discourse. These arguments do not warrant a rejection of the naturalistic fallacy. What they do imply is that the application of moral notions is not more subjective than the application of descriptive terms because one refers to ‘real’ properties whereas the other merely expresses a feeling about something. Further, they imply that value judgments are no less rational or appropriate as objects of rational criticism than empirical claims are. If it is the case that there tends to be less controversy over whether something is or is not a table than there tends to be over whether something is or is not a vicious act, the difference does not lie in the fact that the criteria for tables are more objective than the criteria for viciousness.¹

While I will not attempt to rehearse here the differences between the norms and procedures of theoretical and practical reasoning, I do think that two features of the relationship are important to consider. One is that practical reason does have a certain autonomy from theoretical reason. All the facts about what is the case (in the more ordinary understanding of ‘facts’ rather than Lovibond’s) do not necessarily lead to a conclusion about what ought to be done. But it is certainly

¹. It seems reasonable to assume that the explanation for this difference is rooted in the different place of moral terms and descriptive terms in our ways of life. Moral terms are used to assign praise and blame and form part of a network by which we establish rewards and punishments. Being successful at disputing approbations and drawing commendations is an achievement with direct consequences for how one is treated from a very early age. Attributing and evading responsibility continue to have importance for how we are treated and how we are justified in treating others. The practice of disputing the use of more purely descriptive terms is not typically associated with similar urgency or payoff. I should point out that this is very different from the explanation which Lovibond offers.
not the case that beliefs are irrelevant to the responsible or rational formation of intentions. The second feature of the relationship is that it is extremely difficult to state categorically the differences between theoretic and practical reason. If we reconsider the quotation earlier in this chapter from Charles Taylor, that "By its very nature practical reason can only function within the context of some implicit grasp of the good..." we might note that all reasoning takes place within the context of some "implicit grasp" of what constitutes a valid inference or a "good" argument, among other things. I am not trying to suggest that Taylor does not realize this point or that he is offering this statement as a formulation of the distinction. He is using this phrase to indicate how a central ideal of theoretic reasoning, that of disengagement, is detrimental to an adequate conceptualization of practical reason. As such, he might be understood, though surely he would not wish to be, as saying that practical reason is characterized by this "implicit grasp" of certain central goods or values in a way in which theoretic reason is not. The most it is reasonable to claim is that theoretical reason involves the attempt to disengage oneself from any particularities in one's conception of the good which might be specific to an individual or cultural/political group. However, not all values or commitments to certain goods can be avoided. Most obviously, a commitment to the worth of establishing the truth is presupposed when one engages in any inquiry, no matter how theoretic.

Gilbert Harman suggests a distinction between practical and theoretic reason by suggesting that:

In practical reasoning one can be justified in satisficing even in choosing among competing plans at the same level. In fact, this is
often what one should do - make an arbitrary choice of a satisfactory plan to accomplish one’s goals. But in theoretic reason one would not be justified in making an arbitrary choice of what to believe among competing hypotheses at the same level (1987, p. 68).

While this certainly has some immediate plausibility, careful reflection on Lakatos’s reconstruction of scientific evolution might suggest that there is more arbitrariness or convention involved in theoretic reasoning than Harman’s formulation of this distinction would incline us to believe. Once again, I am not denying that there is a distinction which can be drawn, but I am suggesting that the distinctions are perhaps more subtle and complex than can be captured at this level of abstraction.

Harman offers a further distinction between the two kinds of reasoning by noting that the role of desires is different in practical from theoretic reasoning. The fact that one wants to do something is a *prima facie* reason in favour of doing it (or intending to do it) whereas the desire that something be true is not a reason of any kind for believing it to be true (1987, p. 77). (He qualifies this claim carefully so as to avoid asserting that desires are irrelevant to theoretical reason.) While the claim seems well-founded, it is hardly a discovery about the nature of the relationship between practical and theoretical reason so much as a statement of one of the criteria by which we differentiate them. Consider Charles Taylor’s definition of theoretic understanding as being aimed:

... at a disengaged perspective. We are not trying to understand things merely as they impinge on us, or are relevant to the purposes
we are pursuing, but rather grasp them as they are, outside of the immediate perspective of our goals and desires and activities (1982, p. 89).

Here we must remember that such disengagement is of varying degrees. We can no more have complete disengagement than we can have, in Kovesi's terms, description of the world in terms of "raw data." Practical reason, on this account, must be something like reason with the ideal of taking a full range of goals, desires, and purposes into consideration.

Most fundamental to the the project at hand, an understanding of the standards of rationality or critical thought, are the realizations that practical reasoning is neither an inferior form of theoretic reason nor a mere expression of feeling in contrast to a legitimate claim to represent the truth. Practical reason is related in complex ways with theoretic reason but is not reducable to it. As Harman says, "Theoretical and practical reason are ... intertwined" (1987, p.113). To the extent that it is possible to identify norms, strategies, and procedures which exemplify good practical reasoning, they are as much a legitimate part of critical thinking as, for instance, the standards and procedures for relating observation claims to theories are.¹ Because second order reflection on the adequacy of one's own attempts to explain, conceptualize, describe, or justify, involves making practical judgments about whether to accept, revise, or reject various bits of reasoning, the most theoretic of reasoning necessarily involves what has

¹. The standards and procedures of normative reasoning are perhaps explored most exhaustively by Paul Taylor in his Normative Discourse. Jerrold Coombs has done considerable work in explicating the standards of practical reasoning in educationally perspicuous terms. See for instance, "Practical Reasoning: What is it? How do we enhance it?"
traditionally been referred to as practical reasoning. For these reasons, it is suggested that ways of talking about and teaching responsible approaches to reasoning about practical and normative issues is an area much in need of attention. Many of the existing accounts of critical thinking and many of the programs for instruction and evaluation based on them have tended to ignore or undervalue the importance of normative reasoning in general and practical reasoning in particular.

4.3. INTERPRETATION AND THE PRACTICE OF CRITICISM

Given the arguments of the previous section, that an overemphasis on theoretic reason and/or a misunderstanding of the relationship between theoretic and practical reason has misled research and writing about critical thinking, an alternative approach is indicated. In this section, I attempt to articulate a general stance to the study of rationality which avoids what I argue is the illusion of a disengaged perspective in the study of our rational practices. One issue involved in this enterprise is the possible concern that in giving up a disengaged perspective we may also give up the 'critical distance' necessary to reform or improve those practices. I will argue that this need not be the case.

If reasoning is divided into two distinct categories, the categories of practical and theoretic reason, or even if their relationship is regarded as being a matter of degree along some continuum, then attempts to understand rationality or critical thinking will appear to attempts to achieve theoretic understanding. They would obviously not be practical, in the sense of being directed at deciding what to do,
so they would seem to be theoretic. On the basis of arguments in the previous section, the drawing of such a conclusion can be seen to be a mistake. It is a mistake because practical and theoretic reason are not dichotomous, nor are they simply opposite ends of a spectrum.

Each is associated with a cluster of loosely associated attributes. Theoretic reason has traditionally been associated with thought that is rigorous, explicit, contemplative, and disengaged. Further, it has been associated with the notion of transformation or revision. Back as far as Plato, the notion of theoretic reason has been associated with transcending the limitations of our particular traditions and practices and creating a 'critical' distance from which to view society and ourselves. Practical reason has been associated with commonsense ‘know-how’ which cannot be expressed in rigorous language and is used to guide action. Often, it is thought to be the sort of reasoning we pick up ‘uncritically’ as we are inducted into the traditional practices of everyday pursuits.

This section is an attempt to disentangle some of the different aspects of these clusters, showing that there is an alternative to the traditional theoretic perspective which is particularly relevant to the study of rationality. I will argue that such a perspective can share many of the virtues of the theoretic perspective, including being explicit, rigorous, and revisionary, without taking the notion of disengagement as an ideal. Such a position is a realistic alternative to the illusion of establishing a transcendentally objective foundation on which to ground one’s theorizing, or the notion of a neutral position or vocabulary which could be used to avoid issues of ideological or cultural differences. The explicit
adoption of such a stance would be useful in ensuring that we are not misled (by the ideal of disengagement) into the illusion of an a-cultural, non-ideological, or value free conception of critical thinking. This runs counter to Ennis’s stated expectation that critical thinking would not correlate with "political, social, and moral values" (discussed on p. 14, above). Seeing that an intellectually responsible alternative to the traditional theoretic stance exists ought to be a useful counter-influence to the widespread notion that improvement in the understanding of rationality can only come about through better theories and their scientific verification and the other questionable moves documented in the previous section.

The alternative I propose will not be defined any more precisely than theoretic or practical reason have been. In fact, the approach to reasoning to which I am referring is difficult even to label very adequately. For purposes of this discussion it will be referred to as taking an interpretive stance. In social theory, it has been referred to as verstehen. Wittgenstein uses the phrase "perspicuous understanding" to refer to somewhat the same thing. Some writers refer to hermeneutic understanding. Clifford Geertz borrows the term "thick description" to label one avenue to understanding of this kind. While I am deliberately avoiding tying this notion to any particular formulation, I wish to emphasize some characteristics which are connected with each of these examples. As the notion is developed, the work of a number of well-known philosophers will be used as landmarks by which to explicate the proposed perspective.

In each of the cases mentioned, there is an attempt to capture as closely and
completely as possible an understanding of some aspect of life from the perspective of the participants. As indicated, this sense of understanding cuts across the distinction between practical and theoretic reason. If we construe theoretic reason in Taylor's terms, as "not trying to understand things merely as they impinge on us, or are relevant to the purposes we are pursuing, but rather grasp them as they are, outside of the immediate perspective of our goals and desires and activities," we could construe this interpretive understanding as being from the perspective of an informed participant in whatever practice or aspect of life provides the context for inquiry. This means taking into account the purposes, goals, desires, and activities from which theoretical reasoners are trying to disengage themselves. Obviously, as is the case with theoretic reason, there are limits to the extent that one can "adopt a perspective" for the purposes of an inquiry, especially a perspective which is very different from one's own. What the 'adoption of a participant's perspective' means will vary dramatically with context. The task of taking the view from the inside of a practice is very different for anthropologists or historians trying to understand the customs of another culture than it is for linguistic philosophers who are trying to offer a perspicuous account of practices familiar to both the philosophers and their readers.

This understanding from an internal perspective is like practical understanding in that it involves the preservation of the purposes, values, and nuances of meaning in context, in as rich a sense as possible. However, in the same way that theoretic reason is not aimed directly at making choices about specific actions (although it may inform such choices in a productive manner) neither is this
kind of understanding. While it is not disengaged from purposes, values, and goods peculiar to a given practice or set of practices, it is disengaged from the immediate context of decision making about what to do. Unlike a new immigrant faced with practical decisions about how to cope with the exigencies of life in a strange land, anthropologists, translators, or historians can face the problems of their inquiries as relative abstractions. This understanding is contemplative in the sense that Aristotle associated with theoria as opposed to the phronesis required of a general or statesman.

While it is recognized that this kind of understanding has been only very roughly sketched out, and that it might be possible to say more about the kinds of standards, purposes, and particularities of context from which one can disengage or partly disengage and still take part in either theoretic or interpretive understanding, I suggest that as it stands the distinction is of some utility in characterizing certain important issues. These issues have been brought out quite clearly in current debates about rational inquiry in the field of ethics, a field in which normative issues are most likely to remain at the centre of attention. In the following paragraphs I will describe two such disputes in order to bring out issues relevant to inquiry into standards of rationality.

