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Honest Questions in the Classroom

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HONEST QUESTIONS IN THE CLASSROOM

by

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VITA

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CHAPTER I

INTRODUCTION

What is to be presented here is an argument on behalf of a technique of teaching. The technique is ~~a technique~~ one used for conducting discussions, and I ~~want to~~ will show why it should be freely used by teachers. I refer to the technique I propose as "honest questioning," and immediately acknowledge that I was not the originator of that name or of the technique itself. The technique will be discussed ~~more fully~~ in greater detail in Chapter V. At this point it is enough to say that an honest question is one to which the teacher does not know the answer, and to which the student can ~~give a~~ provide correct answer. Honest questioning can be seen from many points of view, as will be shown, but it should be ~~seen~~ examined, first of all, from the point of view of the teacher. From that point of view, honest questioning is simply an efficient way to do what many teachers believe they ought to do at the beginning of a school year or before they begin

Redundant Clause

teaching a course. That is, it is a way to find out where the student is.

I claim that honest questioning can be widely used. It can be used in science or humanities courses, and with young or old students. In all cases it will produce the same ~~sorts of ef~~fects. But I provide no empirical evidence to support this general claim, nor the more specific claims I make--nothing other than the transcript of a class, which is presented as Chapter III. Although I do not present an empirical study, the ideas for which I argue did not arise out of consideration of theory, but out of classroom practice. From teaching young children I learned the importance of listening and of watching for opportunities to get students to see a problem. The experience with younger students made it difficult for me to try to teach older students using the traditional lecture, and I discovered that they, too, responded to honest questions. The support I do provide for these claims based on classroom experience derives in part from theory. I make the assumption that if various theories, initiated by different concerns, point to similar ways of treating other persons, there may be some merit in the practices. I also assume that if the effects claimed for certain practices are predictable

from and explicable by a number of theories, it is reasonable to suppose the effects are not wholly imaginary. I find additional support for my claims from another source. Even if it were established that the effects of honest questioning were what I claim, and even if the effects were adequately explained, it would have to be shown that those effects were justified by reference to the proper ends of teaching. I will show that the effects of honest questioning can be so justified, and, therefore, honest questioning itself is a justifiable practice. If the present ar ument is sufficiently convincing, others may find it worthwhile to expend the enormous amounts of effort required to gather quantifiable data.

Arguments for and against discussion are usually presented in the context of arguments for and against other methods of teaching, most especially the methods of recitation and lecture. These arguments, culled from the literature of the last hundred years, are presented in Chapter II. In Chapter II, I also acknowledge the similarities between the honest questioning and some other techniques of discussion and or questioning, and briefly note the differences between my arguments and the arguments of those who have proposed these similar techniques.

Since honest questioning results in a kind of discussion that will be unfamiliar to most, Chapter III consists of a transcription taken from one two and three quarter hour class session. There was no particular reason for choosing this class or this group of students. When the time came to make a tape, I did so in the next class that came up. Chapter IV provides an informal description of the discussion, emphasizing those characteristics which are typical of discussions led by a teacher who uses honest questions.

It is in Chapter V that I spell out my assumptions about the proper ends of teaching and show why it is reasonable to expect that honest questioning will contribute to their achievement. I claim that rationality is the end of teaching, and define rationality as including both the ability to reason in the narrower sense of reason and the ability to recognize and act in accordance with proper ends. (Although I believe honest questioning could enable persons to achieve both parts of rationality, the transcript I present shows honest questioning employed only to improve the student's ability to reason in the narrower sense. I cannot justify this omission. I explain it by saying that since schools have power over students' futures, I have usually chosen not to challenge their enrollment

in class too vigorously by pressing them to consider why they have done so.)

If asked, few teachers would deny that rationality is at least one proper end of teaching. But having accepted the rationality of the student as an end, a teacher may be uncertain how to produce it. I am proposing that honest questioning is a means to that end, but that it also may be conceived as a means to a less grand, more immediately comprehensible goal. For honest questioning is a sensible way for a teacher to find out where a student is and it is, as stated on the first page, a truism of teaching that the teacher ought to begin where the student is. A teacher can use honest questioning to achieve her immediate goal of finding out where the student is and be confident that in doing so she will be fostering his rationality. (1)

In Chapter VI, I show that honest questioning can be expected to contribute to the student's coming to "know that" and to "know how." I take no particular position regarding the nature of propositional knowledge as a whole, claiming only that "knowing that" depends at least on the individual's knowing how to justify a belief. Epistemologists differ regarding the nature of propositional knowing, but they do agree that some conceptions of it are mistaken. I assume that

whatever passes for teaching should not derive from those clearly mistaken ideas about knowing but should rather be consistent with whatever approaches a current consensus regarding necessary conditions of knowing.

Chapters V and VI include attempts to justify the honest questioning as a method of teaching. Chapters VII and VIII offer explanations of its effects. In Chapter VII it is shown how the results of honest questioning could be explained in terms of portions of Piagetian theory. I make no pretense of evaluating that theory as a whole, and do not wish to suggest that the truth of my claims depends on the adequacy of that theory any more than I wish to suggest that the adequacy of that theory guarantees the worth of my proposal. I simply wish to show how my proposal that a student can best learn to reason with words by trying to reason with words is consistent with the work of Piaget. My proposal is consistent with Piaget's claim that children must act to learn, and consistent with his belief in the necessity of cognitive conflict for development. My emphasis on a verbal technique is obviously consistent with Piaget's early work, and can be interpreted as being consistent with much of his later work. I agree with Piaget that we do not learn to do by being told. I agree that we must learn by

trying and being corrected by the environment. We learn to ride a bicycle by getting on it and adjusting our responses as necessary. We learn to use words by trying to use them. But the analogy with the bicycle does not tell the whole story. For skill at using words is a social skill. As we learn to fence not by going through the motions in solitude but by responding to a skillful partner, we will learn to use words intelligibly by trying to make ourselves understood to a skillful partner.

Chapter VII aligns honest questioning with one theory of cognitive development, and Chapter VIII aligns honest questioning with a therapeutic model of communication. I have chosen to show the similarities and differences between the techniques of honest questioning and the client-centered therapeutic techniques of Carl Rogers. There are several reasons for focusing on Rogers' work. Despite the lack of conceptual clarity in his writing, I found his ideas stimulating when I began to teach. Rogers himself attempted to employ his ideas in the classroom, and so did many teachers during the 1960's who made efforts to improve the emotional climate of classrooms. While Rogers' ideas felt right to those who tried to apply them, they also appeared to be incomplete and Chapter

VIII suggests addenda to Rogers' formulation. The chapter, though critical, is in part an effort to repay a debt.

Chapter IX deals with some of the obvious objections to honest questioning. This concluding chapter also attempts to right the balance so that, in urging this particular method of teaching, I may not be seen to be overstating the case for it. I try here to place honest questioning within the framework of other teaching activities and I note the relationship between honest questioning and the student's experience, between honest questioning and the acquisition of information. The very interesting question of appropriate methods of evaluating the effects of honest questioning as a researcher or a teacher is briefly considered. The chapter and the dissertation conclude with a few remarks on the practicality of honest questioning, and on the function of honest questioning as an ideal.

1. Throughout this dissertation I shall use feminine pronouns to refer to teachers, and masculine pronouns to refer to students. This is purely for the sake of readability. There are places where locutions of the sort "she/he" would lead to at least a moment's worth of puzzlement.

CHAPTER II

A HISTORICAL SURVEY OF MAJOR TEACHING METHODS

The Recitation

Oral instruction in classrooms takes one of three forms: recitation, lecture, discussion. None of the three forms is entirely satisfactory as a teaching method. The recitation, so common to primary instruction in particular, has been under attack at least since the time of Comenius in the seventeenth century. The attacks were intensified at the end of the nineteenth century, when critics of recitation were able to employ a new science, psychology, as a weapon against it. (1) William James, for example, acknowledged in Talks to Teachers on Psychology that "words, words, words must constitute a large part . . . of what the human being has to learn," but he deplored the failure of the teacher to ensure that what was learned was understood. His illustrative story is well known:

> A friend of mine, visiting a school, was asked to examine a young class in geography. Glancing at the book, she said: "Suppose you should dig a hole in the ground, hundreds of feet deep, how should you find it at the bottom,--warmer or colder than on

> top?" None of the class replying, the teacher said: "I'm sure they know, but I think you don't ask the question quite rightly. Let me try." So, taking the book, she asked: "In what condition is the interior of the globe?" and received the immediate answer from half the class at once: "The interior of the globe is in a condition of igneous fusion." (2)

James' objection was not that children were required to learn such information, nor was it that the teacher would try to ascertain whether they had in fact learned such information. It was rather to recitation by the book, and it was an objection James made partly on the grounds of efficiency. If the information was to be readily available to students, then the teacher must change her tactics, and James urged her to "multiply the cues as much as possible . . . don't always ask the question, for example, in the same way; don't use the same kind of data in numerical problems; vary . . . as much as you can." (3)

Writing in the same decade as James, Joseph Mayer Rice amassed data from visits to twelve hundred classrooms, and used them to make the same point but with greater emphasis and fervor:

> The instruction throughout the school consists principally of grinding these answers verbatim into the minds of the children. The principal's ideal lies in giving each child the ability to answer without hesitation, upon leaving her school, every one of the questions formulated by her. In order to reach the desired end, the school has been converted into the most dehumanizing institution that I have ever laid eyes upon. (4)

Rice continued a few pages later, "in no single exercise is a child permitted to think. He is told just what to say and he is drilled not only in what to say, but also in the manner in which he must say it." (5)

Rice's exposé, initially published as a series of articles in the periodical, The Forum, caused a stir, as muckraking is supposed to do. But apparently it did not cause teachers to change. In 1912, twenty years after Rice made his study, Romiett Stevens undertook a study of the use of questions in classrooms and found the same sorts being asked in the same way and with the same frequency. Her brief work is filled with examples and statistics. It was common for teachers to ask two or three questions per minute, hurling them as fast as students could reply. Stevens, as James and Rice before her, was displeased by what she found. (6)

The studies of Rice and of Stevens bracket the time of John Dewey's most intense efforts to reform education. If his labors had so small a salutary effect on classroom procedures as a whole, perhaps it is not altogether surprising that recitation in unacceptable form, the form described here, is still to be found in schools. Teachers today are, possibly, more concerned than teachers in the late nineteenth century to be

friendly to children, and most would reject the extreme rigidity of the teacher immortalized by James. Furthermore, teachers now may not know the term "recitation" as the name of a method, much less think of themselves as using it. But, if the recitation method can be taken to consist essentially of the teacher posing questions to which she expects the student to give a particular answer which she will then evaluate, then teachers do use recitation and do so extensively. (7)

Arno A. Bellack and his team observed contemporary classrooms and reported that recitation provided the basic pattern of classroom interaction. The recitation "started with the teacher asking a question, which a pupil answered, . . . (and concluded with) the teacher's reaction to or rating of the pupil's response." (8) They suggest a possible rationale for this typical procedure:

> From another point of view, teachers may assume that students 'learn by doing.' Their aim would be, therefore, to stimulate and guide the 'doing' by repeated solicitations. From this point of view, classroom discourse may be seen as a rehearsal of cognitive processes, or in short, an opportunity to practice thinking as viewed by these teachers. Since thinking begins with a problem, one way for the teacher to encourage pupils to think is to pose a problem in the form of a question. Thus, the aim of teaching is to stimulate and shape the pupil's cognitive responses. The teacher stimulates and directs the response by posing a problem that

> initiates the pupil's thinking; that is, he asks a question that requires an answer. The teacher further modifies this response by his subsequent reactions. (9)