Charles Taylor's account in "Justice After Virtue" (1988) brings out this issue in discussing fundamental differences between the approaches of Rawls and Nozick, and that of MacIntyre. Keeping in mind the coarseness of this distinction, we can understand Taylor as saying that Rawls and Nozick want to examine the

1 More will be said about the sense in which there are values and goods internal to a practice in the last section of the following chapter.
issue of justice from a relatively theoretic standpoint. In Taylor's words, "Nozick abstracts from society altogether. The rules of right distribution are exactly what they would be if we weren't associated at all, but met in a state of nature, as say, members of quite independent clans might meet at some watering-hole in the desert" (p. 20) and, "Rawls in a different way wants to abstract from any particular pattern of indebtedness" (p. 21). MacIntyre, on the other hand, suggests that we can have only a fragmentary and distorted notion of justice when viewed from such a disengaged perspective. How disengaged Rawls perspective is and how disengaged he intends it to be is in contention in this debate. Obviously, a commitment to some values including equality of individuals and many standards of good reasoning are presupposed in the construction of the epistemic position behind the veil of ignorance. Whether or not much more, including commitment to a range of liberal sentiments and presuppositions about the relationship of the individual to society is being presupposed, and whether Rawls is cognizant of this, (ie. whether he thinks he is constructing a liberal or a universal theory of justice) is a debated point. But, whether or not Rawls is passing off ideas which are strongly conditioned by his own political and cultural presuppositions as if they were universal and eternal claims about the nature of justice, it is claimed by MacIntyre that 'justice' is not perspicuously understood from such a disengaged perspective. Taylor, Walzer, and Lovibond are all with MacIntyre on this side of this issue. They are all pursuing approaches to understanding which are much more explicitly attached to our traditions and our current purposes, desires, activities, linguistic practices, etc. (However, they are not necessarily committed to MacIntyre's further claims that a perspicuous understanding can only be achieved through a detailed reconstruction of our
intellectual history in the form of a narrative.) It is this latter position, that value issues are best understood, at least for some purposes, by making use of, rather than trying to escape, our current practices and standards, which I argue, provides a realistic model for inquiry into rationality.

Something of the same issue separates Habermas’s and Foucault’s approaches to ethics and social theory. Habermas opts for the theoretic perspective of the ‘ideal speech situation,’ disengaged from existing practices of interpersonal relations with their ubiquitous imbalances of power and authority. Foucault, on the other hand, tests and describes the limits of present day concepts and practices by examining them and the concepts and practices from which they evolved. Habermas seeks to transcend, in so far as possible, the limitations of any particular viewpoint by considering only those issues which arise in any communicative situation. Foucault wishes to illuminate or ‘render visible’ the elements of our worldview which are ordinarily unseen or accepted as given because they are the means by which we make sense of the world. Foucault deliberately stays within the confines of an immanent critique, pointing out that many of our existing practices result from arbitrary decisions and mistakes, or are the unintended by-products of the pursuit of goals since forgotten, and so on. Significantly, he shows that this immanent approach is consistent with critical reassessment and revision of current standards and practices.

Three issues of particular relevance to the study of rationality arise from these disputes. One has been made already. It is that there are kinds of knowledge which can be rigorous and explicit and contemplative, which are not theoretic in
the sense in which theoretic is normally contrasted with practical or interpretive. Such knowledge is exemplified in the works of those philosophers arguing for an ‘engaged’ examination of our moral and social beliefs and standards.

The second point is that there are some limitations on adopting a disengaged perspective which are peculiar to inquiry into practices of rational or critical thinking. One way of expressing these limitations is to consider Taylor's critique of Nozick, quoted above. Recall Taylor’s point, that Nozick discusses the nature of social arrangements and standards of morality in a state of abstraction from any existing patterns of association. Leaving aside the question of whether this is a good perspective from which to understand how we do or should arrange our social relationships, one can see that an inquiry into rationality cannot pursue a parallel course. We cannot disengage ourselves from existing patterns of argument and rules of inference and continue to conduct any inquiry, including one into rationality.

This is not a claim that we cannot theorize (in some sense) about standards of rationality. It simply suggests that there is an additional factor which limits the extent to which we can disengage ourselves from the very purposes, goals, and standards which are the object of our inquiry. To a larger extent than is true in some areas of inquiry, we necessarily approach inquiry into rationality from a standpoint internal to our existing practices.

It might be thought that these limitations could be avoided by seeing how others have reasoned, especially others who appear to have somewhat different standards
and procedures for arriving at conclusions regarding rational assertability or rational action. In addition one might exercise one's imagination and conceive of other possible standards and procedures. But, there are severe limitations on both of these approaches to escaping the constraints of our 'implicit grasp' of the standards and practices with which we reason. As Donald Davidson has argued, for us to understand or make sense out of actions, practices, and language which are not our own, we must see them as at least partly commensurable with our own.

To understand them is to understand them through our own conceptual scheme. Just as we cannot describe Kovesi's world of raw data, we cannot place ourselves within a very different conceptual scheme, except as it is mediated though our own stock of concepts. Presuming that what other cultural groups do is sensible and intelligible in our terms is required in the process of translation or interpretation. On this subject, Hilary Putnam cites Vico as follows: "... in translation, we seek to maximize the humanity of the beings being translated" (1983, p. 150). Without the assumption that speakers of another language are communicating beliefs and intentions which are somewhat similar to our own, according to rules which operate somewhat as ours do, we lack any criteria for 'getting it right' in translating. And the notion that we can get further, or get more distance between our inquiry and our own worldview through imaginative displacement than we can through interpretation tied to concrete alternatives seems improbable.¹

¹ MacIntyre quotes from three different translations of a passage in Homer's *Iliad* describing a case of practical reasoning in order to display the extent to which interpretation is coloured by the translator and audience, not as a defect in translation, but as function of constraints on translation and understanding
Rationality, on this account at least, is inextricably bound up with being human. Being rational cannot be separated from the realization of whatever purposes human beings have, or come to have, or from the notions of community and communication which characterize human life and make rationality possible. No understanding of the world, no matter how disengaged, is unaffected by what we might call the material facts of the human condition: i.e. the fact that we have certain kinds of sensory organs and other bodily characteristics, that we typically come to have certain expectations, or ‘go on’ in certain ways based on certain kinds of experiences, the fact that we have evolved as beings with complex social needs and communicative capacities. Nor can it be disengaged from our linguistic rules and traditions of inquiry and argumentation.

The third and final point regarding the relationship between taking an interpretive and theoretic stance is that an interpretative understanding does not imply that one is bound to a conservative stance - merely replicating the status quo. This might seem like a contradiction of the point just made, that we can only make sense of the world according to our existing stock of concepts, standards, and procedures. It should not be taken this way. Our existing conceptual scheme, as Quine and Davidson refer to it, is complex and open ended. Even our most central standards of rationality require interpretation or application to new circumstances. Consider the standard of simplicity, as it applies to theoretical structures, as an example. Simplicity is cited as a criterion of a good theory in almost every attempt to spell out such criteria. Nonetheless, there has never been and it is unlikely that there will be a formal account of

what counts as a simpler theory. Which theory is simpler in any given case may be a matter of debate and contestation. Sometimes, what has been taken to be a simpler theory may be shown to be more complex by a new argument or new formulation of the criteria of simplicity.

My main point here is that there is room for argument and revision of standards within an interpretive approach. Taking an interpretive stance does not imply the acceptance of our existing standards, procedures, and concepts as ideal or immutable. They must stand the test of ongoing debate, application to new examples or problems, and confrontation with an evolving set of competing alternatives. In fact, there are traditions of debate, evaluation, and criticism which seem likely to produce change and revision within our conceptual schemes.

One interesting treatment of this question is offered by Michael Walzer, in his book on *Interpretation and Social Criticism* (1987). In his preface he suggests that the book asks the question "as much political as it is philosophical, whether social criticism is possible without ‘critical theory’" (1987, p. ix).¹ He suggests, however that, "Social criticism is less the off-spring of scientific knowledge than the educated cousin of common complaint" (p. 65).

¹ It may be worth noting, at this point, that there is a certain amount of confusion, at least within the field of education, between critical theory and critical thinking. For example, Brookfield’s latest book (1988) incorporates some elements from the tradition of critical thinking (as rational thinking) with some notions from critical theory (as in the Frankfurt School) without differentiating the very different traditions and purposes which have motivated these two different streams of research. Perhaps I should point out that I am not making the same mistake by equating Walzer’s use of ‘social criticism’ with ‘critical thinking’ either. Walzer’s term refers to claims made for a particular purpose, from a particular perspective. Critical thinking refers to any purposive thinking which meets certain standards.
He argues that three approaches to moral and social philosophy can be distinguished: that of discovery, invention, and interpretation. Discovery can be the product of religious revelation, as it was for Moses, or philosophical theorizing as it was for Bentham. Discovery also is the most appropriate characterization of the goal of those searching for a ‘naturalized’ theory of epistemology or reason. Invention is associated with Descartes project which was "to reform my own thoughts and to build on a foundation wholly my own" (quoted from Descartes's *Discourse on Method* by Walzer, p. 9). As examples of moral philosophers who take this approach to ethics, Walzer cites Rawls and Habermas who invent the veil of ignorance or the ideal speech situation as means for detaching ourselves from any more particular perspectives on morality. Walzer claims that "The point of an invented morality is to provide what God and nature do not provide, a universal corrective for all the different social moralities" but then goes on to ask, "But why should we bow to universal correction?" (p. 13).

If the 'invented morality' was in radical conflict with our existing intuitions about what was right and wrong, why would we accept it? For it to seem somewhat plausible, or to get a grip on our sensibilities, (as Rawls and Habermas’s inventions clearly do) an invented morality must be relatively close to what we already believe. It must approach an interpretation of existing practices and judgments. Thus, the disengagement is limited. Adoption of the view from behind the veil of ignorance on this more minimal conception of invention is, in Walzer’s words, to "surrender all knowledge of our position in society and of our private connections and commitments, but not, this time, of the values (like liberty and
equality) that we share (p. 16). This construal of Rawls invention makes it into more of an interpretive device, but at the cost of making it less obviously of universal import. That is, it will only have a grip on those for whom it seems to represent an intuitive understanding of ethics.¹

Returning to a consideration of Bentham’s or for that matter, Moses’s ‘discoveries,’ we can see that the same constraints apply. Why would they be accepted (on rational grounds anyway) except that they appeared to interpret more clearly standards that were already accepted or lead more productively to goals which were already the goals of their respective audiences. It seems significant that, as Walzer notices, the history of utilitarianism is largely a story of successive modifications to bring the products of the theory into closer alignment with existing moral intuitions.

The obvious conclusion pointed to by these remarks is that approaches of discovery and invention, at least in the field of ethics, are constrained by existing practices and values in the same ways in which interpretive understanding is. All rely on an appeal to values which are part of our existing stock of values. But, given that we have a number of values, interrelated in many different ways, there is always the possibility of appealing to existing values in new ways and arguing that some ought to be reevaluated in light of new examples and arguments. This is a reasonable characterization of what

¹. Whether or not the perspective from behind the veil of ignorance or Rawls difference principle can get a grip on everyone’s imagination, or only those from a particular culture or those who share a particular ideology, is largely an empirical question. Obviously neither command universal acceptance but there are many reasons other than differing intuitions which could account for this.
criticism and interpretation are.

I suggest that what is true of the study of ethics and social theory, is equally true of the study of rationality and critical thinking in this case. The adoption of an interpretive stance need not be the adoption of a conservative stance. Practices of criticism and revision are internal to the practices of rationality and one need not adopt (if indeed one can) a transcendental or disengaged stance in order to gain critical distance from existing practices and standards. It may be useful to summarize the major issues of this section. I have suggested that:

1. there is knowledge which can be explicit, rigourous, and contemplative, which does not rely on the ideal of disengagement from existing practices and values;
2. there are special limitations on the extent to which one can study rationality from a perspective which is disengaged from the very standards which constitute rationality; and
3. a disengaged, theoretic perspective is not the only perspective from which one can criticize existing norms and practices - an interpretive perspective is not necessarily conservative.