Bellack and his colleagues have provided a generous interpretation of the function of recitation. If the passage quoted cannot be read as an enthusiastic endorsement of the recitation method, it is, at least not an attack. Richard Hyman, one of Bellack's colleagues, does, elsewhere, explicitly endorse the use of recitation while noting its dangers. He writes that the greatest strength of the method is that the "teacher can quickly get direct feedback from the students, and that the teacher can give prompt responses to the students' remarks." (10) Hyman cautions, however, that the recitation is to be used for "elaboration and expansion of ideas--rather than to judge or bludgeon students . . . the recitation method has great potential for creating a threatening situation for the student . . . any situation is threatening where someone is constantly being evaluated . . ." (11) Hyman does not object to evaluation and states his position clearly: "The teacher must focus on diagnosis and commentary. This does not imply the elimination of evaluation, for surely the student needs to be encouraged and praised for his achievements. He even needs to be reprimanded at times

for poor performances." (12)

Hyman insists that evaluation is an essential part of the recitation, and in any case, when the teacher is looking for a particular answer, it is likely that her response will tend to be in the form of an evaluation. But the unforeseen effect of constant evaluation by the teacher, no matter how kindly it is done, may be that the student gradually comes to assume that the final authority is neither reason nor the methods of inquiry, but the teacher or the textbook. This is a serious objection to raise against recitation. A yet more serious objection is that recitation as it is practiced tends to reduce knowledge to collections of information. Unfortunately, there are those who would not see this reduction as an objectionable result of recitation, but rather as a point in favor of it. Benjamin Bloom's well-known study of teachers' educational objectives gives credence to this claim. Bloom based his conclusion that the primary goal of most teachers is, in effect, the transmission of information, on the fact that most of the questions teachers ask require little more of students than the recall of information. (13)

Teachers emphasize knowledge (by which Bloom means information or what is passed off as information) "as an educational objective out of all proportion to its

usefulness." (14) Bloom hoped that his taxonomy would stimulate teaching aimed at the development of higher level cognitive processes. He hoped teachers would ask questions requiring students to interpret, to apply, to analyze, to synthesize, and to evaluate what they had learned. However, were they to do so, the objectionable features of recitation might well be retained. For though a teacher could not look for verbatim answers if she asked the student to apply information, she could still look for one answer in particular, could still think it appropriate to evaluate the student's reply simply as correct or incorrect, as good or bad.

Two objections have been raised to the method of recitation: that it may fail to foster students' ability to evaluate sources of information, and that it can convey the impression that growth of knowledge is essentially the acquisition of information. There is no need to detail the grounds for rejection of the method of recitation any further here. But before turning attention to the method of the lecture, I have a final observation to make. Insofar as the teacher adopts the suggestions of Hyman ("focusses on diagnosis and commentary") and of Bloom (asks questions requiring higher level cognitive skills) she will be moving, however little, along a line from recitation toward

discussion.

The Lecture

As the recitation has traditionally been the preferred method of teaching younger students, the lecture has been the most commonly used method of instruction for older students.

The lecture, like the recitation, has changed in form over the long centuries of its use. In medieval times, when books were expensive, the lecture might have been just what the etymology of the word suggests--a reading from a book. It might also have been a summary of a book. (15) Today a lecture might provide a summary of the required reading, emphasizing what the instructor thinks has greatest significance, or it may provide background for the reading. More rarely, a teacher might use a lecture as an opportunity to present her ideas and interpretations to an audience. In all of these cases, the primary purpose of the lecture may be said to be the transmission of information. (16)

The lecture antedates by many centuries those techniques of printing which made inexpensive books possible. When printed matter was not readily available, the lecture method of transmitting information was clearly justified on the grounds of efficiency. The lecture might be justified today on the grounds of

efficiency in some circumstances: as, for example, when a teacher is presenting her own new ideas to an audience and has no facilities for duplicating notes cheaply. But oral transmission is not efficient compared to transmission through print and it is, therefore, odd that the lecture is such a common form of instruction today. It is odd precisely because many teachers and students, however mistakenly, do think of teaching as essentially transmitting information. If that is the goal, there are better ways to achieve it. Jean Piaget, not an enthusiast of the cultural transmission model of learning, writes:

> The sentimental and natural worriers have been saddened by the fact that schoolmasters can be replaced by machines. In my view, on the other hand, these machines have performed at least one great service for us, which is to demonstrate beyond all possible doubt the mechanical character of the schoolmaster's function as it is conceived by traditional teaching methods: if the ideal of that method is merely to elicit correct repetition of what has been correctly transmitted, then it goes without saying that a machine can fulfill these conditions correctly. (17)

The lecture is inefficient both because it presents information more slowly than most can read and more quickly than most can transcribe. Those who love the lecture would not be put off by such an objection. Though they may embrace a transmission of information model of education, and thus, presumably, value

efficiency, they would argue that the lecture arouses the interest of the student more effectively than the printed word does. Hyman states that the arousal of the interest of the student in the subject is one of the most important functions of the lecture. It would be foolish to deny that if one must lecture one should try to keep the interest of the students. But it would be difficult to sustain the claim that a lecture is inherently capable of arousing greater interest than a book can arouse. One might wonder whether a person whose interest in geology was not aroused by the printed version of "On a Piece of Chalk," would be any more interested in geology after hearing Thomas Henry Huxley deliver that lecture, even though one might concede it likely that the lecture might prove more entertaining. (18) Whether the entertainment value of the lecture has educational significance is the question, to which Theodore M. Greene's comments on excitement will serve for now as an answer: "Excitement is relatively easy to arouse, both in lectures and in discussion, and though some types of excitement do reflect a real involvement in real issues, excitement is often superficial, more emotional than reflective, and not indicative of genuine student interest and growth." (19)

Whether the lecture is or is not interesting does

depend in part on the lecturer, just as the interest of the book depends in part on the author. If the lecture is not interesting, it is not the fault of the form. But as in the case of the recitation, the most serious objection that can be raised against the lecture is an objection which does derive from an inherent characteristic of the form. No matter how interesting the lecture is, it casts the student in the role of audience. It is a consequence of the form that "despite the best efforts on the part of a lecturer, the student who has to rely chiefly on lectures for his academic instruction is almost certain to be overimpressed by the lecturer's expert authority and to accept much too passively and uncritically the lecturer's own conclusions regarding what is and is not factually the case." (20)

The problem of student passivity has not been overlooked by those who do believe that the lecture is an indispensable tool for the teacher. Hyman, for example, suggests the lecture is improved insofar as the lecturer permits students to question and follows questions where they lead. And that amounts to saying that the lecture, like the recitation, is improved as it assumes some of the characteristics of a discussion.

The Discussion: General Remarks

I have said that the recitation and the lecture move toward discussion when teachers encourage students to answer in their own words, de-emphasize certain forms of evaluation, ask high level cognitive questions, permit students to ask question. That seems obvious, but it would not be obvious just when that movement toward carries the recitation or the lecture across the border and transforms it wholly into discussion. It would not be obvious because it is not obvious what a discussion is. Meredith Gall and Joyce Gall found that the names teachers gave to the methods they employed were misleading. "The term 'discussion method' . . . (was) used to describe a broad variety of classroom interaction patterns" (21) including some that looked very much like recitation, "characterized by a preponderance of teacher talk and fact questions." (22) Discussion is not even distinguishable from other methods by the amount of student participation, for in a recitation the students may say more words than their teacher.

I do not intend to propose that some of the activities called discussions be given other names, even though lack of conceptual clarity and looseness of language create a multitude of problems. Nor am I

interested in working out some sort of classification scheme, useful though such a scheme may be. The Galls have proposed one such taxonomy, and David Dietrick has proposed another. (23) I acknowledge the variety of activities labelled "discussion" and draw the following conclusions: 1) Since so many kinds of activity are identified as discussions, teachers apparently value discussion, at least in principle; 2) The conceptual confusion over the nature of discussion indicates confusion over the purpose of discussion. That is reason enough to consider, as I do in later chapters, what this purpose might properly be; 3) Given the range of activities labelled "discussion," I am under no obligation to defend my application of the label to the technique proposed in this dissertation. It is enough to say that the technique is assuredly neither recitation nor lecture, and so may as well be called a technique of discussion.

Given the fact that a wide assortment of activities may be labelled "discussion," it is not surprising that researchers cannot agree on the effects or the effectiveness of discussion. Dietrick maintains that "generally, lecture and discussion methods appear to be equally effective with regard to acquisition of information." (24) McKeachie would not be perturbed if

discussion did turn out to be less effective for the transmission of information:

> Student-centered teaching might be ineffective in achieving lower-order cognitive objectives. There seem to be few instances of such a loss. Students apparently can get information from textbooks as well as from the instructor. But we had also predicted that any superiority of student-centered discussion methods would be revealed in higher-level outcomes. . . . The more highly one values outcomes going beyond knowledge acquisition, the more likely that student-centered methods will be preferred. (25)

That position is close to the position of Gall and Gall:

> On the basis of research findings, then, it appears that the discussion method is effective in helping students to master curriculum content, especially when cognitive outcomes beyond the level of knowledge are desired. Discussion also may be more effective than the lecture method in promoting higher cognitive outcomes. (26)

In 1954-5 the Journal of General Education devoted an issue to the topic of discussion. The articles, contributed by philosophers and instructors in humanities, each contained the message that discussion was the teaching method most appropriate to a liberal education. The authors justified this claim on the grounds that it was discussion that could lead, for example, to understanding, interpretation, and evaluation. (27) Discussion is, wrote Joseph Schwab, "the experience of moving toward and possessing understanding and a liberal arts education is concerned with the art and skills of understanding." (28)

Theodore Greene praised discussion for promoting "reflective inquiry" and "demonstrating the universal need for the interpretation of evidence." (29) Charles Wegener chose discussion as that method capable of achieving the ends of liberal education, which "require that the student be constantly invited to think, to reflect, to inquire, and to judge. For such a purpose a teaching technique is requisite in which the basic procedure is the raising of a problem and the guidance of an inquiry." (30)

Whatever people mean by discussion, whatever benefits they claim for it, all admit that conducting one is difficult and that success is rare. Greene, who has been practicing the method for years, acknowledges failing more often than not. And Gall and Gall remark that "classroom discussions are frequently boring, aimless, and even threatening to some participants." (31) Any method of teaching can be done badly, and each method has its peculiar dangers. But no matter how well the recitation and the lecture are done they may be objected to on grounds intrinsic to the form. This is not so in the case of the discussion. A discussion can indeed be conducted badly, but when conducted well, discussion is a superior method of teaching because it is a form without intrinsically objectionable

characteristics. This I claim and this I want to show. In particular, I hope to show what form a discussion may take in order to be effective.

Discussion: Some Specific Proposals

The claims (cited in the previous section) on behalf of discussion do not amount to an adequate argument for its use. And the fact that what are referred to as discussions often go badly suggests that few possess the skills discussion leaders need. Others besides myself have provided both more substantial arguments for discussion as a way of teaching, and descriptions of techniques intended to improve the likelihood that discussions will be fruitful. I shall now briefly review a few of these proposals. I do so for the sake of claiming kinship and acknowledging indebtedness, and also because it will help to define my position if I identify those points at which my argument and description diverge from theirs. I begin with a report of an experiment designed to test the effectiveness of techniques somewhat similar to those proposed here and move to those which are more similar.

M. L. Abercrombie shares with the other authors whose work will be described the belief that new knowledge will be the outcome of a successful dis-

cussion. That is to say, the point of discussion is not to simply articulate what is already believed or known. In her book Anatomy of Judgment, Abercrombie records her efforts to use free group discussion as a teaching tool after she repeatedly found that her medical students, to whom she taught zoology, knew the facts but did not think scientifically. Although her experiment was carried out with eighteen to twenty year olds, she believes free group discussion is appropriate for students of all ages. It

> might be most useful where at present least used, where autistic (32) thinking is most dominant, namely in teaching children. Our methods of formal education are still governed by a notion that children's little heads are empty . . . whereas the truth is that it is because they are too full of what we do not understand that they are difficult to teach. (33)

Abercrombie believes that whatever the age of the learner, "the kind of change which has to be effected is the reassessing and rearranging of what is already in the mind, rather than the receiving of new packets of 'facts.'" (34) It is this ability to reassess and rearrange on which inventiveness of imagination in science depends, and it is this ability which, Abercrombie hoped, would be fostered by group discussion. In group discussion, students would better recognize their own ways of working, particularly "the part that

one's past experience and present attitudes play in determining what we see." (35) Such recognitions would enable them to reassess and rearrange, to make new associations of schemata.

Abercrombie describes the role of the teacher in discussion in these words:

> My main task was to make it possible for students to compare and contrast the statements they made with those that others made . . . I tried to be socially reassuring and avoided making statements which could seem to reprove any individual, or even to praise, because praise of one implies by contrast criticism of the others . . . I tried . . . to direct emotion into effective channels, so that they could be usefully anxious about the difficulties of thinking clearly and not be diverted by being anxious about its becoming apparent that they had difficulties in thinking clearly. (36)

The role she outlines for the teacher is not that of the expert and Abercrombie gives as reason for this that

> There is a danger in the teacher summarizing discussion in too final a way, because it tends to inhibit further thinking by the student. They [sic] should not be given the impression that decisions can be made tidily and finally on the matters discussed in the course, but rather that the function of the discussion is to start them thinking. (37)

Students were often uncomfortable with, and hostile to, the non-authoritarian role adopted by Abercrombie. She nevertheless concluded that the results made the struggle worthwhile.

> The course brought the student face to face with the need for continued change in himself, if he is to take in more of the information available to him. .

> . . The aim was to make it possible for the student to relinquish the security of thinking in well-defined, given channels and to find a new kind of stability based on the recognition and acceptance of ambiguity, uncertainty and open choice. (38)

Despite their discomfort, compared on the following dimensions, students in the discussion course did better than those students in the lecture course:

> They tended to discriminate better between facts and conclusions, to draw fewer false conclusions, to consider more than one solution to a problem, and to be less adversely influenced in their approach to a problem by their experience of a preceding one. That is, they were more objective--more flexible in their behavior. (39)

Abercrombie's explanation of the effects of discussion on learning draws on the work of psychologists in various specializations: of Adelbert Ames in perception; of Freud in psychoanalysis; of Piaget in genetic epistemology; and of S. H. Foulkes in group analytic psychotherapy. From Ames, Abercrombie borrows the assumption that experience and attitude determine, at least partly, what we see. From Freud, she learned "to consider more seriously the possibility that a person's behaviour might be changed in a desirable direction by allowing him to talk, as distinct from talking to him or at him." (40) She defends her use of group discussion as the particular vehicle for inducing learning, using evidence supplied by Foulkes and on the authority of Piaget, both of whom emphasized the

importance of interaction with others for the development of thinking.

While Abercrombie's work seems admirable to me, I differ with her over the limited role she allows the teacher. In her model, the teacher appears to be a comforter, and a facilitator of others' conversations. While it is important to recognize that students have feelings and that these affect learning, I see no compelling reason for the teacher not to intervene more directly in the students' cognitive development. Nor, as will now be seen, do the McMurrys.

I referred earlier (this chapter, footnote 1) to a work of Charles A. and Frank M. McMurry, the handbook called The Method of Recitation. As I said there, the McMurrys implicitly define recitation as oral interchange between teacher and student. What they propose as the correct way to conduct a recitation is what I would call the proper way to conduct a discussion, but the difference in terminology ought not obscure the closeness of our positions.

The McMurrys' handbook is for teachers. It therefore but sketches the outlines of theory while illustrating the techniques in some detail. They open their short statement of theory by stating what they take to be a generally shared assumption: that humans

are alike in some ways, including the way they learn. There are, the McMurrys write, universal laws of learning, and it therefore follows that universal principles of teaching method must be discoverable. They ground their proposals for practice in these laws of learning on the one hand, and on the other hand in the universal aims of instruction. There can be no question that there are such universal aims. A glance at any textbook, observation in any classroom, will reveal them. It simply is the case that all instruction aims at "mastery of these (general) rules and principles, and the ability to apply them." (41)

The aim of instruction is always the same. It is methods which vary, taking now an inductive now a deductive approach. The McMurrys insist that the inductive approach is the one consistent with the laws of learning. As the chief exemplar of the inductive approach and of the method of recitation they propose, the McMurrys cite Socrates, to whom teaching meant

> not the telling of what the instructor knows, but rather the asking of such questions as will call up previous experience, guide the thought of the student, and draw him out (educate) to a free expression of his own ideas. The new conclusions reached in the course of the conversation constituted the knowledge acquired. (42)

The McMurrys organize the presentation of their method around Herbart's sequence of steps to be followed

in organizing a lesson, although they see a need to modify Herbart's prescriptions or the interpretations of these. For example, the McMurrys believe it is a mistake to assume that "every recitation should show the full treatment of a topic through the series of five steps." (43) What they do insist on is that the teacher begin by calling up to the student's mind prior experiences relevant to the new material to be learned. This, Herbart's stage of preparation, must be done through conversation, in which the teacher skillfully questions the student. While the purpose of the stage of preparation is chiefly to prepare the mind to receive new knowledge by calling up related knowledge, preparation may have other useful effects. One is that, as they converse, students are likely to find out what they don't know, and their awareness is in turn likely to lead to questions or problems of interest to them. Another useful effect is that the teacher will hear, and consequently have the opportunity to correct, the students' mistaken interpretations.

The name which the McMurrys give to the practice they recommend is "the developing plan," a name which apparently derives from the stage of instruction which follows preparation. This stage consists in providing an absolute minimum of facts and then, using questioning

as in the first stage, drawing from the students inferences based on both their old experience and this new information. Charles McMurry was teaching in DeKalb, Illinois when John Dewey was teaching in Chicago. Undoubtedly the McMurrys knew of Dewey's work and perhaps that is why they emphasize the principle and its corollary that the student who seeks an answer to a felt question will learn more effectively than the student to whom the question is merely posed, and that what is called "information" may not inform. Information is what serves to answer a student's question. In the remaining steps of the sequence, the student is to use his information to arrive at general principles, and general principles are to be applied to new situations.

The McMurrys plainly believe that the teacher who uses the developing plan of instruction must remain firmly in charge and know exactly where she is going. Their teacher is more than a facilitator. She has a direct contribution to make to the student's learning: "if a person is left entirely to himself in acquiring knowledge, he is likely to make serious mistakes in even the simplest observations, and to be very superficial." (44) The McMurrys are not afraid to assert that the teacher's position derives in part from her greater

knowledge and that it is her responsibility to use that knowledge to her students' advantage. The McMurrys insist on the importance of the teacher being knowledgeable. They set high standards for the occupation, and it counts in their favor that they recognize, better than some contemporary reformers of teaching, the impossibility of improving practice by formulating a set of techniques to be used mechanically. Many skills are required if the developing plan of instruction is to be conducted effectively: "A well-grounded process in teaching will not save the teacher who lacks knowledge of his subject, who lacks insight and tact in managing children, or who is destitute of spirit and originality." (45)

My objections to the McMurrys' methods are both major and minor. The minor objections may reflect nothing more than current fashions regarding appropriate ways of treating children. While I questioned Abercrombie for seeming to strip the teacher of all authority, I question the McMurrys for allowing her too much, as they seem to when they encourage the teacher to correct the student's previous experience if he has incorrectly interpreted it. (46) I find the remark discomforting even though I deny that all interpretations of experience are equally justifiable. Perhaps

my discomfort would evaporate if I knew how these corrections were to be made. The same remarks might apply to my objection to the McMurrys' claim that there is a certain order that the mind must follow in learning. (47) I could accept this as a claim that there is a general pattern in the process of learning, but not as a claim that each person must have precisely the same sequence of experiences in order to arrive at a given conclusion. I am not sure what the McMurrys mean, especially in the light of the way they summarize the steps necessary if the teacher is to keep a discussion from wandering: she must state a clearly defined aim to the class, must make herself an outline of the pivotal questions, and these must form a necessary sequence. (48) The McMurrys show only a little concern over the possibility of authoritarian behavior on the part of the teacher, but that lack of concern was widespread in the early twentieth century when it was not the custom to worry much about students' sensibilities, or what might be called the affective environment. The major objection I have to The Method of Recitation is that, while it is designed as a practical handbook (49), it fails in fact to give effective instructions to the teacher who might want to work towards the goals the authors outline. Some teachers would be able to figure

out how to put the developmental plan into practice, just as some people could look at an item of clothing and figure out how to duplicate it. But those teachers would be few and far between. Having made these objections, I now say that the McMurrys' proposals ought not be consigned to history. Much of what they say appears to be sound. The task that remains is the task of showing teachers what techniques will lead to their desired goals.

John McCollum has attempted this task. He, too, has written a handbook, one intended to teach teachers what sorts of questions to ask. His scheme for classifying questions derives directly from a model of scientific thinking. McCollum describes the "inductive knowledge-generating and testing process of: 1. Acquiring and describing data. 2. Developing explanations. 3. Making predictions based on the explanations," (50) and prescribes the kinds of questions that will foster the student's ability to use that process. These are the:

> Open Describing Question: "What are some of the things the article told us about Antarctica?" Closed Describing Questions: "What is the climate like in Antarctica?" "What grows there?" "What animal life do they have there?" "How are the animals in Antarctica different from those in (Oregon)?" Explaining Questions: "What might happen if we took some of our (Oregon) animals to Antarctica?" "How do you account for some animals

having thin fur and others having thick fur?" (51)

As the McMurrys do, McCollum distinguishes between appropriate and inappropriate sorts of teacher questions, but unlike them he pays equal attention to the distinction he sees between appropriate and inappropriate teacher responses. It is precisely on the affective climate of the classroom that John McCollum focuses a great deal of his attention. McCollum believes that if the student is to learn, he must feel he is accepted. Therefore, it is imperative that the teacher listen to what the student has to say, that she learn how to check up to be sure she understands what he said, and that, with few exceptions, she learn not to evaluate what he has to say. This last condition is especially important, because learning "depends on the students acquiring the understanding and skill to evaluate their own ideas." (52) McCollum grounds his proposals in humanistic psychology and the incomplete argument he sketches in his introduction is sufficient for a manual of practice.

McCollum's proposals, like the others cited, have much to recommend them. But McCollum has offered an analytic tool as a teaching tool. He is not the only one to have made this pedagogical mistake: it has occurred countless times throughout history. Because an

understanding of this mistake is germane to my argument, it is a mistake I shall illustrate with another example taken from the literature of questioning.

In the 1960's and early 1970's the scientific model of thinking chosen as the basis of McCollum's taxonomy was not the model preferred by educators interested in improving teachers' questioning strategies. The experiments reviewed by Virginia M. Rogers were all designed to teach teachers how to ask high level cognitive questions. (53) In each case attempts were made to teach teachers how to classify questions according to Bloom's taxonomy. All of the authors claimed at least some short term success as a result of their efforts. That is, teachers learned to ask questions demanding higher level cognitive skills of their students. It might be useful to learn to classify questions according to the taxonomy, but to teach such a skill in order to improve teachers' question-asking techniques seems analogous to trying to teach students to speak well by teaching grammar rules. Bloom's taxonomy, like the rules of grammar, was designed as an analytic tool, and teaching the use of an analytic tool is not likely to be the best way to improve practice. One does not learn to analyze or classify the ways that different people walk in order to learn to walk, nor

even to improve one's own walking, even though such a study might be useful for other purposes. Some people may learn to speak well or to ask better questions while they learn the analytic language, but I concur with the McMurrys: the deductive approach seems contrary to the "laws of learning." An inductive approach is preferable, and it is such an approach that I will argue for here.