These points have some importance for inquiry into critical thinking, especially in light of the various attempts by writers in the field take the ideals of theoretic knowledge as the ideals to which all knowledge ought to conform and the language of scientific explanation as appropriate for all kinds of explanation. It is important to see that the only alternative to the rigourous pursuit of scientific understanding is not the uncritical acceptance of whatever "folk psychology" is
represented by our current linguistic practices, as certain philosophers and
cognitive scientists appear to believe.¹ The notion of an alternative perspective
ought to be helpful in encouraging those interested in critical thinking to realize
that while the ideal of a completely objective, disengaged stance from which to
examine our rational practices is unreachable, the alternative is not to lapse into
complete relativism. While standards of rationality develop within the context of a
particular culture and are bound to reflect the purposes of particular groups of
people in particular historical circumstances, they are a product of continuous
revision and criticism.

4.4. SUMMARY

The chapter began with a discussion of the points of view which were useful to
consider when trying to understand the standards and rules of a practice. The
perspectives of the competent practitioner, the teacher, the judge, and the critic
were mentioned.

The issue of whether critical thinking is a special kind of thinking, or whether it
is thinking which meets certain sorts of standards, was raised again in
connection with the often cited distinction between critical and creative thinking.
Through a discussion of points made by Goodman and Lakatos, it was argued

¹ Hilary Putnam addresses the selective way in which Stephen Stich and Paul
and Patricia Churchland are prepared to dismiss "propositional attitudes" (such as
beliefs, purposes, and desires) as "quasi-mythological entities" and argue that they
must be eliminated if we are to achieve a suitably scientific view of mental
phenomena, and yet are unprepared to eliminate other categories (such as the
extension of the word chair) which rely on the notion of purposes for their
existence (1988, pp. 57-60).
that criticism and creativity are closely related. Goodman's argument was also useful in demonstrating the limitations of approaches to critical thinking which place undue weight on syntactic rules without context or semantic considerations.

The distinction between theoretic and practical reason was also considered. A way of construing the relationship between these two sorts of reasoning which was associated with positivism was criticized, and it was pointed out that certain vestiges of that philosophical tradition have continued to influence ideas about critical thinking. In general, the idea that all knowledge should be as scientific or theoretic as possible was demonstrated to be misleading and the cause of confusion on the part several writers in the field of critical thinking. The confusions included adverting to "fallacy theory," practices founded on the belief that capacities (in general) are learned by studying theory and then learning to apply it in practice, the overemphasis on the relationship between theories and evidence in critical thinking curricula and underemphasis on issues in practical reasoning, and the illicit reduction of intentional terms such as belief to the names of entities such as representations.

The need for a more balanced understanding of the relationship between practical and theoretic reason was pointed out. Kovesi's and Lovibond's expressive approach to language, their dissolution of the fact/value dichotomy, and their realist interpretation of values were examined as an alternative to scientific realism and a non-cognitivist approach to values which has continued to influence theory and practice in the field of critical thinking.
It was recognized that the distinction between practical and theoretic reasoning is not sharp nor is the relationship uni-dimensional. In fact, each of theoretic and practical reason connote a cluster of characteristics. By separating out these characteristics, we can see that they are not necessary associations, that we can have reason which is rigorous, explicit, and contemplative, without adopting the ideal of disengagement from any particular set of cultural values and practices. The explicit adoption of such an interpretive stance is useful in ensuring that we are not misled (by the ideal of disengagement) into the illusion of an a-cultural, non-ideological, or value free conception of rationality. Further, it was argued that the adoption of an interpretive stance need not imply simple acceptance of the status quo. Re-interpretation and criticism can function from within the sets of beliefs, values, and practices of a given culture. In other words, we can continue to revise and possibly improve our standards of rationality without scientific discovery or the adoption of a transcendent or theoretic stance.
5. RULES AND NORMATIVE ACTIVITIES

In the opening chapter of this thesis, I argued that critical thinking could sensibly be studied as a normative practice. In succeeding chapters, I have offered examples of confusion within the field, about the nature of rules and standards, the relationship phenomena under normative and empirical descriptions, what it means to 'know a rule,' and many other issues related to rules, procedures, standards, and normative activities. This chapter will be devoted to developing a coherent and realistic picture of rules and their place in our lives. Such a picture will enhance our understanding of the issues mentioned above. It will be useful in understanding a further issue which has been largely ignored by those interested in critical thinking and has proved troublesome for a number of philosophers. The issue is the relationship of rules to judgment in the sense in which one can exercise good or bad judgment. Understanding this last issue is of considerable significance to assessing Ennis's multi-aspect approach, in which the concept of judgment plays an essential, but largely unexplained, role.

The first two sections of this chapter are devoted to developing conceptions of 'rules' and 'normative activities.' The third section displays the consequences of such conceptions for furthering our understanding of critical thinking. The issues to be clarified include: differences between normative and causal explanations, the ways in which rules and standards are embodied in our practices, the relationship between rule following and judgment, and the sense in which thinking critically has intrinsic value.
5.1. RULES

Trying to characterize the nature of a rule is something like trying to characterize the nature of a game. We all know what games are, and can list many different kinds of games, but there is little that can be said which applies to all games in any informative way. In characterizing what it is to be a game, or to be a rule, perhaps the best we can do is to point out a range of exemplars and identify some of the characteristic features of different kinds of games or rules. This chapter will include discussion of the variety of kinds of rules and how they are interrelated, the different grounds which can serve as a basis for identifying rules, and the way in which rules are developed for particular purposes within the context of normative activities. These activities are, in turn, a constitutive part of our way of life. The discussion of normative activities will also include a discussion of the role of judgment in competent performance.

The notion of rules arises in connection with those situations in which people can do things which may be judged as right or wrong, legal or illegal, good or bad, felicitous or not, etc. It makes sense to speak of rules only in contexts where this is the case. Hence, we do not have rules which forbid doing things which people cannot ordinarily do (going to the moon) or cannot help doing (sneezing). Rules make sense only with regard to actions which are, or can be, intentional. In cases in which people's behaviour is caused (in the sense that they have no choice about what they do or how they do it) rules play no role in explaining
their behaviour. A prisoner who is locked in a cell is not acting in accordance with the rule ‘do not leave this room.’

Max Black suggests, in this regard, "I think it will be found in every case that a rule formulation identifies what I shall call a class of human actions..." (1962, p. 107). Black goes on to explicate the term "actions" in a way which makes it clear he is referring to intentional behaviour.

The fact that rules are adverted to in those situations in which there is a right or a wrong (or better or worse) way of doing things gives rise to two further conditions. The first is at the heart of Wittgenstein’s "private language" argument. If something is to count as being done according to a rule, it must be possible to ‘get it right’ or ‘get it wrong’ and this requires that there be some external criterion to serve as a check on the sensation of being right.

---

1. This claim expresses no position on the determinism vs. freewill issue, except that it presupposes that it makes sense to speak of choices, intentions, and actions in the sense that we usually do, that is in the sense that we hold people responsible and worthy of praise or blame. It would be consistent with this position to believe that for every action which can be explained or interpreted according to rules or norms, there could be a causal explanation according to physical laws. It is being suggested, however, that there is no reason to think that these alternative kinds of explanation ‘fit’ in the sense that the categories involved in normative explanation (e.g., rules, decisions, beliefs, actions) can be translated into, or analytically reduced to the categories of causal explanation.

2. It may be that we are inclined to attribute some attenuated sense of intentionality to higher mammals. Thus, we could regard some rule-conforming behaviour on the part of trained animals as rule-following in a limited sense. It may be noted that very few of the possible ‘things we can do with rules’ (which include justifying, enacting, formulating, explaining, and protesting) are possible for someone or something which is not a member of a fairly sophisticated linguistic community.

3. If we think of a rule such as an aesthetic standard, we may be disinclined to use the words "right" and "wrong" but the same general point holds. The novice water-colourist does not produce art simply by pleasing himself. His work
Put differently, there must be a difference between thinking one is following a rule and actually following it, a difference which evaporates if there is no possibility of having one's experience of thinking one is following a rule corrected according to public criteria.

The second of these two conditions is that rules are intimately related to the notion of 'authority.' It may not be most fruitfully understood as a necessary condition, but it is a characteristic feature of rules. It is significant that we speak of a king ruling over subjects and of rule-governed activities. While, as we will see, there are a wide variety of rules, only some of which are directly associated with regulation and governance, there is a sense in which all rules are authoritative, i.e. unless a rule has at least suasive force, issues of right and wrong are inappropriate. Thus, while the appropriate conception of authority may be either overtly political, as in legal rules; the authority of expertise in the intellectual, moral, religious, or practical realms; or the authority we associate with accepted practice, some sense of authority applies.

We have noted that rules are applicable only in those situations in which it is sensible to speak of right and wrong, better and worse, or correct and incorrect, and so on. As is implied by these words, judgments according to rules are not simply matters of taste, they must be considered, in some sense, to be authoritative or to decide the issue. Thus, Black points out that some intentional activities, e.g. doodling (1967, p. 92), are not rule-governed in that the concept

(cont'd) must meet certain public standards regardless of the fact that we find it difficult to provide a perspicuous formulation of the relevant standards in all cases.
of a mistake cannot arise with regard to their performance.1

There are some fairly obvious apparent counter-examples to the notion that all rules involve relations of authority. In some cases of norms defined in social practice, for instance the rules of appropriate conduct on public elevators, there is a sense in which there is no authority, political or epistemic, to appeal to for a definitive judgment. But I think that this sort of example gets its force from the fact that such rules are borderline examples of rules. They are at the point where rules begin to shade off into customs and habits. (This is not to deny that there are some customs which are enforced much more clearly and directly by particular authorities.) In some places, and in more places at times in the recent past, a young man would have been taught by someone in authority to wait until all the ladies got off the elevator before getting off himself. Had he failed to heed his teacher(s), someone might well have spoken to him with authority about his manners. In the case of social practices which are regarded as being of significance to a community, such as linguistic and moral practices, there are, in fact, many different and sometimes competing authorities.

Another subset of rules which may seem not to include a role for authority is rules which an individual makes to guide her own behaviour. Someone might, for instance, make it a policy never to park in public parking garages at night. In such a case, it is true ex hypothesi that there is no authority, in the sense of

1. Black’s point here is well taken although he perhaps overstates the extent to which the activity of doodling is a-normative. The fact that one’s design can be ruined by having one’s elbow bumped or that one’s doodling can be found to be imaginative by others indicates that some standards do apply even to this modest and almost purposeless activity.
no external authority, to enforce the rule, to criticize actions according to it, or to engage in any other normative activities with regard to the rule. Nonetheless, we do speak of people governing themselves according to such rules and we do speak of such rules as being authoritative in certain situations.

So, while some instances of rules are related to a rather attenuated conception of authority, some connection seems to be, at the very least, characteristic of rules. If this connection is stated as a condition that rules must be regarded as, in some sense, 'authoritative,' rather than 'depending on an authority,' it may be regarded as a third necessary condition of 'rules.'

The foregoing three points express conditions for the existence of a rule. For ease of reference, they can be labelled the "intentionality" condition, the "non-private" condition, and the "authority" condition. Armed with these conditions, we will examine something of the range of kinds of rules and the sorts of activities which imply the existence of rules.

Baker and Hacker identify five "clusters" of rule-type concepts which display somewhat distinctive features. These are:

1. laws, statutes, regulations - these are "formal rules, voluntarily created according to rule-governed stipulations."

2. practice, code, convention - "informal rules which exist in the practices of a social group and are not created by norm creating acts."