A wholly satisfactory proposal for a technique of teaching will have to satisfy a number of desiderata. It will have to take into account the intellectual aims of teaching, as the McMurrys' and McCollum's proposals do. It will have to take into account the effect of emotions on learning, as Abercrombie's and McCollum's proposals do. And it will have to be compatible with at least some psychological theories, as Abercrombie's and McCollum's proposals are. In addition, a wholly satisfactory proposal will be justifiable from the point of view of current thinking about the nature of knowledge, and will be justifiable from the point of view of the proper ends of teaching (which I take to include more than the sheer acquisition of knowledge and/or cognitive development). Abercrombie, the McMurrys, McCollum do not attempt to justify their proposals from such lofty perspectives. I will show

that what I propose does take into account all the factors which must be taken into account, can be shown compatible with psychological theories, and can be justified from the points of view of the nature of knowledge and the proper ends of teaching. But I will also show, when I begin my argument proper, that one great advantage of my proposal is that it can be presented in terms that teachers can understand. The McMurrys' proposal was couched in terms of aims. Examples were given, but not useful instructions. McCollum, and the people Virginia Rogers cited, also spoke of aims and offered examples. In addition they presented taxonomies, the tools of analysis, disguised as tools of instruction. But learning to classify questions is one kind of learning, learning to ask good questions another kind. It is conceivable that a person could learn to classify questions according to a given taxonomy but still not be able to ask questions in various categories. It is not conceivable that a person could learn to ask honest questions and not ask better questions. Honest questioning is, therefore, presented as a technique the use of which will lead teachers to ask better questions (and consequently to lead better discussions). Chapter III, a transcript of a class session, illustrates the technique of asking honest

questions to find out where the students are.

1. The objections made to recitation in the nineteenth century were not to recitation as such, but to recitation as it was practiced. A distinction was made between good recitation practices and bad recitation practices. For example, Charles A. and Frank M. McMurry wrote a handbook, The Method of Recitation, to be discussed later in this chapter, prescribing good practice. They appear to include in the category of recitation any oral interchange between teacher and student. I prefer, for reasons which will be made explicit, to distinguish recitation from discussion.

2. William James, Talks to Teachers on Psychology, new edition (New York: Henry Holt and Company, 1939), p. 150.

3. Ibid., p. 82.

4. Joseph Mayer Rice, The Public School System of the United States (New York: The Century Company, 1893), p. 31.

5. Ibid. p. 38.

6. Romiett Stevens, The Question as a Measure of Instructional Efficiency, Contributions to Education, no. 48 (New York: Columbia University Press, 1912).

7. Teachers are no longer confined to asking questions orally of the entire group of students, but the workbook, different programming devices, and even objective tests, can plausibly be seen as extensions of the recitation method.

8. Arno A. Bellack, H. M. Kliebard, R. T. Hyman, and F. L. Smith, Jr., The Language of the Classroom (New York: Teachers College Press, 1966), p. 55.

9. Ibid., p. 249.

10. Ronald T. Hyman, Ways of Teaching, 2nd ed. (Philadelphia: J. B. Lippincott, 1974), p. 202.

11. Ibid., p. 202.

12. Ibid., p. 203.

13. Benjamin Bloom, Taxonomy of Educational Objectives. Handbook I: Cognitive Domain (New York:

David McKay Company, Inc., 1956), p. 28.

14. Ibid., p. 34.

15. Samuel G. Williams, The History of Mediaeval Education (Syracuse, New York: C. W. Bardeen, 1903), pp. 141-2.

16. The lecture did, at one time, serve another purpose. In American Education: The Colonial Experience, 1607-1783 (New York: Harper and Row, 1970), p. 215, Lawrence Cremin describes the lecture at Harvard in the eighteenth century, where students were trained to argue orally: "The lecture was the master's way of demonstrating systematic thought at its best: he would commonly cast a proposition as a question, divide and subdivide it into its various elements, dealing with each separately, and then indicate the relationships among the several parts." That kind of lecture was itself a model argument. Few teachers today would be capable of constructing and delivering anything resembling it.

17. Jean Piaget, The Science of Education and the Psychology of the Child, trans. Derek Coltman (New York: Orion Press, 1970), p. 77.

18. Gilbert Ryle, The Concept of Mind (New York: Barnes and Noble Books, 1949), pp. 284-5.

19. Theodore M. Greene, "The Art of Responsible Conversation," Journal of General Education 8 (1954-5):48.

20. Ibid., p. 48.

21. Meredith D. Gall and Joyce P. Gall, "The Discussion Method," in Seventy-fifth Yearbook of the National Society for the Study of Education, Part 1, ed. N. L. Gage (Chicago: University of Chicago Press, 1976), pp. 166-7.

22. Ibid., p. 168.

23. David C. Dietrick, "Review of Research," in A Comparative Study of Lecture and Discussion Methods, by Richard J. Hill (No place of publication given. The Fund for Adult Education, 1960), pp. 90-118.

24. Ibid., p. 94.

25. Wilbert J. McKeachie, Teaching Tips: A Guide Book for the Beginning College Teacher, 6th ed. (Lexington, Mass: D. C. Heath and Co., 1969), p. 76.

26. Gall and Gall, "The Discussion Method," p. 200.

27. The terms "understanding," "interpretation," "evaluation," echo Bloom's categories. See above, page 16. The issue of the journal to which I refer includes articles by Joseph Schwab and Charles Wegener, both of whom were teaching at the University of Chicago when Benjamin Bloom was conducting his research. All were no doubt involved with the problem of creating satisfactory comprehensive exams, which were administered at that time to undergraduates at the end of a yearlong course of study. Perhaps this accounts for some of the similarity of language.

28. Joseph Schwab, "Eros and Education," Journal of General Education 8 (1954-5):51.

29. Greene, "The Art of Responsible Conversation," p. 48.

30. Charles Wegener, "Discussion and Aims of Liberal Education," Journal of General Education 8 (1954-5):27.

31. Gall and Gall, "The Discussion Method," p. 166.

32. The Oxford English Dictionary Supplement gives as a definition of "autism:" "morbid admiration of oneself." It also cites Bleuler. Autistic thinking is thought which is "divorced from logic and reality." A Dictionary of Psychology, revised edition, provides the following definition of "autistic thinking:" "mental activity which is controlled by the wishes of the individual, as contrasted with reality thinking, . . . " Abercrombie appears to be using "autistic" not to suggest that children's thought is pathological but to suggest that it is less logical and realistic than adult thought.

33. M. L. J. Abercrombie, The Anatomy of Judgment (London: Hutchinson, 1960), p. 81.

34. Ibid., p. 109.

35. Ibid., p. 16.

36. Ibid., p. 76.

37. Ibid., p. 78.

38. Ibid., p. 141.

39. Ibid., p. 18.

40. Ibid., p. 60.

41. Charles A. and Frank M. McMurry, The Method of Recitation (New York: The Macmillan Company, 1905), p. 11.

42. Ibid., p. 142.

43. Ibid., p. 327.

44. Ibid., p. 75.

45. Ibid., p. 317.

46. Ibid., p. 97.

47. Ibid., p. 288.

48. Ibid., p. 147-51.

49. Ibid., p. vii.

50. John A. McCollum, "AhHah!" The Inquiry Process of Generating and Testing Knowledge (Santa Monica, Ca.: Goodyear Publishing Co., 1978), p. 81.

51. Ibid., p. 80.

52. Ibid., p. 83.

53. Virginia M. Rogers, "Modifying Questioning Strategies of Teachers," Journal of Teacher Education 23 (Spring 1972):59-62. Rogers herself designed an experiment to teach teachers how to ask higher level questions. She provided this reason (page 58) for teachers to do so: "With open-ended and high level

questions the answer may be secondary to the reasons given to support it. These reasons are clues to the thought processes used, the depth of understanding, and the level of thinking attained by the pupil." Compare this with Richard Suchman's rationale for his inquiry training program. See J. R. Suchman, "Inquiry Training: Building Skills for Autonomous Discovery," Merrill-Palmer Quarterly 7 (1961): 147-70. In Suchman's program children watch short films about which they may ask questions which may be answered "yes" or "no." No physical manipulation of materials is permitted: "the teacher has very little access to the cognitive operations that a child is performing while exploring a piece of apparatus. By permitting children to obtain data only through verbalized operations (i.e. questions) we give the teacher greatly increased access--however indirect--to the children's processes."

CHAPTER III

TRANSCRIPTION OF A DISCUSSION

The third chapter consists of a transcription of a class discussion. The participants were not selected in any formalized way. I merely went to class one day with a tape recorder. No advance warning had been given that I intended to do this, and when I arrived I explained my wish to record and asked students whether they objected. None did. The students appeared to be comfortable with each other, perhaps in part because the group was small. On this evening it was smaller than usual. Out of the class of eleven students, only eight were present. The number of absences was greater than normal for this group, but not high for the time of year at which the tape was made. This was the last of ten sessions of the third quarter of the year, and so it fell in June, at a time when teachers are likely to have all sorts of school obligations, and most of these students were practicing teachers. They taught in upper middle

class suburban schools and at one upper middle class private school in the nearby city, at levels from kindergarten through high school. Each had at least four years of teaching experience, and two had more than ten years experience. The other students came from different backgrounds: graduate studies in the biological sciences, nursing, business, and computer programming. As it happened, two of the absentees were the business man and the computer programmer. The youngest person in the group was the graduate student in biological sciences, who was in his early twenties. Several students were in their mid-thirties. All of the students were working toward master's degrees (in reading, special education, school psychology, for example) at a small teacher's training college in the Midwest. The course in historical and philosophical foundations of American education in which the tape was made was required. It met, as graduate courses for teachers often do, in the late afternoon and early evening, from 4:25 to 7:10.

The transcription amounts to about forty percent of what was recorded in a discussion which lasted two and one quarter hours. (We took half an hour out of our two and three quarter hour class for general business and for a break.) Two long sections were excised, one

on what a psychologist is, and one on the sort of responsibility which might distinguish the professional from the non-professional. Sections in which the group fragmented so that several people were talking at once--sometimes to no one in particular--were also deleted. Much material was omitted simply because it could be omitted without losing the thread of the discussion. As a result of cutting, the discussion appears to be less tortuous than it was. That distortion was inadvertent, but elimination of some repetition has had the effect of improving readability.

Even if every word of the original discussion had been included, much of its character and content would have been lost. For example, it is not possible to preserve the pacing of the conversation. There were times when all participants spoke at once or interrupted each other, and there were long moments when no one spoke at all, perhaps because they were thinking, or perhaps because they were tired. The warmth, the good humor, and the involvement of the group leave few traces: a transcript is but a script of a discussion.

In preparation for this, their last session, the students had read several chapters from Arthur Bestor's The Restoration of Learning, P. H. Hirst's article "Liberal Education" from the Encyclopedia of Education,

and the article "The Basis of Education" by Robert Maynard Hutchins. In the previous class, the group had argued about Bestor's effort to justify liberal arts education on the grounds that such an education was practical. The teacher had decided that it would be fruitful to explore further the relationship between liberal education and practical knowledge, and the relationship between the theoretical and the practical. Such relationships are usually of interest to teachers and appeared to be so to those in this group.

The teacher made a few introductory remarks to review what had been said earlier, and to call attention to what she hoped would be the major focus of attention for the evening's discussion. She concluded her remarks by stating Hirst's four criteria of liberal education: liberal education is based on the structure of knowledge, is distinguished as a pursuit of knowledge for its own sake, is not narrowly specialized and, finally, has nothing to do with vocational education.

(1) Teacher: Do you see now why, from Hirst's Aristotelian point of view, it would be inappropriate to try to justify liberal education on the grounds that it is practical?

(2) Shan: Could I just jump in?

(3) Teacher: By all means.

(4) Shan: I graduated from a liberal arts college, and what I think is interesting is that the education department was never recognized as a department. The professors and the board of trustees wouldn't accept a major in education based on the fact that it was vocational training.

(5) Rob: I graduated from a liberal arts college that destroyed its department of education . . .