3. standard, canon, model, paradigm - these concepts exemplify the evaluative role of rules.
4. maxim, principle, precept, recipe - emphasize the "guiding role of
'impersonal rules', i.e. rules not addressed to anyone in particular but
'available' to anyone who wishes to adopt them," and
5. prescription, direction, directive, instruction - which tend to be "rules issued
by individual authorities, often to individual subjects" (1984, p. 250).

This list is obviously not exhaustive, nor are the divisions between the categories
of concepts free from vagueness and ambiguity. The list is useful, however, in
that it indicates something of the variety of rules, their origins, their scope, and
their uses.

5.2. GROUNDS FOR THE EXISTENCE OF RULES

The first category includes the most obvious instances of rules, the ones which
spring to mind first when one thinks about rules. For our purposes, this
category is primarily important by way of marking off a kind of rule which
plays little part in the practice(s) of thinking, and yet can serve as a misleading
model or paradigm for the kinds of rules in which we are interested. Seeing
that rules which are purposefully created by individuals in authority are only one
of many kinds of rules can prevent us from trying to understand all rules as if
they operated like formally constituted rules. Most importantly for our purposes,
the way in which formally constituted rules are typically learned, i.e. first as
rule formulations, and then as applied in practice, is only one of the ways in
which rules may be learned. Consideration of the ways in which other rules are
typically learned will be suggestive of other possible educational strategies which
may be more effective in promoting critical thinking.
Many of the kinds of rules with which we are concerned need not be formulated and are not proclaimed before coming into effect. Nor are they enforced by the use of sanctions. Many of the activities associated with either "promulgating" or "being subject to" rules in the regulation sense, have no role in language games appropriate to rules in the sense that thinking is a rule-governed activity. The rules of thinking cannot be drafted, rescinded, or revoked. Nor can they be protested, although they can be criticized.

The rules with which we are primarily concerned "exist in the practices of a social group." Such rules emerge and evolve within a community. They may or may not be formulated in order to qualify as rules. Often, even for those rules for which formulations do exist, agreement by those competent in the relevant activity takes precedence over any specific formulation (or reconstruction) of the rules. A paradigmatic subset of such rules are the rules of logic. While Aristotle is often credited as the father of the study of logic, it is not imagined that no one was logical until Aristotle formulated the rules. What Aristotle did was to construct formulations which captured (to the extent that he was successful) the rules which already governed the practice of drawing inferences. In an important sense, Aristotle's formulations expressed or stated the rules which already governed existing practices.

1. This terminology is borrowed from Max Black, 1967, p 116).
2. It is rather striking, however, that many "non-regulation" concepts have uses which emphasize the "official" or "formal" sense of rules. An "exemplification" in law, for example is an official and certified copy of a public document. "Canonical" can be used to mean "authoritative; officially approved; orthodox." Both definitions are taken from the The Heritage Illustrated Dictionary, McGraw-Hill, 1969.
3. See Max Black, 1962, pp. 95-100 for an account of the problems involved with speaking of such formulations as "descriptions" of the rule in question.
Of course, once formulations of the rules of a practice exist, they may come to be authoritative. They may become guides to practice and they may modify practice. However, it is important to notice that this kind of rule formulation can be incorrect in a way that a regulation or rule of law cannot. A legal regulation or statute is in effect if it is enacted by a relevant authority and becomes invalid only if it is overturned, rescinded, or revoked by the relevant authority, or if the authority loses power over the relevant jurisdiction. A regulation is neither correct nor incorrect. Its validity depends on its provenance (e.g. whether it was legally enacted by competent authorities).

A dictionary serves as a good foil by which to explicate the difference between regulations and the formulations of "rules of practice." Consider a dictionary as an authoritative set of rules for spelling the words of a language. It is created by trying to capture accurately the spelling practices of competent spellers. In turn, it serves as a reference for those who wish to correct or justify the way they spell. But dictionaries are fallible: they may be incorrect, for instance by failing to include acceptable variations for spelling a word. Their authority is not absolute. Linguistic practices may change and render them obsolete. Non-observance of the rules of spelling by generally competent language users can make the relevant rule formulations incorrect or invalid. Adequacy of these rules depends on whether following them produces judgments which accord with those of generally competent practitioners.1

1. This is, of course, a contingent fact about our current rules and practices. L'académie française has a more authoritative and official mandate than any equivalent English language institution, in determining "correct" practice. The current Korean alphabet and rules for spelling were invented by a king and spellings are determined exceptionlessly according to phonetic practices.
These examples point out a fact of some significance. The relationships between rules, rule following, and rule formulations, are not simple or invariant. Rules can exist on the basis of their formulation and promulgation by authorities, in which case their formulations and the interpretations taken by those responsible for enforcing them are crucial for their significance. Other rules are constituted by the practices and regularities in judgments of a community, in which case their formulations may play a secondary or subservient role. In these latter cases especially, it will be important to maintain a distinction between rules and their formulations.

The variable relationship which holds between rules and rule formulations is paralleled by a similarly varied relationship between rules and exemplars or paradigms. An exemplar may, as in the case of the judgments and actions of Christ or Buddha, serve as a standard for actions and judgments of others. By their actions and teachings, such figures establish new norms, in these cases, for 'Christian actions' or 'the practice of gaining inner illumination.' Actions of others can be judged on the basis of their similarity, in relevant respects, to those of an exemplar. Just as one can follow, or act according to a rule, one can follow an example, or act according to an exemplary model. In such cases, an

1. For a more general account of the distinction between rules and their formulations, see Baker and Hacker, 1984, Chapter 7, Section 2, pp. 250-265; or Black, 1962, pp. 100-2.

2. What constitutes "relevant respects" or "similarity" is a complex question. Putnam has pointed out that everything is similar to everything else in some way or other. "...'of the same kind' makes no sense apart from a categorial system which says what properties do and what -properties do not count as similarities" (1981, p. 53). In other words, judgments of similarity are judgments according to conceptual rules. I suspect, although I will not argue it here, that acting according to an exemplar involves subsuming both the exemplar and the action under consideration under a principle or rule.
exemplar could be said to create and define the rule, or, in other words, to set a standard. Citing an exemplar is a way of expressing a rule.

But often, an exemplar or paradigm is simply a particularly clear or striking instance falling under an existing rule. A speech might be singled out because it exemplifies many of the (already recognized) standards of good speaking, for instance. In such a case, the exemplar need not set or create the relevant norms (or rules) but rather it can provide a model which shows how the standards can be realized or measured up to. Even in cases in which well articulated rule formulations may apply, exemplars may be useful in explaining or clarifying a rule. For example, a teacher might single out a particular bridge hand as exemplifying "a one no-trump opener" or a particular position of players in a soccer game as "being off-side." Such examples may be used to demonstrate how a rule formulation is applied in practice.

As in the case of rules and rule formulations, we must be careful to avoid trying to subsume all relationships between rules and exemplars (or other examples) under a particular model. For cases in which it seems important to clarify the relationship between rule-governed practices and either rule formulations or exemplars, it may be helpful to take note of what one adverts to in establishing correctness, rightness, or goodness, in any particular case. There may well be cases in which no one factor is definitive. In the context of trying to understand complex and contested issues, such as the standards of justice or rationality, we may appeal to exemplary judgments, judgments by exemplary people, canonical lists of rules, formulations of principles abstracted
from practice, intuitive judgments about hypothetical cases, or standards of acceptable practice in our community. In some cases no one of these factors seems completely authoritative and several may be taken into account. It is in the interplay of these various factors that there is 'room' for criticism and re-interpretation of existing standards and rules.

5.3. NORMATIVE ACTIVITIES

The preceding sections on the nature of rules are based on a presupposition. Implicit in the account so far is the notion that rules do not simply exist as individual entities in the world. Rules, of whatever sort, exist within a particular kind of medium, we might say. They exist as elements in normative activities, as part of the fabric of our social practices. While we can formulate imaginary rules, actual rules (rules which are the basis for judgments about right and wrong, better and worse, etc.) have their role in the practices and institutions which constitute our form of life. Importantly, rules come in clusters, clusters which are created within particular spheres of activity. Rules are meaningful within the context of these activities. The ability to use the rules (follow them, judge according to them, etc.) is dependent on some degree of familiarity with the practice. A familiar demonstration of this point is the experience of many men who, not having been initiated into the practice of cooking through their upbringing, find that the procedural rules offered in cookbooks are insufficient for the production of edible meals. The ensuing section addresses more explicitly the nature of normative activities and the way they form the context in which rules have a place.
As one might expect given the connections between rules, as explicated above, and normative activities, the necessary or standard features of rules will also apply to normative activities. To say that something is a normative activity implies something about the intentions of the participants and the fact that there are correct and incorrect or better and worse ways of participating. Further, it implies some level of agreement amongst the participants regarding the rules that define the activity. For any individual participant, engaging in such an activity means the acceptance as authoritative of (at least) most of the constitutive rules about which participants in that activity generally agree. Put differently, all participants must recognize the rules of the activity as being relevant to what they are doing - including the determination of what is right and wrong in that context.

While these remarks follow generally from the earlier account of rules, some cautionary notes may be in order. With regard to intentions, very little is being claimed. It is simply the case that normative activities are those activities in which intention and the related notions of choice and judgment have a place. Activities like dreaming, which are, for most of us, not subject to our intentions, are not normative, in this sense. It is certainly not the case that anyone who engages in a normative activity must have the intention of acting according to the rules which define and govern the activity. An obvious counter-example to the italicized claim is a poker player who plays poker but cheats at every opportunity. While we could say that he is not really playing poker, because he is not playing according to the rules, more commonly we might say that he is playing but he's not playing fairly or properly. Notice that cheaters do not
regard the rules as invalid. They invoke the rules in order to restrict their competitors’ actions and to claim their own winnings. The carrying out of the cheater’s intentions are fully as dependent as those of the honest player on both the existence of rules and the general presumption that the rules will be followed. Both the cheater and the honest player agree on the rules of the game, both as rule-formulations and as agreements in judgment about instances of right and wrong. Both accept the authority of the rules in a way, but the cheater’s recognition of the rules is displayed by what is done openly and what is done surreptitiously whereas the honest player’s recognition is displayed as obedience. Someone who refused to recognize the fundamental rules of poker would not be playing improperly, as the cheater is described, but rather, would not be playing at all.¹

There is a sense in which performing an action which is part of a normative activity depends on acceptance by the actor of a certain relation to the rules of that activity. This could be described as adopting an attitude of acceptance of the rules as constitutive of the activity. If I am engaged in writing a cheque, painting a painting, or arguing for a particular belief, I must understand what I am doing in terms of the rules which govern those activities. Again caution is required however. For reasons made clear above, my belief that I am writing a cheque is not sufficient to make it a case of cheque writing - my actions must conform to the rules from an objective perspective. Also, as we have seen, the

¹ This is parallel to a point in Cavell (1979, Chapters 2 and 3) about the criteria of a concept such as pain. The writhing which serves as a criterion of pain does not prove that the writher is in pain - she could be acting. But in the case of both the actor and the person who really is in pain, the writhing serves to identify pain as being the relevant concept, be the pain mock, feigned, or actual.
attitude of acceptance cannot be understood as an attitude of obedience - I may be intentionally breaking some of the rules by, for instance, writing a bad cheque.