(6) Teacher: Conant argued that the only function of a school of education was to provide supervision for student teaching. All courses should be taken out of other schools: courses in educational psychology should be taught by psychologists, courses in history and in philosophy of education by historians and philosophers.

(7) Shan: That's what we did in school. We had one person in the education department and then we took everything else in other departments.

(8) Teacher: Let's talk about what the preparation of the teacher ought to include. Bestor claims that a liberal arts education is all but sufficient preparation for teaching. Do you agree?

(9) Jean: I think it makes a big difference whether

it's little kids or big kids.

(10) Teacher: Why do you say that?

(11) Jean: They're such very different human beings . . . I guess it's because of communication . . .

(12) Teacher: Can you say what the big difference might be?

(13) Jean: Well, if I were going to teach small kids, I would need to go to college to learn how to communicate with kids because I don't remember how they think, how they perceive . . .

(14) Sandy: My view of teacher education has always been that we don't have enough kids in it. I don't think you learn any of these things until you're working with children. We literally only saw children for one quarter of the whole four year period . . . I can get into catalogs and teachers' manuals and things like that on my own . . . I've always thought that it was a shame because the only time I wasn't working with children--I've been teaching children since I was six years old--was when I was supposedly learning how to teach. A much larger part of teacher preparation should have been experience in the classrom.

(15) Maryanne: That experience should be from the time

you decide that education is your field . . .

(16) Rob: To compare it to my own experience, it would make about as much sense as studying theoretical science for three and a half years and then sticking the kid in the chemistry lab and saying, "Don't you know how to do chemistry? You've been reading books on it." It seems ridiculous. You learn how to deal with your subject matter, kids, by dealing with kids. It struck me a little funny--nothing personal, Jean--to say, "I want to go to college to learn about little kids," because that's the only place there are no little kids . . .

(17) Jean: Yes, but where would you go to learn . . .

(18) Rob: Be a parent. That would be useful . . .

(19) Jean: Some parents can't communicate. (Much laughter) They really can't. They don't seem to have any conception of how limited their children's experiences are and what they don't understand because they shouldn't understand. They're just too young . . .

In the next few minutes, almost all took the opportunity to contribute to a collective lament. Parents, they said, bring their problems to teachers who are supposed to know how to solve them, but don't.

(20) Bev: I think I see where Jean's coming from . . . The problem comes in in the difference between the theoretical and the practical. You know a child does not fall into page five, paragraph seven, and that's the thing that really disturbed and frustrated me. I had to spend all that time on how it should be and when I went out to teach I saw kids did not fall into these categories.

(21) Teacher: You're all saying that somewhow or other you need practical experience with children and that you need to learn how to communicate with children. What does that mean, "to learn to communicate with children?" How is it done? Do you learn it by simply being out there with children?

(22) Sandy: You need to know theories. You need some background in order to be able to judge what direction you're going in. I'm not trying to say you don't need the theory, but the balance . . .

(23) Irene: First, I'm not sure what people are saying when they say "liberal education." Then, I kept on thinking of Piaget. Let's say you want to learn reading, or some other skill. He says that you have different experiences that lead up to the development of that skill. You have to have

experiences. Whatever goes into the development of that skill, you experience different steps. Some of the steps might involve concrete experience with the children. It might involve reading a book. It might involve a discussion approach to learning. I'm not sure what we mean by the practical versus the theoretical. I don't want to perceive it as a dichotomy.

(24) Teacher: I think we have to concentrate on three terms. What do we mean by theory? What do we mean by liberal? And what do we mean by professional?

(25) Sandy: Are we talking about the liberal as liberal arts or . . . Liberal arts is really a body of knowledge and liberal education is perhaps a body of experiences . . .

(26) Shan: I agree. Traveling might be a liberal education. Experience might be a liberal education because you're working through something one on one with a little kid, an animal, a relationship . . .

(27) Teacher: Are you saying that any experience . . .

(28) Shan: I wouldn't want to say any experience. I definitely wouldn't want to say that.

(29) Teacher: Only those experiences for which you are

prepared contribute to your liberal education?

(30) Shan: I haven't thought it through that far.

(31) Irene: I had always thought of liberal arts as a body of information. You go and take English, or philosophy. Liberal education, well, you need a philosophy. And I thought the liberal arts were everything that wasn't science. I don't think that now . . .

(32) Teacher: It was a common misconception. But you don't think that liberal arts program was inten e to produce a liberally educated person necessarily?

(33) Irene: I don't think it was.

(34) Sandy: Does liberal come from the same root as library?

(35) Teacher: No. Although both come from Latin. "Liberal" comes from the Latin "liber" meaning "free". Our word "library" comes from the Latin "libra" meaning "book". Let me say the distinction you are trying to make is an interesting one, but historically, I believe it is accurate enough to say that the liberal arts were intended to produce the liberally educated person. But look at the root. Liberal arts are the arts of the free man. They are also the

liberating arts. But what do they free you from?

(36) Jean: When you have to concentrate on your major then you're no longer free to take the courses you're curious about, like Science 101. What you were freed from in your earlier, liberal education, was the need to zero in on the skill to get your job.

(37) Teacher: So you're free from having to specialize? That sounds close to one of Hirst's criteria. Is there anything else the liberal arts might free you from?

(38) Rob: He who ends his education on a liberal note is free to go on to anything but he who has a professional education is bound to that profession. I'm quoting, it sounds like . . .

(39) Teacher: Franklin? Who wanted to provide students with the basic tools so that they would be prepared to learn any business, profession or calling?

(40) Shan: Engineers can only deal with problems in the way they're trained.

(41) Teacher: Are you giving a practical justification for liberal arts again?

(42) Shan: Yes. Not intentionally . . . Much like what Rob said, if you had liberal arts for four

years you'd tasted . . . if I took science and didn't like it then I could go back to history . . . I could then decide which avenue out of this whole highway of ideas I wanted to go down.

(43) Teacher: Now it sounds as though you're trying to justify liberal education on the grounds that it exposes you and enables you to make choices. Do you think those are the only or even the best justifications for a liberal arts education?

(44) Sandy: I'd like to analyze it in somewhat broader terms. I keep thinking it frees you from being ignorant. I couldn't put it together until Shan said it gives you the ability to solve problems.

(45) Teacher: What kinds of problems would it help you to solve? Do I need a liberal education to solve the problem of how I'm going to buy a new car?

(46) Sandy: As you get more specialized you narrow down the problems you can solve and the methods you can use . . . if you're following a liberal arts track you're learning a much broader range of methods of solving problems.

(47) Teacher: Are you?

(48) Rob: I think you do learn more about problem-solving in a liberal education, because as you learn more disciplines and gain more

facility with them you learn more different ways to solve problems.

(49) Teacher: How is a liberal arts education going to teach you to solve the problem of making a living?

(50) Irene: It's teaching you how to problem solve. Not, er . . . what problems to solve. If you have the ability to problem solve, you theoretically have the ability to go from problem to problem.

(52) Teacher: So you're holding to that: a liberal arts education is justified on the grounds that it improves one's practical problem-solving ability?

There were "yesses," chuckles, and one "no."

(52) Irene: No. That is not my justification. I think knowledge is the justification in and of itself. I think you learn problem-solving techniques in a variety of ways and no more in liberal education than through a more specialized education.

(53) Sandy: Hmm. I see a difference between an intellectual problem and a practical problem like changing a tire or like earning a living . . .

(54) Teacher: What kind of difference?

(55) Sandy: (giggling) There's one thing in my mind right now and I can't get past it . . . it's the absent-minded professor . . .(General laughter) He zeroes in on one intellectual pursuit and he can't change his own tire. It's different . . . he's using . . . all right it shows you the ways to collect materials, to put the information together, to reason it out, and come to some sort of solution or further questions. In a practical situation you're trying to solve a problem. In an intellectual situation you may want, ah . . . you may be perfectly happy with more questions.

(56) Teacher: Are you backtracking? I think you were saying liberal education was justified by its ability to improve your problem-solving . . .

(57) Sandy: But your intellectual problem-solving, not all your problems.

(58) Shan: I'm trying to look at it from the other way. If practical is knowing how to change a tire, then let's say a person specialized in tire-changing. Now how does that specialization help the person, and now I'm trying to think of something liberal like . . . like do history or analyze all the factors leading up to the Civil War and make some statement about the causes.

I'm trying to turn it around. I don't know that tire-changing can help a person solve liberal problems, therefore, I don't know that a liberal training can help solve practical problems.

(59) Karen: But a liberal education will give me some start for finding the answer to a practical problem. I can go to the library and read a book on how to change a tire. Whereas a specialized, practical education is not going to help me answer a philosophical . . .

(60) Teacher: You're referring to skills, Karen? Are those skills necessary in order to pursue a liberal education or are they themselves a part of liberal education?

(61) Karen: I want to say "yes" to both questions.

(62) Teacher: I would say those skills, reading and knowing how to find information, are not a part of liberal education.

(63) Sandy: I would differ with you. You have to teach those skills in the younger grades and they are as much a part of liberal education as liberal arts subjects are in college.

(64) Teacher: So then, you are rejecting the views of Bestor, Hirst, Hutchins? To them the liberal arts are the fundamental forms of inquiry. The

skills one needs would not be part of . . .

(65) Rob: I'd like to turn this in another direction. Something about the reason liberal education hangs together is that it shares a set of skills. Once you've learned something of the problem-solving methods of history, you've also learned them for economics, government. But the skills necessary for the vocational stuff, are much more basic, reading, writing . . . that's why it's practical to have a liberal arts education because it's practical for learning more liberal arts.

(66) Teacher: Why would you want to learn more liberal arts?

(67) Rob: Something about the higher achievers going into the liberal arts, the lower achievers going into professions and vocations. That's my observation . . .

(68) Irene: What about engineers, doctors, lawyers?

(69) Rob: Well, I guess I don't want to include professionals.

(70) Teacher: Now what do you mean by professional? We'd better identify some professions.

(71) Various voices: Medicine. Teaching. Law. Major league baseball. (General laughter)

(72) Teacher: You notice immediately that everyone wants to be called a professional and we end up calling every occupation a profession. But let's take those which we think most would agree to call professions and see what their characteristics are.

(73) Jean: They require further education.

(74) Teacher: Meaning what, Jean?

(75) Jean: Two things: one is that you subscribe to a professional journal so that you stay up on the latest research, and the other is that you periodically go back for further formal education.

(76) Teacher: Can you think of other criteria? Look at medicine, law . . .

(77) Irene: What they charge . . .

(78) Sandy: . . . and how the charge is determined. They can set their own rates if they're professionals.

(79) Teacher: Now then, if I'm a caterer who reads the caterer's journal, and goes to France to study, and can charge five hundred dollars for a meal for ten, am I a professional?

(80) Many voices: "yesses," "no's," and "why nots?"

(81) Shan: Lawyers and doctors know something that

other people don't know and you have to trust them. I have to lay myself there and say, "please take care of me," because I don't know why my heart beats forty thousand times a minute. I don't have the ability to find out. I can take the book out and check on my prescriptions but I can't understand the books. It seems to me they've got the magic. Whatever it is you can't get at it easily.

(82) Teacher: Special knowledge?

(83) Irene: I'm trying to distinguish between the caterer who satisfies the criteria and the doctor. Maybe it's a broader base of knowledge. No, I'm not sure that's true . . .

(84) Teacher: Why is the doctor's training not exclusively experiential? Suppose we apprenticed the young doctor to be with an experienced doctor who taught him what to do. Once admitted to the group of doctors he answers questions about why he does what he does by saying: "it works," or "that's the way I was taught." Would you accept those answers?

(85) Irene: You need a broader base of knowledge.

(86) Teacher: Can you say what you mean by broader? Does that mean more information?

(87) Bev: Maybe he was just lucky once. What he did may not work the next time.

(88) Teacher: Supposing he has one hundred percent success? He does know what will work. He says, "I've tried this on five hundred and sixty-three patients. Here are their names and addresses. They're all cured. Call them."

(89) Irene: Let me use an example from my own field. There's a new intelligence test coming out. It's based on theory. You can use it practically if you're a technician. But if you want to apply it, to understand it, you have to understand the theory behind the test. So a professional is one who understands the theory . . . behind the instrument, the technical process, or behind the mechanical operation.

(90) Shan: You can take that into the classroom which goes back to our original questions. There's a theory on brain growth which says that kids reach plateaus and that their synapses don't connect and that at that point they cannot learn. Now I might be a teacher for four hundred years and notice that when kids turn twelve "A" students drop down to "C" students. I could tell a parent that I know this from experience, and they'll

start learning again, so not to worry. But if I have theory behind it, I can explain to them rather than just saying this is the way it is. If you have the theory you speak on a different level with the parents or the patients.

(91) Teacher: Do you want to say the professional knows the theory? Do you want to say it gives you a way to explain what you observe?

(92) Rob: It's a way to fit it into an organized background. I mean a technician doesn't know why he's doing what he's doing.

(93) Jean: I think he may know why. I don't think he understands the larger picture of where it fits into a whole. (Jean went on to talk about the nursing field, where, she said, each kind of nurse, e.g. licensed practical nurse, registered nurse, wished to be considered professional but did not want those below them in the hierarchy to be so considered.)

(94) Teacher: It may be true that in fact everyone wants to be called professional, but if the term is going to have any meaning at all, you might want to insist that the professional is, for example, the one who knows the theory. Do you think that by this criterion a teacher qualifies

as professional?

(95) Someone: They should be a professional.

(96) Teacher: If that is so, then what do you think is the theoretical basis of their practice?

(97) Several voices: Psychology.

(98) Teacher: Then I'm going to want to ask you why you choose psychology as the theoretical underpinning for teaching, and what you mean by "knowing psychology." First let me suggest to you that we try to distinguish two sorts of thinking. Instrumental thinking or reasoning is the kind we do when we're doing practical problem-solving. In instrumental thinking, we accept the goals or ends as given. We don't question whether we want to change the tire or write the paper. We simply want to know how to do those things. The question for the instrumental thinker is, "How do I solve this problem?" Now, when we think critically we may not take the goals or ends for granted. We may ask, "But why maintain the democracy?" "Why be a good citizen?" or, "Why buy a new car?" We want to know what count as good reasons for our actions. And we also want to know what count as good reasons for our beliefs: "Why do we believe

such-and-such?"

I suggest that the general goal of critical thinking is understanding, while the general goal of instrumental thinking is control, and I then suggest that liberal arts education is education in critical thinking. Now consider this distinction. You may know the theories or the explanations given by the historian, and thus in a sense you have the science, that is, the knowledge produced by the historian. But you have not the art of being an historian. You have the theoretical knowledge of the historian, but you cannot yet engage in the practice of being an historian. We look at theories and demand that they translate into practical problem-solving, and I think that is a mistake. If I learn the theories of history, do I do so to solve my practical problems or the current problems of the world? What does it mean to be an historian?

(99) Irene: I was just thinking of what you were doing here. You could talk about a theory of education, talk about the importance of dialogue, but without getting us to do it, you're not a teacher. But it doesn't mean we're going to solve any practical problems and in point of

fact, I don't think we have. (Much general laughter) . . . But I'm saying it's an act of doing, but using your theory. You can't just do something helter-skelter, you have to have a theory behind it. You can learn in school about Piaget, but if all you can do is spout Piaget and cannot sit down with a student and act upon that theory, well, it has nothing to do with problem-solving, then you are not doing the art of teaching. Of Piagetian teaching . . . I'm trying to tie it in with science versus the art of . . .

(100) Shan: . . . becoming an historian. There's an interpretation implied, not just a rote memorization of the theories of historians, but evaluation, and concluding, and doing some of your own writing.

(101) Teacher: What does it mean to be a psychologist? Who is the psychologist? Is it the person who knows all the theories? Or the one who knows one theory, or a person who knows one theory and practices psychotherapy according to that theory? What about the person who has good human relations skills, whatever these might be? What about the person who goes through therapy and

develops these skills? What about the skillful manipulator of others who knows how to get what she wants? Who is the psychologist?

(102) Someone: Not the one who just knows the theory.

(103) Teacher: Do you want the teacher to be a psychologist in some sense?

(104) Jean: I would want them to have the human relations skills rather than the theory.

(105) Shan: They have to know lots of theories. I use whatever I need at that moment.

(106) Teacher: So you use it to solve your practical problems?

(107) Irene: I want someone who can use whatever they need to fit the needs of that child at that moment. They don't all respond to the same thing.

At this point the teacher gave another short mini-lecture, this one on the history of psychology as a science. A strictly empirically-based psychology, modelled after a nineteenth century view of the natural sciences seeks to explain human behavior in terms of causes, or correlations. Other psychologists, those whose ideas originate in European phenomenology, for instance, look at man as a thinking being who attaches meaning to the things and events of his world, who can

give reasons for his beliefs and actions.

(108) Teacher: Which psychology can the teacher choose? How is she to choose? And what can psychology do for the teacher?

(109) Sandy: Okay, the purpose of studying the theory of psychology is to come to a reasonable analysis of what I believe. I may forget the names of the people we've read for this class, but I have taken what we've discussed and come to my own analysis and my own beliefs.

(110) Teacher: Would it be okay for the doctor to forget what he has learned?

(111) Sandy: Not everything. But I don't mind when he pulls a book off the shelf and checks something that he may not be sure of . . .

(112) Teacher: I think it is true that there is a generally agreed on body of law to which the lawyer refers. The same is true of doctors, at least if they're practicing conservative medicine. But look at the problem of the teacher: how many psychologies does she have to choose from? Does that fact have any bearing on the problem of whether the teacher is considered a professional?

(113) Shan: This goes along with that. I teach seventh

grade and someone else teaches eighth grade and someone below me taught sixth grade and we all have different philosophies. I mean I don't know what came before and we all come from different places and the parents and the kids, too, get mixed up, which doesn't make us look any better.

(114) Teacher: Is that because teachers have such different goals. In law, you said, there's one goal: "To get the client off the hook." In medicine the goal is to cure. Teachers say the goal is the learning of the students, but do we all mean the same thing by learning?

(115) Irene: I think that having so many theories does make it difficult. I would consider a good teacher as one who could go into a classroom and teach each child individually, but I don't know whether that makes her professional.

(116) Teacher: It makes her competent? Do you want to hold to the criterion of professional that you set up before? Should the professional refer to a body of theoretical knowledge? Have we figured out what that is for the teacher? It seems a little odd that as teachers we refer to the discipline of psychology. Lawyers refer to law .

. . Does it have to be psychology?

(117) Irene: I would guess that as you get higher up in education they will not say psychology. They will say their own content.

(118) Teacher: Is the college teacher considered a professional?

(119) Maryanne: In universities you need a degree in your specialized area but you don't need a degree to teach. You can be a mechanic and be hired at a junior college to teach auto mechanics.

(120) Teacher: Are you saying that at the college level teachers are not professionals?

(121) Someone: Professional what? Professional teachers? Probably not. They may be profesional historians, or philosophers, or physicists.

The group then considered the criterion of a good track record, which they claimed lawyers and doctors had but teachers as a group had not. They examined the case of chiropractors and then expressed uncertainty about the criteria of more education and theoretical knowledge. The teacher then summarized what seemed to be the position: that teachers neither referred to a generally accepted body of theory, nor did they share generally accepted goals. That is, teachers did not agree on what learning was, nor on what kind to promote. After she

said this, the group groaned and someone said, "Then we don't have a profession."

(122) Teacher: Did you want to be professionals?

(123) Irene: I think we should be . . .

(124) Teacher: Let's throw out psychology for now. Is there some other body of knowledge that you think the teacher needs to know?

(125) Irene: The math teacher has to know math and the English teacher has to know English.

(126) Teacher: Should math teachers be professional mathematicians?

(127) Irene: That would be terrible. How many teachers have we all had who were brilliant in their area but couldn't teach. That just makes them a professional mathematician, but not . . .

(128) Rob: They should know how to communicate what they're teaching to whomever they're teaching it.

(129) Teacher: Does that get you back in some sense to psychology?

(130) Rob: Communication skills. Being able to get across ideas. I suppose that's psychology. I would set up as a criterion the ability to communicate.

(131) Teacher: The teacher as professional communicator?

(132) Rob: It's more than that. To communicate a body of knowledge, methods, technique, that sort of thing.

(133) Shan: That does get us back to psychology though.

(134) Teacher: Are you saying that it is the teacher's primary job to communicate?

(135) Rob: Yes, that's what they do.

(136) Teacher: This is exactly where we began. Jean said one has to go to college to learn to communicate with children. And that ability to communicate is crucial for the teacher.

(137) Jean: But wherever people have to work as a group to make the thing go, communication is vital.

(138) Teacher: Therefore the ability to communicate doesn't distinguish teaching as a profession?

(139) Jean: In my undergraduate work in public health the emphasis was on education and that meant communication. At the end of that sequence you understood much more about how to take what you hear from people who are from a different subculture . . .

(140) Shan: Which is really interesting because you didn't go through teacher training and I went through liberal arts and teacher training and never had any of that. It's so strange, because

if your job is communication . . .

Ordinarily, when we approach the end of our time, I ask the group if someone could summarize positions, and if no one can then I try to. In this instance no summary was provided by anyone. The discussion was moving in a lively manner, and, perhaps because this was our last session together, I let it go on. We ended the discussion reluctantly at this point, and then talked about the course as a whole.

CHAPTER IV

A DESCRIPTION OF THE DISCUSSION

Introduction

Although the observations which follow refer to one discussion in particular, I wish to provide a description that could be applied to any discussion led as this one was led. The discussion transcribed in Chapter III will be taken to be representative of a type, and differences which reflect unique characteristics of this group will be ignored. However, within discussions of this type, variations will occur, and the kinds of variations which may be expected will be noted in the sections describing student and teacher behaviors.

The description is organized into four parts. The first part, The Content of the Discussion, answers the question "what was the discussion about?" The second part, The Behavior of the Students, answers the question, "what were the students doing?" The third part, The Behavior of the Teacher, answers the question "what did the teacher do?" The fourth part of the

description, Outcomes, answers the question, "what happened and was it worthwhile?"

The Content of the Discussion

It is not easy to list the several topics of this discussion, and in discussions of the sort I am describing, that is often the case. Students rapidly learn that, since there are interconnections between ideas, it is difficult to resolve one problem without dealing with others. Carrying on a discussion is a bit like rehabilitating an old house: one cannot start at one corner of one room and work one's way neatly through the building. If one is to rehabilitate effectively, one must tackle whole systems, several of them simultaneously. Only in this destructive, messy way can one do the job well.

Initially, it seemed that the first major topic of the discussion was to be the relationship of liberal arts education to the training of teachers. But the attention of the group rapidly turned from the role of the liberal arts to a critique of teacher training. A passing suggestion was made that teachers needed to learn how to communicate, but the group let that suggestion lie, as they indignantly deplored the failure of teacher training to include practical experience. It

was apparently the word "practical" and the implied suggestion that teacher training was too theoretical that prompted the mention of theory. A few minutes were spent arguing the relative worth of the practical and the theoretical, and then the group recognized a need to clarify concepts, choosing first to try to say what they meant by liberal arts. They were unsuccessful in their attempt, one abbreviated by their unplanned return to the original question, that is, how the liberal arts were to be justified. They were subsequently unable to resolve the question whether a liberal arts education develops superior problem-solving ability, and when the discussion got bogged down the teacher redirected attention toward the concept of profession. The students failed to establish a set of criteria by which to distinguish profession from non-profession. But they did seem satisfied that at least one criterion was necessary. This was the criterion of theoretical knowledge on which professions were, they claimed, founded. Using this criterion, the group was led, through a consideration of their own assumption that teaching was founded on psychology, to the position of doubting whether teaching was, after all, a profession. If teaching was founded in psychology, then its foundations were shaky, since there were so many

psychologies to choose from. Finally the discussion came full circle as participants reconsidered the suggestion--almost ignored when first made--that teachers must know how to communicate.