It may also be noted that there are degrees of understanding of normative activities. I need not know everything about what happens to cheques or all the rules and penalties for transgressions that govern their use in order to be engaged in writing one. But without some awareness of the significance of my action as being involved with the transfer of money and some knowledge of money and its place in our lives, I cannot be engaged in cheque writing.¹

The fact that there are degrees of understanding of normative activities, and that it is not necessary to know everything before engaging in such an activity is critical. It is closely associated with the fact that normative activities are not entirely bounded by rules. Typically, we develop rules as required in order for the practice to be useful or satisfying but we do not have rules which cover every possible aspect of a practice or to settle every possible dispute. Often the rules can be applied without controversy in typical or standard situations but may be unclear and/or disputed in less common or more marginal ones. New cases may demand new rules or the extension or reinterpretation of old rules. We may have a set of basic or overarching rules for some activities which serve

¹. This point is made by many philosophers in many ways. Charles Taylor uses the example of voting to show how the relevant action is constituted as an act of voting by the concept and its place in our lives and necessarily involves certain understanding and intention on the part of the voter. Hilary Putnam's opening argument in *Reason, Truth and History* is based on the point that no matter what kind of path an ant traces in the sand, the line it leaves is not a depiction or representation of anything (including Winston Churchill) because the ant is, as far as we know, incapable of intending to depict things.
to establish a framework for the interpretation and revision of the rest of the
normative structure, as is typical of the relationship between a constitution and
the by-laws of an organization, but there is not always recourse to another rule
which explains or fixes the interpretation of any rule in question.

This general notion arises in two somewhat distinct issues. The first of these
issues has to do with the fact that sets of rules for normative activities do not
completely specify every aspect of those actions which are to count as fulfillment,
transgression, or obedience, etc. Rules must be interpreted and, in many cases
judgment is required to decide borderline cases. Some cases may be
indeterminate. As Wittgenstein says, there is a certain vagueness in the rules of
games, but they are games for all of that (PI, Para. 100). The second issue
involves the problem of "infinite regress" as taken up by Gilbert Ryle in A
Concept of Mind. These two issues, taken together, have important implications
for the nature of normative activities and the place of judgment in our
explanations. Each of these issues will be dealt with in turn.

Perhaps the clearest examples of rule-governed activities are games with formal
sets of rules. Games like tennis or chess can be said to be defined by, or
constituted by, the rules which govern those who take part in them. Engaging in
one of these games involves the use of many different kinds of rules including
the constitutive rules which "make up" the game, strategic rules in the form of
heuristics or procedures for achieving success, auxiliary rules for arbitrating
different kinds of disputes, critical standards, etc. Nonetheless, in spite of the
many and varied kinds of rules, if one is engaged in playing the game, many
of one’s actions are not determined by the rules. Tennis has no rule regarding how high or hard one throws the ball, as Wittgenstein points out (PI, Para. 68). Chess has no specific requirements regarding the size of the pieces or how they are to be held when being moved. But this incompleteness or vagueness of rules for games does not prevent the games from being played or mean that they are incomplete as rule-governed activities.

Often, we are inclined to think that a well formulated rule determines our judgments on some particular issue. But this can be misleading. Typically, rules are determinate only for standard cases. We know for instance, that deceiving someone for one’s own personal benefit is wrong because it is a case violating the moral principle of treating someone as an end rather than a means. Nevertheless it is not difficult to think of examples which are morally ambiguous at worst (e.g., falsely representing one’s attitude towards the boss’s new hat before applying for a raise). Even more specific rules such as the entrance requirements for a university may apply in a straightforward manner only to students who have a typical history involving attendance at schools which have a particular curriculum and relatively standard ways of measuring student performance. While there may be special provision for applications from foreign or otherwise irregular students, rules are typically created to deal with eventualities which do arise, not with all conceivable cases.

Similar points can be made about some of the sets rules which have been a focus of the dissertation so far. The rules which govern the use of concept labels, for instance, need not be so complete or precise as to settle, in advance,
all possible questions about the extension of a term. How could they? But there is a general notion that there are rules which could, at least in principle, be discovered, and which determine whether any particular judgment is correct, or not.¹

Perhaps this notion is derived from an analogy with the widely accepted notion that all physical events are caused according to natural laws which could, at least in principle, be discovered. The notion seems particularly prevalent among those who take geometry or deductive logic as exemplifying rationality in general and has been associated historically with Frege. But, logic and the standards of rationality need not form some kind of perfectly ordered and complete structure in order to serve a purpose or be adequate for our needs.²

Rules are created by human beings for particular purposes, that is, to achieve certain ends or avoid certain problems within particular contexts. They are only as clearly defined as need be to accomplish those objectives. These realizations should help us avoid thinking of rules (including concepts and norms) as abstract entities which are clear and perfectly ordered in themselves but only roughly or imperfectly perceived due to the limited understanding of human beings. We can also avoid thinking that cases not clearly determined according to existing sets of rule formulations must be determined according to tacit rules, as Schon suggests.

¹ Several versions of this view are criticized by Baker and Hacker in Language, Sense and Nonsense (1984). This view is also implied by Norris when he suggests that research could eventually determine the correct application of terms such as mental ability, although the point is somewhat obscured by Norris's failure to recognize that meaning of terms is a normative matter, dependent on our practices, rather than a matter for empirical determination. This is an alternative to the view that there must be a special activity or faculty which determines judgments in cases not covered by rules expressed as formulations. The 'special activity' view will be discussed below.

² "The preconceived idea of [the] crystalline purity [of logic] can only be removed by turning our whole examination around. (One might say: the axis of reference of our examination must be rotated, but about the fixed point of our real need.)" (Wittgenstein, PI, Para. 108).
in his accounts of reflective thinking.\(^1\) A more perspicuous rendering might be that judgments in some such cases are part of the social creation of new norms, in others, that we must decide how to interpret existing rules under new circumstances.

Only in some cases is it important for rules to preclude ambiguous cases or to have a sharply defined field of application. Only for some normative activities is it desirable or necessary to have a formal hierarchy of rules to define what ought to be done in cases when rules appear to conflict or more than one standard seems relevant. It is a mistake to think that normative activities must or should have an underlying structure of rules which can be operated as a calculus in which there are determinate and formal procedures for deriving valid rules from a finite set of axioms and definitions.

Closely associated with Wittgenstein’s realization that rules and systems of rules need have neither sharp boundaries nor determine all aspects of a practice, is a point which has been raised by many philosophers, but is most closely associated with Gilbert Ryle. Ryle points out that ‘following a rule’ cannot depend, in all cases, upon a further rule of interpretation or application. For, if every rule required a higher order rule to govern its application to particular cases, each rule application would involve an infinite series of steps.\(^2\) This problem is commonly known as the problem of infinite regress. Some philosophers have taken this to imply that there must be some special sort of activity or some

\(^1\)See Schon (1987) for an example and Selman (1988c, pp. 184-7) for a critique of Schon’s work on this point.

\(^2\) Notice that adverting to tacit rules does not avoid this problem but merely pushes it back to another level.
special faculty which is involved in the application of rules but is not rule-governed. Thus, Oakeshott searches for:

"[w]hat is required in addition to information ... which enables us to interpret it, to decide upon its relevance, to recognize what rule to apply and to discover what action permitted by the rule should, in the circumstances, be performed, ... [something] capable of carrying us across those wide open spaces, to be found in every ability, where no rule runs" (1967, p. 168).

The required kind of knowledge/ability is called, in this case, judgment. Other writers have posited a special type of activity or faculty, sometimes called judgment but also by many other terms, including intuition. Alasdair MacIntyre associates this point with Aristotle's notion of *phronesis* (sometimes translated as practical wisdom or judgment). In MacIntyre's words:

"So we are faced with these alternatives: *either* we have to posit an infinite hierarchy of rules *or* there is a kind of activity which may involve the application of rules to instances, but which itself is not rule governed" (1988, p. 117).

This way of putting things seems likely to be misleading. It suggests that the exercise of judgment (what MacIntyre calls *phronetic activity*) is separate from, or of a different kind than, rule-governed activities. *Phronesis* sounds as if it were a final stage of appeal that each rule application would be required to pass through after having passed through whatever intermediate applications of higher order rules might be required. It sounds as if good judgment might be
facility at a particular sort of activity, a special skill perhaps, which the
phronimos possesses but which others do not. The question arises, how could the
novice ever apply a rule without this special skill to bring to an end the infinite
regress?

A similar notion is found in Kant:

If [logic] sought to give general instructions how we are to
subsume under these rules, that is, to distinguish whether
something does or does not come under them, that could only be
by means of another rule. This in turn, for the very reason
that it is a rule, again demands guidance from judgment. And
thus it appears that though understanding is capable of being
instructed, and of being equipped with rules, judgment is a
peculiar talent which can be practiced only, and cannot be
taught ... [an error in subsumption under rules] may be due to
... not having received through examples and actual practice,
adequate training for this particular act of judgment ... Examples
are thus the go-cart of judgment. (from The Critique of Pure
Reason, A 133-4, B 172-3 and quoted in Hacker, 1986,
pp. 174-5n.)

Again, this seems misleading, not on account of the very sensible and
perceptive remarks about the role of training and examples in developing
good judgment, but because the talent is thought to be 'peculiar' as
phronesis is thought to be a particular 'kind of activity.' Consider the
following example. An apprentice is helping a carpenter build a floor. One of the tasks of the apprentice is to bring pieces of wood which are to be cut and used as joists. At first, the carpenter must instruct the apprentice regarding each piece, pointing out relevant features like knots, checking, or bad milling, which make it inappropriate for the purpose at hand. Gradually the apprentice comes to understand the standards involved in a piece of wood's being good or appropriate for a particular task. Gradually, if the apprentice applies himself, is reasonably intelligent, and is given sufficient explanation, he will be able to choose pieces which are appropriate without instruction or without such frequent instruction. He will have developed a sense of judgment albeit in a limited domain.

As Kant says, such training may necessarily involve the use of examples and actual practice, but where is the 'peculiar talent' or the 'non-rule governed activity'? The apprentice has learned to judge according to standards as taught by the experienced carpenter. The experienced carpenter may have developed these rules himself from seeing, for instance, that joists with large knots near the centre of a span and close to the bottom edge are likely to snap, or he may understand that the lower edge of a joist is under tension when load is applied and that knots affect tensile strength more than compressive strength, or he may simply have been taught never to use a joist with a large knot near the bottom edge. Qua selection of joists in standard circumstances, good judgment need not depend on a peculiar kind of talent with a particular sort of provenance or on the exercise of any particular kind of activity. Good judgment, at least in this
case, is not something in addition to being able and inclined to act according to the rules and standards one been taught or otherwise learned; it is simply having learned to do it properly.

The concept of judgment is, of course, appealed to in many different contexts. A central use involves claims about the ability of a person to make good decisions in apparently indeterminate situations, in new and unusual situations or cases in which the available rules and standards appear to be in conflict. Poor judgment, in this sense, often implies that a person is inclined to act rashly, without taking into account all of the important factors, or by narrowly adhering to a particular standard in a situation which requires a broader view. In this sense of the word, judgment is not required for the interpretation of standard cases, which can be decided relatively mechanically, but is crucial to recognizing the features which make a case non-standard and in making judgments in new or borderline cases.

Many complex normative activities are characterized by a multiplicity of purposes, standards, principles, exemplars, and practices, and, in some cases, officially formulated regulations and policies as well. Often, the participant in these activities faces problems in deciding on an action or judgment not because she lacks knowledge of the relevant norms but because the norms are not "perspicuously ordered," for instance, when the context makes certain purposes more important than others but the participant has difficulty in seeing the relationships between the standards which are
relevant and irrelevant to those particular purposes.

No doubt, certain kinds of teaching are more conducive than others to the development of a more systematic or perspicuous understanding of the relevant standards. Returning to the case of the apprentice carpenter, it seems only reasonable to expect that an apprentice who is given explanations for rejecting each unusable board, rather than simply being told that it is no good, will be more likely to be able to make good judgments in new cases. He is more likely to recognize, for instance, situations in which one of the standard criteria are irrelevant, as when the joist is not load-bearing. Being able to connect the standards (e.g. "No large knots in the lower third of a joist.") with the purposes (maximizing the load-bearing capacity of the floor) is a part of having a perspicuous understanding or having good judgment.