If a discussion is to be judged according to whether participants, individually or collectively, arrive at answers to all the questions that are raised, then this discussion failed, as did all the previous discussions in which the group had engaged. So in fact do most discussions of this sort, though not all break off leaving quite so many loose ends. The characteristics of the group and of the teacher which contributed to the inconclusiveness of the discussion will be mentioned in the appropriate sections. But the principal reason why this kind of discussion is likely to be inconclusive is that the questions discussed are genuinely discussible, and, by definition, that means they are difficult to answer.

Not all questions are discussible. For example, a question about the size of the financial contributions of state and federal government to education could be settled by reference to a book with the appropriate statistics, not by talk. But had this group been trying to decide how to find out whether senior citizen volunteers reading to first graders could affect reading

scores, they would have had something to talk about, namely how to design a suitable experiment, or how to conduct an inquiry. Had the group been trying to figure out how to conduct a study to determine the effect of salary on teacher performance, participants would again have found themselves in the midst of lengthy discussions as they tried to select criteria against which teacher performance was to be judged. In other words, they would have found themselves discussing, as they so often did, questions of concept, e.g., what is teaching, what is good teaching? Questions of concept were, for this group, of primary concern, but it should not be assumed that only questions of concept are discussible. (1) Questions of interpretation of texts or events, questions of method are all discussible. Answers to these kinds of questions are not likely to be quickly found, a fact which, it must be admitted, initially causes some students a degree of frustration. That this discussion resulted in nothing more than the discovery of the complexity of the questions addressed is not a mark against it. Discussions must be evaluated by other criteria than how many questions are answered. What these criteria may be will be suggested in the final section.

The Behavior of the Students

It may be helpful to think of discussions as located on a many stranded continuum. The strands of the continuum would represent, at least, participants' social skills, their intellectual skills, and whatever pertinent knowledge they bring to bear on the problems under discussion. At one end of the continuum might be placed "discussions" carried on by persons with minimal social and intellectual skills, who, in effect, carry on monologues, expressing their uninformed opinion. This sort of exchange is exemplified in the parallel play of young children. At the other end of the continuum could be placed discussions between participants who, having well-developed social skills, listen to and respond to each other; who, having well-trained minds, speak the language of reason; and who, finally are immersed in the problem being talked about and well-acquainted with its literature. Such discussions are rare indeed! They are not likely to be heard in classrooms where students are assembled for one short term.

A classroom discussion is, in all likelihood, going to fall between the extremes of the continuum. The exact position will be determined in part by the age of the students, since age will, to some degree, affect social and intellectual skills, and, also, level of

knowledge. The students who participated in this discussion were all adults whose social skills were well-developed. They showed great good will, seldom interrupting each other, and never "putting each other down" in any way. There were few if any signs that they were not listening to each other; occasionally their responses were indirect, as if a bit preoccupied with their own thoughts (22, 87), (2) or delayed as if the speaker was replying to what had been said some time previously (16, 23, 42, 83).

But these students were not characters in a Becket play. That they were listening to each other can be concluded from the fact that there were times when they disagreed with each other, and that they were socially skillful can be concluded from looking at the way they handled disagreements. A few disagreements were over relatively insignificant matters. Jean and Rob disagreed (16-19) over where one could go to learn to communicate with children. Contradicting Rob, Jean argued that being a parent was not enough, since some parents could not communicate. Much later Jean and Rob appeared to disagree again (92-93) when Jean said that technicians did know why they did what they did, but simply could not place their actions in a larger context. Both Jean and Rob, as well as the rest of the

class fail to recognize the ambiguity of "why" questions. To take but two examples of more significant disagreements: Karen (59) insisted, in opposition to all, that liberal arts education could help one solve practical problems; and Irene (52) differed with others when she insisted that in her opinion, knowledge was its own justification. Neither statement was taken up or directly challenged by the group: certainly neither resulted in heated exchange. No disagreement that occurred could be said to have been disruptive and occasionally disagreements were not even recognized or acknowledged. For example, after Jean said she wanted teachers to possess human relations skills rather than theory, Shan asserted that teachers must know lots of theories (104-5). No one made any effort to reconcile the views. Whether students openly disagree or remain silent, the fact of disagreement is, in this sort of discussion, rarely the occasion of discourtesy. In this particular discussion it never was: from beginning to end not an instance of bad manners could be discerned.

If these students possessed well-developed social skills, they were less well-developed on other strands of the continuum. Their intellectual skills did not appear to be very sophisticated. It is not a criticism of them to say so, although it is a criticism of the

kind of schooling they have had, that, bright as they are, they do not have minds trained closer to capacity. The speech of students whose minds have been well-trained is likely to include numerous linguistic pointers, what are referred to by English teachers as transition phrases, indicating the relationship between thoughts. Well- trained speakers (and writers) acknowledge what follows, offer hypotheses and counterexamples, make or challenge assumptions, and speak of necessary and sufficient conditions. Such pointers were all but absent in the speech of students in this group. Their metalinguistic vocabulary extends to "because" (11, 14, 16, 48, 140), "analyze" (41), "criteria" (83), and "example" (89). Furthermore, by definition, persons with well-trained minds have good command of reasoning skills, while students in this group do not. Sometimes their logic is fallacious, as when Sandy begs the question (63), and when Rob appears to be implicitly assuming the equivalence of converses (67). But the weakness of their intellectual skills is revealed most strikingly by their preferred methods of supporting a point. Most often they rely on the fabricated example (26, 36, 40, 42, 55, 59, 81, 90). Karen argued that what she took to be liberal arts education could help people learn to solve practical

problems, but one doubts that she had ever gone to the library to find out how to change a tire. When possible, they use the personal example (14, 89, 99, 113, 140), as Sandy does when she cites her own experience as evidence that teacher training "did not have enough children in it." When the examples, fabricated or real, are used as evidence, they often provide no or weak support for the speaker's point. Karen's statement that liberal arts education will help one solve the problem of changing a tire may be true, but it is comparable to saying that training as a surgeon will help one carve the holiday turkey: such incidental benefits do not justify a surgeon's training. If Sandy's example had been intended simply to illustrate her point (as Irene's example at 99, or Rob's analogy at 16), and had illustration been needed, it would have been useful, but judged by the wording, it seems to be offered as evidence for a general claim about all teacher training, not just hers. As evidence, her example is, of course, inadequate. (I wish to emphasize again that I am not faulting these students. Their experience is the experience of most students, and is, in fact, my own. Their poorly developed skills are the consequence of instructional methods which demand passivity of students and ignore the social nature of

knowledge and of learning.)

A third strand on which a discussion could be located can be called the knowledge strand. The quality of a discussion is affected by how much participants know about its subject. In this case the participants might have been hard-pressed to identify the subject: witness the way themes changed from moment to moment. However, the changes were not propelled by idiosyncratic associations. The concepts amongst which they floundered, e.g. liberal arts education, theory, profession, practice, are linked to one another, and in ways difficult to delineate. In fact, for all its twists and turns, the discussion was controlled by one topic, to which attention always returned, and that was the topic of teacher training.

Teacher training was a topic the students "chose," but it was one they were ill-prepared to discuss. It seems an odd comment to make of a group of students who had been through or were undergoing teacher training. But they were familiar with the topic in the way that the layman is familiar with money. The layman has had a great deal of firsthand experience with money, but sheer familiarity does not ensure his ability to discuss it in coherent fashion. The participants in the discussion had been exposed to teacher training, but they had

little knowledge of forms of teacher training other than their own and they had not read the literature extensively. Judging by the fact that they hardly ever refer to it (see 31 and 38 for what may be indirect references), they had not assimilated what they had been required to read for class. Their own experience, including the master's program they were currently enrolled in, remained, quite naturally, far more salient for them than the reading they had done.

It is to be expected that people will draw first of all on their own experience as that pertains to the subject of discussion. The liveliness of this discussion is largely attributable to the fact that the participants were trying to make sense to themselves of their own experience, to which, as already observed, they refer often (e.g., 4, 5, 7, 14, 16, 20, 67, 89, 93, 99, 100, 113, 139, 140). Personal recollection can lead discussions far afield and so interrupt the flow of conversation. But reminiscing did not preoccupy this group. Only once in the transcript were participants unable to resist taking turns telling what happened to them (after 19). Even on that occasion, the stories they told of their troubling experiences with parents who brought to them problems teachers were ill-prepared to solve were germane to the question of teacher

training, and once each person had, as it were, provided a footnote, the discussion proper was resumed.

Earlier, I noted the students' frequent use of examples drawn from their own experience, criticizing this behavior from the point of view of argumentation. Sometimes, however, examples are introduced not as illustration, nor as evidence. They are introduced as material to be worked over, as when people talk about what has happened to them in order to understand it. And this--reflecting on experience--might have been what participants were doing from time to time. They seem to have been trying to explain their experiences in terms of ideas they were considering in the course of the discussion, as for example, when Shan (113) suggested that the variety of teaching styles in her school might be a potential source of confusion for students and parents.

It was obviously not the objective of this group to achieve some sort of consensus: they were teachers, but they were not in a faculty meeting trying to establish policy. Equally obviously, it was not the objective of anyone in the group to win a victory or score points off others. There were no signs that participants understood themselves to be engaged in a sporting debate, an exercise of wits. On the contrary, for the

most part, participants seemed unsure of themselves, aware that they were not making their points clearly to others, or, more importantly, to themselves. Only rarely did anyone make an unqualified assertion such as Sandy's at (63): "You have to teach those skills in the younger grades and they are as much a part of liberal education as liberal arts subjects are in college." Even Irene's "No. That is not my justification. I think knowledge is the justification in and of itself," (52) one of the most emphatic, forceful statements made in the entire discussion includes a hint of doubt. The qualifying self-reference, "I think," was in keeping with the consistently--and appropriately--hesitant manner of the group. Taken as a whole the mood of participants in this discussion was neither self-consciously conciliatory, nor combative, but rather, meditative, like the mood of a small group of children engaged in some utterly absorbing project such as building a sandcastle at the water's edge. And again, like the children of such a group, participants in the discussion were each uncertain how their efforts would turn out. None was an expert at the assigned task. All learned what they were doing and how to do it as they went along.

The Behavior of the Teacher

Although each participant in the discussion had his or her own way of speaking, all were absorbed in a common task and their behavior could be described in identical terms. The behavior of one student was not readily distinguishable from the behavior of another. But the teacher's behavior was very different from the behavior of other participants, as it was different from the behavior typical of teachers.

In the first place, the teacher's behavior appeared to differ from that of other teachers in the amount of speaking she did. If the mini-lectures are excluded from the calculation, the teacher spoke less than the students. That is to say, although the teacher has more entries than any single student, students as a group have more entries than the teacher and speak more words. (See table 1) Secondly, while teachers usually spend much time dispensing a great deal of information, this teacher spent very little time doing so, and on few occasions (1, 6, 8, 35, 37, 39, 64, 98, after 107). Thirdly, while she did provide some information to students, did try to direct the course of the discussion (8, 24, 35, 70), did summarize (21), what the teacher did most was question. Every utterance except those at 3, 6, 62, and 136 was a question or included a question.

Number of Entries per Individual

Teacher	57
All students	83
Shan	15
Rob	13
Jean	12
Sandy	12
Maryanne	2
Bev	2
Irene	17
Karen	2

Total entries 140. Students names presented in the order in which they first spoke.