Experience with 'real life' examples is crucial to developing a perspicuous understanding of the rules of a normative activity, at least in part because such examples typically involve making judgments involved at balancing the requirements of a variety of standards. Some balance must be maintained between maximizing load-bearing capacity and getting the job done with the materials at hand. Whether or not a defect is sufficiently important to cause rejection may depend on what other boards are available, how close the joists are to their maximum span, what the likely use of the floor is to be, etc. It should be noted that we could develop highly specialized rules to specify exactly what defects are inadmissable under particular
circumstances. However, the multiplicity of possible situations, the fact that it is easier to overbuild than to tailor each piece to its precise role in a structure, and the relative forgivingness of frame construction which tends to distribute the stress from any particular weak point, means that such rules would be more trouble than they would be worth. Thus, carpenters typically function adequately with rules of thumb, rules which do not determine correctness of judgment but serve as guides to good judgment. What Oakeshott refers to as "those wide open spaces, to be found in every ability, where no rule runs" are a function of the degree of specificity with which it is sensible to have explicitly formulated rules. How detailed the rules are will be determined by the nature of the practice, by the gravity of the consequences of mistakes and the degree of precision which is necessary to fulfill the relevant purposes. Normally, the purposes themselves are also rather loosely determined. A floor is expected to hold up any reasonable load, but past a certain point, we are inclined to blame, or question the judgment, of those using the floor if they load it beyond its capacity.

Too often, philosophers have been inclined to take geometry, or formal logic, as the paradigmatic examples of rule-governed systems. While they do exemplify some aspects of normative systems, they can be misleading if we think that they set the standard to which all normative activities ought to conform. Many of the rules, standards, and concepts employed in thinking rationally are not determinate for all possible cases, but that is not

1. These rules would function like Kovesi's "complete moral concepts" in that their application would unequivocally determine correctness.
necessarily a defect in our understanding of rationality or our practices of reasoning. Our standards for reasoning are as context dependent as the rules by which we cook, build houses, or write theses, and the need for judgment is evident in all of these. Nevertheless, the requirement of good judgment should not be interpreted as a demand for something over and above an appreciation of the purposes for which we engage in an activity and an understanding of the ways in which rules serve those purposes.

Another feature of normative activities, one which was not prefigured in the account of rules, is the way in which normative activities generate what have been called "internal goods." Consider the activity of driving a car. Some of what is good about driving a car is good independent of the existence of cars, the practice of driving, or the rules which govern driving a car. Such goods are the relative speed, comfort, and individual freedom of driving when compared to other means of transport. If other means of transportation were available which were better in these regards than driving a car, the activity of driving might be abandoned on the grounds that these values were being maximized in other ways.

For some people, however, cars and the skilful driving of cars have intrinsic worth. Some people enjoy driving as an activity or enjoy watching others who are particularly good at it. To the extent that these are

1. This terminology s borrowed from Charles Taylor (1988) and who adopted it from MacIntyre (1981). It may be noted that I will use the notion of goods internal to a practice in contrast with goods external to that practice, not as Taylor and MacIntyre do, in contrast with "transcendent goods." My use of 'practice' is more inclusive than MacIntyre's, also.
valued, they are valued as part of a practice and have no independent existence apart from the practice. Part of being 'on the inside' of a practice often involves valuing those goods which are internal to a practice. Coming to be competent or good at an activity may involve coming to appreciate internal goods as being good. Notice that by their very nature (by definition) such goods are inaccessible to those who are not participants¹ in the practice. While this need not be the case with a practice such as driving, full participation in some activities requires coming to care about its internal goods. I take it that this is R.S. Peters’s fundamental point when he stresses the intrinsic value of education and our intellectual practices.

To summarize these features of normative activities, they involve:
1. intentional activities in which the notions of right and wrong, better and worse, correct and incorrect, are appropriate;
2. agreement and the common recognition of rules as authoritative;
3. rules which are typically only as exact and complete as is necessary for normal practice; and often,
4. internal goods or values which are inextricably tied to the particularities of a practice.

¹ "Participation" may take a variety of forms. In the sense I am using it, "participation" includes judging, criticizing, appreciating, and teaching, as well as active participation, as long as judgments of those who are judging and criticizing are guided by the same norms and concepts which guide what we might term "direct" participation.
5.4. CONSEQUENCES FOR CRITICAL THINKING

A major consequence of accepting what I have argued is a 'realistic picture' of rules and normative activities is the recognition that rules, procedures, standards, strategies, and the like, are part of a semantic field or language game which can and ought to be distinguished from the linguistic practices in which concepts such as structures, processes, mechanisms, habits, skills, and many other terms common in the field of critical thinking are at home. Rules, procedures, and the like, may be adopted for use by anyone whereas habits and skills must be acquired. Processes may occur naturally whereas strategies and procedures are developed by people for purposes. One must know a rule (though one need not be able to formulate it) in order to use it, whereas mechanisms and processes may operate independently of human agency. Rules may be formulated whereas structures, skills, and the like can only be described. If writers in the field of critical thinking were to take cognizance of the characteristics of rules and rule-related concepts, they would be more careful than they are in their use of these terms.

Care with such distinctions ought to mitigate the tendency to make certain sorts of mistakes such as those made by Sternberg and Norris when they mistake a procedural set of steps for a process or mechanism.1 As a result of describing it in these terms, they believe it plays a causal role in the production of an ability. But what they take to be a mechanism is best understood as a procedure. A procedure does not cause an ability or the exercise of an ability,

1. Discussed in section 3.2 above.
although it may guide (intentional) action. This mistake is important in that a mechanistic account is likely to obscure the intentional or purposive character of students' reasoning.

A second consequence of this conception of rules is related to the issue of whether or not we can have a culturally or politically neutral set of standards for critical thinking. When it is recognized that all rules are created by human beings, either deliberately by groups or individuals in authority over the relevant jurisdiction, or collectively through the historic development of social practices, the possibility of a neutral set of standards seems implausible. In either sort of case, rules are developed in order to serve purposes. While it is true that there are some purposes which are very broadly shared by human beings, it is also true that different cultural groups and social classes have differing purposes. Given that those interested in critical thinking want to develop standards for thinking in many different areas of human interest, it is unrealistic to suppose that any particular formulation of the standards for critical thinking can be based on anything but the purposes which are at least somewhat specific to a particular cultural and political context. At any rate this conception should help us avoid the idea that there is any ground for certainty about rules and standards which exists outside of the practices of some existing cultural/linguistic community, in contrast to conceptions which seem to to imply that there are transcendent or ideologically neutral sets of standards to be found through the abstract practices of logic or through the supposed objectivity of scientific research.

Donald Davidson might suggest that knowledge of a procedure might serve as a reason for acting and therefore as a cause of the behaviour, but this is a very different sense of cause from that implied by Norris and Sternberg.
A third consequence this conception of rules for approaches to critical thinking is related to understanding how rules are learned. The notion that we learn a rule (as a set of words), then learn to use it or apply it, then learn to apply it with judgment has dominated many approaches to critical thinking. Logicians teach rules of implication in the form of abstract symbols, then teach how these rules can be used in the analysis of ‘everyday’ reasoning, and then, with Kant, suggest that judgment cannot be taught, but must be learned through practice. Those with a more scientific bent suggest that we must teach students the relevant theories first so that they have them and can apply them in practice.\(^1\) Theories of critical thinking are (unlike theories in the physical sciences) normative in the sense that they are intended to guide practice. Once again, judgment is thought to wait on experience in the application of these theories.

What the conception of rules and normative activities shows us, however, is that many rules are not learned this way at all. Many rules, standards, and procedures are never formulated. They are learned in practice, as in the case of the carpenter’s apprentice. They can be taught, at least in the sense that an experienced practitioner may help a novice by setting examples, correcting mistakes, criticizing lapses, and explaining individual judgments and criteria. (It is not clear that there is another sense of teaching to be contrasted with this one.) But in this case we see no separation between having learned the relevant rule or appreciating the appropriate standard and having good judgment about this

\(^1\) The inadequacies of this approach are as evident in the way we prepare teachers to teach well as they are to the way we prepare thinkers to think well.
Once we see this point, we can reconsider the sort of case in which students are taught a rule-formulation and then taught to apply the rule expressed by the formulation. What they learn is how the rule is used, just as the apprentice learns how the joists are selected. Thus, we can see that it was only the idea that the rule was instantiated in the rule-formulation which created the picture of this three stage process of learning the rule (as a formulation), learning to apply it, then applying it with judgment. The attribution of good judgment implies only that a person is good at some practice as judged against the relevant rules and standards. It does not imply the person has any other capacity, much less a special faculty, over and above knowing the rule.

This gives us good reason to reject a position we already had good reason to reject, that is, the idea that judgment (or intuition) is a special skill, a faculty, or a mechanism. But it is also reason to reject Ennis’s account of judgment as an extra category, something other than the abilities and tendencies listed as aspects of critical thinking.

The final consequence of this conception to be considered is related to the idea of internal goods. It is also related to the grounds on which we believe that instruction and inquiry in the field of critical thinking is important. There are many reasons why we would want to teach students to think well and why we would want to understand what it means to think well. Many are very practical, having to do with the capacity to achieve one’s purposes. Though some try to
justify teaching critical thinking on these grounds, and on the grounds of consistency with other ideals (e.g. Harvey Siegel, 1988), there is something about such justification that seems to miss the point. What is missing appears also to be missing from many texts and programs of instruction for critical thinking. It is, I believe, a sense of the goods internal to the practice of thinking.

People do not try to think well in general because it leads to other goods or because it is required by our commitment to other standards. We try to think well because we want to understand things, because, to the extent that we appreciate the standards of good reason we care about good reason. All of us have been initiated in one way or another into the practice(s) of being rational and we care about it for its own sake. It is this sense of appreciation of the goods internal to the practice of thinking which are left out of many texts which take a rather technical or instrumental approach. But critical thinking is not a technique although one may need techniques in order to think critically in some areas. An important part of what we mean when we say that someone is a critical thinker is that they value certain goods, the goods internal to the practice.

What this conception of rules points out is that these are not innate values or natural wants. They are values which one learns in learning to think rationally. It seems reasonable to suppose that explicit attention to these values would be a useful part of encouraging people to be critical.
6. CONCLUSIONS, CONSEQUENCES, AND FUTURE DIRECTIONS

There is a sense in which this thesis is more of a prolegomenon to future work in critical thinking than it is the development of a theory or even a conception of critical thinking. The field has been surveyed and areas of internal inconsistency and inconsistency with what I have argued are philosophically responsible views have been pointed out. This, the concluding chapter, reviews briefly the issues raised in the first chapter. Each of the five approaches to critical thinking, their inadequacies, and the status of the problems and issues identified, are reassessed. In keeping with the promise of the introduction, there are few positive recommendations of a practical nature to be derived from such a work. What value this work has is likely to be therapeutic, rather in the tradition of Wittgenstein. The final section of this chapter elaborates on this notion of therapy in the context of issues in critical thinking and offers some more speculative comments on future directions in the field. In particular, I draw attention to the connection between rationality and the ideal of a non-coerced community. This Kantian notion, which has been revived by both pragmatists and critical theorists, says something important about the role of social environment and social relations in promoting or impeding the development of practices of rationality.

6.1. FIVE APPROACHES REVISITED

While conceptual work rarely leads to any clear conclusions about how best to proceed in practical matters, it can sometimes provide reasons for rejecting ideas
which might otherwise appear plausible. This is certainly the case with regard to the process approach to critical thinking, which was seen to rest on the mistaken notion that using the same word in a number of cases means that reference is being made to some particular process. The fact that there is no empirical support offered for the belief that the analysis of a chemical compound is made easier or less challenging by practice at analyzing words or opponents' weaknesses in basketball games, to take one of Ennis's examples (1985, p. 45), serves as supporting evidence.

The problem solving approach was also found wanting for several reasons. Thinking of the sort that can be good or bad is not always aimed at solving things - one may, for instance, merely wish to understand something. The range of problems one might wish to solve are not usefully addressed by any one strategy or procedure, as is implied by those who adopt this approach. Also, neither good thinking nor problem solving is simply the adoption of a procedure - even a useful procedure may be used carelessly or insensitively but those who adopt this approach have generally failed to develop the relevant sets of standards. Modern accounts of the development of scientific knowledge, such as Lakatos's, give cause for skepticism that there is any particular method, process, or procedure which exemplifies good scientific thinking, much less good thinking in general.

The logic approach is problematic both at the level of conceptualization and in terms of the instructional methods by which it is taught. Conceptually, the notion of logic, if restricted to syntactic rules, is too narrow to refer to all of what is
important to good reasoning. Certainly the standards of deductive logic are insufficient to account for much of our reasoning. At most, logical competence is a necessary condition of being a good reasoner and even this is disputed by philosophers as respected as Gilbert Harman. Knowledge of the concept labels and rule-formulations employed by logicians is not a necessary condition. Even if one is willing to accept a conception of logic which includes inductive and informal logic, it fails to include many important aspects of reasoning, especially those which depend on semantic distinctions. Goodman's green/grue example showed how inference patterns which are central to the practice of the natural sciences depend on a history of practice, rather than simply on syntactic rules, for their validity.

The practical consequences of misunderstanding the role of logic in reasoning, coupled perhaps with a misunderstanding of what a rule is, are evident in programs of instruction based on the logic approach. Most obvious is the frequently encountered predilection for teaching syntactic rule formulations and strategies for their application. Comparatively little emphasis is placed on assessing whether an argument is important, on what Coombs refers to as the norms of deliberation (Coombs, 1989), or on the relationship between various types of value standards. While increasingly texts use examples of ‘everyday’ reasoning, there is little attempt to deal with value related issues in any systematic fashion.

The information processing approach is more diverse and harder to characterize than the previous three approaches. However, certain problems are relatively
universal. Preeminent among these is the consistent failure to deal adequately with mental, normative, and even modal concepts. So far, claims to the objectivity associated with natural science have been purchased only at the expense of a coherent sense of mental and normative concepts. Since these are the concepts in which our inquiries are framed, their distortion destroys any hope of having our questions answered in any satisfying manner. The rejection of social practices as too contingent to provide a suitably objective ground for norms, rules, and reference, is, perhaps, one of the causes of this problematic theorizing.

The final approach to be considered is the multi-aspect approach. Unlike the other approaches, it has not been shown to be based on mistaken assumptions. While one of its proponents (Stephen Norris) fell prey to some of the problems which plagued proponents of the information processing approach, this need not affect our assessment of the approach in general. There are, however, three major areas for concern. One is related to problems in the individuation or quantification of abilities and sub-abilities. A second the degree to which the role of values in assessing thinking has been undervalued or overlooked. The third is the misleading picture of judgment as something separate from, or additional to, ability. Each of these issues will be dealt with in the following sections.

6.2. ISSUES AND PROBLEMS REVISITED

Several of the issues and problems with which this inquiry began have been settled sufficiently for present purposes. Significant doubts have been cast on the
plausibility, or the completeness (as conceptions of critical thinking) of the process approach, the problem solving approach, and the logic approach. Existing formulations of the information-processing approach have been seen to involve confusion over the relationship between the language of physicalist and normative explanations. Thus, the ensuing discussion will focus primarily on the multi-aspect approach.

Included in the category of issues which have been settled in so far as possible at present is the notion of a neutral conception of critical thinking and that of a sharp distinction between knowledge and ability or between having information and having the ability to process it. These notions have been shown to be misleading, the first because all conceptions encompassing enough to cover the range of purposive thought are bound to reflect the priorities and background purposes which vary at least somewhat in accordance with cultural, social, and political factors. The latter are misleading because knowledge claims are so closely related to attributions of ability. To have certain information is, among other things, to have certain capacities.

More problematic is the issue which has dominated inquiry in the field - that is, the issue of generalizability or transfer. It has served as a particular interest of Robert Ennis. When put in the language of the multi-aspect approach, the issue is most commonly construed as involving the extent to which various abilities are relevant to performance at thinking tasks in a range of different subject areas or fields of knowledge. The question I want to ask is, "What fixes the reference of the term ability so that we know whether we are referring to the same ability
or a different one?" This, I take it is the issue which drove Norris to the position that there must be a mental structure or mechanism to which the term ability, in each case, refers. We have seen that this is not true, that it is based on the fallacious reduction of an ability to the structure of its vehicle. So, what else might fix the reference?

The only plausible candidate is our linguistic practices. But, I suggest that our linguistic practices with regard to ability claims are so context dependent as to provide little assistance. For instance, take the way we use the phrase 'can read' in the following sentences.

1. I can read even though I am not reading right now.
2. I can’t read when I am asleep.
3. I can’t read because there is not enough light.
4. I can read because I learned as a child.
5. I can read but I can’t read this - it’s in German.

Notice that all of the statements could be translated into ability-talk quite easily and without affecting the issue under discussion. Given suitable circumstances, all of the above statements could be true simultaneously, even though some assert and some deny that I ‘can read.’ What ‘can read’ means is in each case modified by the phrase following. What we mean with claim 1 is that, given relatively standard circumstances, I will meet some relatively unspecified level of performance at the activity of reading a relatively standard text in a language I know. But what counts as standard circumstances, level of performance, standard text, etc. is defined by the context, who I am, the modifying clauses, and so on. What then, is the ability to read?
Researchers in critical thinking want to know whether certain abilities are closely tied to particular contexts or whether they are more general. How can we find out when the reference of the word ability changes from one context to another?

Recall also my argument in section 3.3 that abilities could not be understood as sets of sub-abilities without risking confusion. I suggested that the solution to this problem for the multi-aspect approach is to be clear that the list of abilities is a list of tasks a critical thinker ought to be good at or a set of criteria for the attribution of the term critical thinker.¹ But these ways of understanding the list of abilities are of no help in determining how generally abilities apply because it is obvious that what counts as one task or two tasks, one criterion or two criteria, is simply a matter of definition or convention. However, I suggest that the same holds true of 'abilities.' This poses a grave difficulty, I believe, for the notion defended by both Norris and Ennis, that empirical research will determine the degree of generalizability of critical thinking abilities. Unless some philosophically responsible way of fixing the meaning of 'ability' is found, the notion is unsuitable for the work which Norris and Ennis wish it to do.

This does not, of course, preclude empirical work in this area. One might, for instance, test whether students who are good at accurately reporting observations in the context of a science lab are more successful than those who are not when it comes to reporting the events in a play or a movie (although we have

¹ This approach is quite compatible with Ennis's earlier (1967) analysis of critical thinking but is harder to reconcile with the language of his later works which makes greater use of 'abilities' and even 'skills' (especially 1985).
good reason to suppose that what people notice and remember will vary considerably according to their interests and experience). One might determine whether there are any heuristics with general utility across a variety of situations involving reporting observations. But, even if there are such general heuristics, the question of whether we ought to posit the existence of a general ability to report observations remains open. What we count as an ability depends on the context, not the means by which the task is attempted.

A second major issue is the place of normative or value judgments in critical thinking. I have drawn attention to the way in which judgments about thinking (in the sense in which we are interested in thinking) are normative judgments made on the basis of standards of rationality. This suggests that a central part of the practice of thinking critically is the practice of making value judgments. But reasoning both with and about values has been largely ignored in instructional materials designed for teaching thinking according to any of the approaches.

The result is not that students fail to develop values, but that the values developed are not viewed as objects of criticism, and subject to revision much as our beliefs are. We ought to recognize that an important part of being a critical thinker is the appreciation of the goods internal to the practice of thinking. Critical thinking curricula and programs of instruction ought to be designed with the explicit goal of bringing students to care about these values and appreciate these standards. As I have argued, we cannot consistently accept both the ideal of disengagement from the values and traditions of our culture(s) (or simply
pretend that some form of natural science will replace epistemic and other values or determine what they 'really are'), and also hold the values internal to our practices as intrinsically worthwhile. For this reason I suggest that the modified engagement which characterizes the interpretive stance ought to serve as a realistic and perspicuous epistemic position from which to view and criticize our existing practices.

One writer who has devoted attention to the place of values in critical thinking Robert Ennis. In his early work, when Ennis understood critical thinking to be the correct evaluation of statements, he offered no analysis of value statements. He did recognize that this exclusion was a gap to be filled (1967, p. 117). In his more recent work, he has argued that critical thinking is best understood as "reflective and reasonable thinking that is focused on deciding what to believe or do" (e.g. 1985, p. 45). In explicating this more broader conception, some analysis of what is involved in making and judging value judgments has been included (e.g. Item A, 6, e, in 1980, p. 13; and Item 8, explicated in 1985, p. 46, and 1989, pp. 185-6).

Ennis himself notes that these analyses provide only a starting point in explicating what is involved in thinking critically about value issues. The relatively modest place that value reasoning plays in his conceptions is made evident in the absence of value related aspects of critical thinking in his various tests. If, as I have argued, making value judgments is at the heart of critical thinking, then this relatively limited treatment of value reasoning is a serious shortcoming.
Another significant development in Ennis's work on critical thinking which is relevant to evaluating his treatment of values in critical thinking is the declining attention given to the place of "the pragmatic dimension" and "background purposes" from his 1967 conception to his most recent work.¹ This omission tends to detract from the value of his later work, in that the connection with all our standards of good reasoning and our judgments about the quality of actual examples of reasoning and our fundamental commitments (even our 'way of life') tends to be overlooked. I have tried to make the importance of these connections explicit in developing a conception of interpretive reason in section 4.3.

One further concern about Ennis's treatment of values is his characterization of value judging as a "type of inference" to be distinguished from inductive and deductive inference. While it is difficult to identify exactly what is at stake in referring to value judging as a type of inference, it seems difficult to conceive of it as being an equivalent category to deduction. We can, of course, employ deductive arguments in justifying value judgments,² just as we can in defending empirical, or conceptual claims. This seems to call into question the view that value judging is a different type of inference from deductive inference.

This issue is of great significance in that educators are quite confused about how to deal responsibly with issues involving values. There seems to be great

¹. Post 1967, Ennis does not employ what he earlier referred to as "the three dimensions of critical thinking" (1967, p. 117-8). One of these, the pragmatic dimension, was taken to include the role of background purposes in determining how relevant standards were to be applied in a given context.
². This is true even if, as I have argued, value judgments and practical decisions are not arrived at by deduction from unquestioned premises.
difficulty in finding any middle course between asserting values dogmatically, as if they are the self-evident product of human intuition, or lapsing into the relativistic assumption that values are simply a high-toned way of speaking of people's attitudes and emotional states. Conceptualizing value judging as a separate type of inference, then saying little about its standards and procedures, seems likely to contribute to teachers' feelings of helplessness in dealing with values issues in a constructive and responsible manner.

6.3. A MORE PERSPICUOUS CONCEPTION

The thrust of this dissertation has been to argue for inquiry into critical thinking as a social practice and a normative activity. In so doing, certain positions have been taken, most notably, realism with regard to standards and values, an expressive approach to the understanding of language, an interpretive approach to the understanding of rationality, and a social constructivist approach to rules. As these positions have been established, their relationship with writing about critical thinking has been discussed. Little of a systematic nature has been said in the way of a positive account of critical thinking.

The critical remarks which make up the major part of this thesis do suggest, if not a theory of critical thinking, at least a way of characterizing what I take to be a responsible approach to the tasks facing educators and researchers in the field. A succinct way of expressing this approach is to borrow the Wittgensteinian notion of philosophical inquiry as a therapeutic activity. The following paragraphs elucidate some of the ways in which the notion of a
therapeutic approach may be helpful.

First, we may consider the task of school teachers as therapeutic. Given that students learn the rules and standards of argument, dialogue, and debate as they learn the language, in a variety of contexts involving communication and verbal contestation, we should not regard teachers as introducing their students to critical thinking.¹ A more realistic view of what teachers can do is that they can diagnose deficiencies in their students' reasoning and, using rules and examples, correct their students' practices. In many ways, this task resembles teaching students to behave according to any complex set of standards, such as those of politeness. In such cases, a central part of coming to be polite, or rational, involves coming to care about certain things and becoming sensitive to relevant distinctions. Crucial to this enterprise is the development of an atmosphere in which the giving of reasons is taken seriously (not merely as an academic exercise) and reasons given are evaluated against relatively consistent standards of adequacy.

Notice that teachers need not have a fully developed and articulated theory of rationality or good thinking in order to be successful at this therapeutic task, any more than therapists need a fully articulated notion of the good life or mental health in order to help their patients. For teachers, as for therapists, it may be useful to have familiarity with second order concepts and distinctions to aid in explicit reflection on our practices, but teaching need not consist of instruction in such categories. As we have seen, starting with explicit

¹. As, for instance, McPeck (1980) does.
formulations of rules is not the only way in which rules can be taught or learned.

Sensitivity to a wide range of distinctions is crucial for being able to reason well. In addition to being sensitive to distinctions such as soundness and validity, critical thinkers must be able to distinguish between conceptual claims, empirical claims, and normative judgments. Often such distinctions are context dependent and cannot be explicated according to a formula or differentiated according to a simple procedure. As is sometimes said, such distinctions require judgment. But, as we saw above, developing good judgment is part of learning these distinctions in the sense in which it is most important that thinkers know these distinctions. Students ought to learn to treat conceptual claims as conceptual claims, whether or not they learn to label them properly. Whether the best teaching method, in general or in any particular context, is to introduce these distinctions by their labels or to build on the ‘implicit grasp’ all language speakers have of these distinctions is more a matter to be answered by experienced teachers than by philosophical argument.

One point that teachers ought not overlook is that conceptual and other rules come in clusters of some complexity. Using a word such as ‘justice,’ or acting according to a rule such as ‘choosing the simplest alternative,’ are not the sorts of practices which are either mastered or not learned at all. Our knowledge of such rules and concepts admits of degrees. Interpreting rules and standards in new situations is often a challenge and a question of judgment for even the most expert authorities.
In addition to valuing good reasoning and appreciating a variety of distinctions, students should learn a variety of procedures for establishing and evaluating claims to truth, rational assertability, or good judgment. These procedures are best categorized, perhaps, as strategies, in that any given procedure is not typically essential to arriving at a rational judgment, although any number may be helpful. It is difficult to make any categorical claims about these strategies, in that their role in our thinking varies across differing contexts and areas of inquiry. In some tasks, it may be appropriate to utilize a variety of strategies for instance, when trying to understand a difficult moral issue. In other cases, such as mathematical problems, there may be particular procedures which are known to produce reliable conclusions if followed carefully. In any case, being critical involves knowing a variety of procedures for testing different claims in different areas of knowledge and having a realistic idea of the extent to which any given procedure is definitive of, or merely likely to produce, reliable conclusions or judgments. Often, the use of such strategies must be monitored, with one’s progress in reaching a solution being checked against contextual constraints such as the available time, the significance of being wrong or mistaken, and the potential for adopting an alternative procedure.

An informative way of understanding what teaching critical thinking is, is as the attempt to encourage good judgment in the formation of beliefs and intentions on the part of students. As has been argued above, judgment is not most productively conceptualized as a special talent or skill which is something in addition to understanding and applying rules intelligently. Coming to have good judgment is simply having a developed competence at following a rule within the
context of a normative activity. Judgment only appears to be separate from the following of rules when we conflate ‘learning a rule’ with ‘learning a rule-formulation.’

Regardless of whether rules are learned by starting with rule-formulations or by starting with examples of good and bad practice, it seems sensible to follow Kant in the realization that examples are central to the development of good judgment. If students are to become good at reasoning (as opposed to becoming good at talking about reasoning) they will need ample opportunity to criticize and give reasons in support of a variety of judgments. In order to maximize the potential benefit of this practice, students’ reasoning must be criticized and alternatives must be pointed out. Teachers must explain what makes one reason more compelling or one criticism more important than another. It is for this reason that teachers need to be able to articulate their knowledge of the standards of critical thinking to a greater extent than is true of those who are interested only in thinking well for themselves.

Given the preceding remarks about central aspects of teachers’ tasks in promoting critical thinking, it is instructive to consider what role philosophers and educational theorists might play. Once again, I think that the notion of therapy has relevance. A primary task of philosophers, I suggest, is to criticize and undermine confusions based on the misuse of language. In Wittgensteinian terms, such work ought to be therapeutic in that we ought to be cured of the illusions that some key will be found to unlock the hidden secrets of rationality or that we will discover the essential nature of critical thinking ability. More specific
illusions and confusions which have been discussed are the misleading separation of thinking from emotion or critical thinking from value reasoning, exaggerated claims about the role of formalized rules (especially logic) in good reasoning, the misrepresentation of thinking (in general) as a series of unseen inner events or mechanistic processes, and the notion that there is an objective, disinterested set of standards which determine what counts as good thinking. These confusions can be cleared away, I argue, by accepting frankly that 'thinking' is a multi-faceted concept with a variety of loosely connected uses, that there is no essence of thinking to be discovered behind this multiplicity of uses, and that the standards of good thinking, like the rules of a game or the standards of good workmanship, are a social and historical product developed to serve a varied set of purposes.

Therapeutic philosophy ought to make us satisfied with the somewhat incomplete and partially articulable set of rules, standards, and purposes which has evolved through human efforts to understand, argue, and otherwise communicate. We may argue that, due to changing conditions, certain aspects of our practices ought to be changed, but they will be changed within the context of this network of social practices and standards, not by appeal to an external and unconditioned reality, or to some fundamental and disinterested level of description.

Critical therapy, aimed at exposing illusions which are used to support and justify theories and educational practices in the field, is only one way in which philosophers and theorists may contribute to the field. Another is by developing reconstructions of the strategies and articulations (in so far as possible) of the
standards used by competent thinkers. Jerrold Coombs's "Critical Thinking and Problems of Meaning" (1986b) serves as a good example of this sort of work. In it he distinguishes different ways in which questions of meaning can be important and suggests strategies for dealing with some standard sorts of cases.

Notice that there is no limit to the number of problems which might be explicated in these terms. Nor is there a definitive set of appropriate strategies and/or relevant distinctions. Thus, we cannot expect that philosophers will, one by one, explicate the entire field of critical thinking problems. However, incremental improvements seem possible, especially if philosophers and theorists work closely enough with practicing teachers to try out and modify strategies according to pedagogical, as well as rational, standards.

It is, perhaps, important to note that these reconstructions of strategies and articulations of rules and distinctions are not likely ever to be much help to teachers who lack a relatively sophisticated appreciation of the practices of rational thinking, any more than a cookbook is likely to help a novice cook a complex and challenging meal. Developing competence at thinking, like developing competence at other social practices, involves, in most cases, extended experience with competent practitioners.

To this point, we have followed most of the critical thinking literature in considering the improvement of critical thinking in the context of adults teaching children, or young adults, the intellectual practices of a culture. If we consider the situation of adults trying to become more critical, a somewhat different set
of issues emerge. For many people in many situations, there is no teacher, no expert or authority, who can be turned to for a determinate answer which will settle an issue or complex set of issues. Many important practical decisions, such as how to vote, where to live, what kind of employment to seek, and so on, are like this for any autonomous individual, by definition.

It is part of the modern predicament, certainly part of the predicament of anyone who rejects foundationalist accounts of rationality and epistemology, that there is no ultimate authority or source of expertise to which we can turn. Putnam points out that Kant diagnoses this situation quite well. According to Putnam, Kant celebrates the realization that nothing, not even reason, can determine fundamental truths of religion and morality, and that this is a good thing (Putnam, 1987, p. 49). It is good because the notion that anything determines these ultimate truths leads to fanaticism, in the sense of intolerance or hostility towards others who would think for themselves. The result is that, "we all have the potential to think for ourselves with respect to the question of How to Live" (p. 50). Thus, Kant's ideal community is a community of autonomous "individuals who think for themselves without knowing what the 'human essence' is, without knowing what 'Edaemonia' is, and who respect one another for doing that" (p. 51).

As Putnam points out, the idea of rational assertability, especially in difficult and complex areas, as that which could be accepted by an ideal community of inquirers, has continued to have currency, notably with Peirce and more recently in the work of Apel and Habermas. Such communities must operate under
certain sorts of rules, rules insuring that all criticisms and all hypotheses are heard, otherwise "the possibility of an irrational sort of 'protection of belief' rears its ugly head" (p. 54).

We must recognize, of course, that these are ideals, or to put it differently, that claims to rationality are, on these accounts, counterfactual claims. Nonetheless, we have some idea about what a non-coercive social environment is like, if only by extrapolation from the difference between more and less coercive environments. We have some idea what it is to come to a conclusion freely and autonomously, rather than under the influence of coercion, psychological compulsion, or ideological conditioning, even if all these terms are somewhat problematic. We can, in some way, try to approximate these conditions in real life, in the form of free discussion amongst equals, as in a study group or a support group. We can try to test for ideological bias or psychological impediments by taking seriously the views of others, especially those who have significantly different beliefs and practices. As we consider these possible impediments to rational decision making, and how we try to overcome them, the notion of therapy, or therapeutic criticism, is once again appropriate.

Therapy, in this sense, is aimed at exposing contradictions and incoherencies in our systems of beliefs and values, problems which may obscure our best interests or realistic perception of the world around us. It is a matter of subjecting some of our relatively ingrained beliefs and values to reassessment against what we take to be the best and most responsible of our commitments. Perhaps the best model of such therapeutic activity is that of groups which have been subjected to
psychological, cultural, and ideological domination, and have come to resist it. Groups such as women and ethnic minorities who have realized that they have been denied autonomy, and in ways have internalized this denial, have attempted to develop supportive communities within which new and better practices can develop. Some of these attempts may serve as exemplifications for the more general attempt to proceed with the ongoing reconstruction of rational practices.

While these remarks are sketchy, at best, they do at least point in the direction of something important. They suggest that there is a strong connection between the study of rationality and what critical theorists call the human sciences. The extent of our rationality, collectively and as individuals, is limited by our failures to treat each other with respect as equals. Becoming more rational may have more to do with empowering people and correcting perfectly obvious examples of injustice than with developments in cognitive science or sophisticated argumentation by philosophers.
BIBLIOGRAPHY


Ryle, Gilbert (1966). Knowing how and knowing that. In Israel Scheffler (ed:)


University Press.

Selman, Mark (1988a). Another way of talking about critical thinking. In Barbara
Arnstine & Donald Arnstine (eds:) *Philosophy of Education, 1987*. Normal,
Ill.: Philosophy of Education Society.

*Educational Theory, 38, 2*.

Selman, Mark (1988c). Shon’s gate is square: but is it Art? In Peter P.
Grimmett & Gaalen L. Erickson (eds:) *Reflection in Teacher Education*. New
York: Teachers College Press.


"Values and the Disciplinary Status of Distance Education" in *Journal of Distance Education*, (in press).


"Schon's Gate is Square, but is it Art?" in Galen L. Ericksen and Peter P. Grimmett (eds.) *Reflection in Teacher Education, New York: Teachers College Press, 1988*