Table 1

Asking questions is, like the other behaviors mentioned, typical of teachers, but the kinds of questions this teacher asked were not typical at all. What the teacher did ask was, in effect, what students believed (8), and why they believed what they did (10, 66). On occasion she asked students if they could be more specific (12, 74, 86) by asking them what they meant. Sometimes she asked them what they meant in order to start them off on a new problem (21). She asked questions which provided correction (39), and

which offered interpretation (29). She made generalizations based on what the students had said and asked them if that was what they were saying (27, 42). She asked students to make suggestions (37), and to consider her suggestions (101). She asked for examples (45), and she invented examples (79) to test criteria the group had proposed. She invited students to make distinctions (60). She asked, in short, the sorts of questions anyone might ask who could not understand what someone else was saying. She did not, as would have been expected of a teacher, ask questions to learn what the students remembered of what they had read or of what she had told them. The behavior of this teacher was, finally, unlike the behavior of other teachers in that she never overtly appraised the students' responses or performances.

Much more could be said about the teacher's behavior. Undoubtedly she let pass some remarks which she would not want students to think she accepted. She may have shown too much of a tendency to let students get off the subject, as she did at the outset (3). Perhaps she should have intervened and corrected mistakes, especially mistakes in reasoning (58, 65 and elsewhere), as they occurred. (3) Certainly she failed to use metalinguistic pointers as often as she could

have done. There were times when she could, in the form of questions to students, have identified their own remarks as, possibly, statements of necessary or sufficient conditions (126, 134), as in need of qualification (28), and could have identified her own remarks as paraphrases (37), as generalizations (51), as analo ies (79). It was, admittedly, not the most skillful performance. The teacher, too, was learning how as she went along. The question to be taken up in the next section is whether this sort of discussion, even when clumsily handled, was worthwhile to students.

Outcomes

The specific outcomes of the discussion were these. A few distinctions were teased out and a few insights--not all entirely welcome--were won. Jean (93) differentiated between knowing why one does something and understanding where that something fits into a larger picture. Irene (50) called attention to the difference between learning how to solve problems and learning what problems to solve. And Sandy (53) tried to separate intellectual from practical problem-solving.

Insights occurred in the form of new relationships perceived, or relationships perceived anew. Irene (89) concluded her exploration of the relationship between

theory and practice saying, "So the professional is one who understands the theory behind the instrument. . ." She appeared to be phrasing the relationship between theory, practice, and profession in what was, for her, a somewhat more satisfactory way. Sandy suggested (44) that the liberal arts freed you from being ignorant and immediately observed that she had just put that together. Rob's manner when he made his simple affirmation, "Yes, that's what they do," (135) that is, teachers communicate, unmistakably conveyed the impression of seeing an old idea afresh, as if all the problems of teachers, all the programs to improve teaching, all the research on teaching were to be reduced to questions about the nature of communication.

There were instances of collective as well as of individual insight. As a group, all assented to Rob's assertion that a principal skill of the teacher is skill at communication. And then all were shocked by the realization that only Jean's training in public health had included training in this skill. None of the certified teachers had been taught to communicate. The most significant moment and the dramatic conclusion to the discussion came when all admitted their failure to establish that teaching was a profession (121). They wanted to believe it was, but had to admit that they did

not yet know what a profession was, and that it was doubtful that teachers could be called professionals if they could not agree what learning was.

It must be admitted that the number of distinctions made, insights achieved, ideas clearly formulated in this two hour discussion were few in number. It may be that if the students had been asked to write on the various topics before and after the discussion, the essays written afterwards would show changes which could be accepted as resulting from the discussion. But it is also quite likely that no new ideas would endure close examination in further discussion. The new perceptions were but steps along the way and this very provisionality must prompt many to wonder again whether discussion, which produces so little in the way of firm knowledge, is worth the effort.

It appears that the students were working on two related tasks. On the one hand they appeared to be trying to make sense of their own experiences, and on the other hand they appeared to be trying to make sense to themselves, as well as to others. Exactly what the relationship is between <u>making sense of</u> and <u>making sense to</u> is not a matter to go into here, but ordinary experience confirms that people struggling to make sense <u>of</u> struggle to make sense, and at least sometimes when

people cannot make sense to themselves, they feel that they have not made sense of what has happened to them. These two tasks are ongoing--no one ever makes sense of everything and no one always makes sense--and they are undoubtedly tasks which are and ought to be undertaken. Yet one may still ask whether the struggle to make sense of or to make sense are or ought to be the primary tasks to be undertaken within the classroom. The struggle is time-consuming, and when, after all, are students to "acquire knowledge?" Why not simply tell the students what they are supposed to know? Why, in this case, did I not tell them my ideas on teacher training, or Bestor's ideas, or what I thought of Bestor? (4)

Suppose students had memorized Hirst's ideas? Would that have been learning? A student could have memorized a passage with more new-to-him ideas than came out of discussion, in less time than the discussion took. But, without anticipating in detail the arguments of subsequent chapters, I will say that a teacher who refuses to deal with those ideas students already have on a subject, and instead requires them to remember what others say, builds on shifting sand. When required reading presents ideas considerably at variance with their own, students may merely assimilate those new ideas to old schemas, which is to say they may distort

them. Old patterns of thought can stand in the way of new learning. (Students should read good writers and thinkers, and it is unfortunate that, very often, the more carefully a writer states his case, the more tedious students find him. I hope that one result of extensive experience with class discussions of the sort transcribed here might be an increased patience for and ability to understand the conscientiously written word).

At this point I will simply assert that if, in the course of a discussion, students reconsider some of their beliefs and recognize their inadequacy, and make some progress towards a better formulation of other beliefs, then that discussion is worthwhile. That is the chief criterion by which a discussion is to be evaluated. If the criterion is accepted, then the discussion in Chapter III was worthwhile. But this conclusion will not be sufficient for my purpose. It is possible to accept the worthiness of an activity for students without accepting it as a foundation of learning. But it is precisely as a foundation of learning that I am proposing discussion. I want to say that not only was this discussion of worth to the students, but that discussion conducted as this one was, one which takes into account students' beliefs and gets students to reconsider these as they try to make sense

of experience and make sense to others, has an essential role in classrooms. The defense needed on behalf of the essentiality of discussion will have to show that it does contribute to the growth of students' knowledge, and this defense will now be provided.

1. One of my assumptions is that concepts are not and cannot be acquired all at once, in full flower, as it were. Nor, to change the image, can they be transferred to another person like pieces of currency. Each concept a person possesses is embedded in networks of concepts. D. W. Hamlyn writes: "To have a concept is not an all-or-none affair; there are degrees of understanding and degrees in the complexity of what is understood. Conceptual development is as much as anything an initiation into a web of understanding which may be more or less involuted at any given time." "Epistemology and Conceptual Development," in Cognitive Development and Epistemology, ed. Theodore Mischel (New York: Academic Press, 1971), p. 10.

2. The underlined numbers throughout this chapter refer to entry numbers in Chapter III.

3. John Brubacher cites the Jesuits' Ratio Studiorum on discussion methods. The teacher is to "preside in such a way that he may himself seem to take part on both sides; he shall praise anything good which is said, and call it to the attention of all; if some unusually difficult objection is proposed, he shall make a brief suggestion to support the defender or direct the objector; he shall not keep silent too long, nor yet speak all the time, but let the pupils set forth what they know; he shall . . . not permit an objection which is practically answered to be pressed too far, nor an answer which is unsound to stand too long; after a discussion, he shall briefly define and explain the entire matter." The honest questioner would, it is clear, satisfy some but not all of the requirements of the Jesuit teacher! The quotation, found in A History of the Problems of Education (New York: McGraw Hill Book Company, 1947), p. 189, comes from E. A. Fitzpatrick, St. Ignatius and the Ratio Studiorum (New York: McGraw Hill, 1933), p. 154.

4. "Who is so stupidly curious to send his son to school in order that he may learn what the teacher thinks?" Augustine, St., De magistro, (New York: Appleton-Century Co., 1938), p. 55.

CHAPTER V

HONEST QUESTIONING AND RATIONALITY

In the previous chapter, I described the behavior of participants in a class discussion and the results of that discussion. That discussion was representative of a kind of discussion, one distinguished from other forms of social interchange by the kinds of question asked. In this chapter, I examine in greater detail the nature of those questions. I will also try to justify these kinds of question from the point of view of their immediate value to the teacher and from the point of view of rationality.

Finding Out Where the Student Is

It is in fact a commonplace amongst teachers that they ought to begin teaching where the student is, and it is for this reason that they do sometimes try to find out where he is before they begin teaching. (1)

Teachers use different methods to find out where the student is, and choose them according to what they mean by "where the student is." They do not always intend to find out what students know that is relevant to the subject in order to prepare the mind for the apperception of new knowledge, as Herbart would have teachers do. (2) By "where the student is," some teachers may mean what the student "knows," and what the teacher wants to learn is what students already know about a given subject. These teachers may administer a diagnostic test prior to beginning a course or a unit of study to find out whether a student can give the expected answers to a set of questions. A teacher who makes such an interpretation may decide on the basis of the student's answers what level of reader he requires or what learning materials he should be given. Some teachers may want to find out what interests students have. That interpretation of "finding out where the student is" may be made by a teacher who hopes to show connections between the students' interests and what she is trying to teach. This may be her way of trying to "motivate" students. Interpretations of the phrase "where the student is" differ as teachers' objectives differ. I am here proposing an interpretation which is more likely to result in the teacher both finding out

what the student knows and finding out what it is that moves him. (3)

On this interpretation, to "find out where the student is" is to "find out what the student believes about a given subject and why he believes it." Finding out what he believes can include finding out those substantive beliefs he holds about the subject and can also include finding out those beliefs he has which reflect his feelings about the subject. For example, a teacher who wishes to find out where the student is, in this sense, may find out not only what beliefs he holds about the origin of the English novel, but also that he believes English literature is boring or fascinating. (4) Whether the student's beliefs about the subject are positive or negative, true or false, appropriate or inappropriate, those beliefs, together with his reasons for them, whether these are adequate or inadequate, <u>are</u> where the student is with respect to that particular subject. One reason why "finding out what the student believes and why he believes it" is a sensible interpretation of "finding out where the student is" is that, as I will argue in later chapters, if the teacher does not find out what the student believes about a subject, she cannot, logically, find out what he knows and she probably cannot "motivate" him.

Honest Questions

If the teacher tries to find out what the student believes and why he believes it, then she will most likely ask the student questions. (5) And furthermore, if she is to be successful in her inquiry, she will, I contend, ask what I refer to as honest questions, (6) examples of which can be found throughout Chapter III. All of the questions the teacher asked in that class session were honest. An honest question is here defined as one to which the questioner does not know the answer and to which the respondent can give a correct answer. The honest question is a request for information not yet in the possession of the questioner. The honest question is a question about the student's beliefs and his reasons for them, and he is, therefore, clearly in a position to give a correct answer to such a question. As was apparent in Chapter III, it may be difficult for the student to do so, but he can state correctly that he doesn't know what he thinks (believes), or that he has this reason for believing, or that he doesn't know what he believes.

Honest questions may be contrasted with non-honest questions, of which there are two principal varieties. One, the checking-up question, is used by a teacher to find out whether students have learned what she asked

them to learn. When the teacher asks, for example, "What is the capital of Illinois?" or "How does Skinner define learning?" she expects students to have learned the answer. What the teacher learns from the student's answer is that he does or does not remember what she or the book said. In a trivial sense, if he remembers what the book said and tells her what the book said, the student is telling the teacher what he believes. He believes that this is what the book said. But if a tea her wants to find out what the student believes the capital of Illinois is (an absurd example, to be sure), or whether he accepts Skinner's definition of learning, she cannot do so by asking the checking-up question. If the teacher is to find out what the student believes about the subject, then her purpose is better served by an honest question.

A second kind of non-honest question is frequently asked in classrooms. It is the rhetorical question, asked by students as well as by teachers. The rhetorical question may be asked either when the answer is assumed to be obvious to both questioner and respondent, e.g. "How much of television is worth watching?" or when it is assumed by the questioner that no possible good answer can be given. A student may, for example, ask "Why do I have to do this?" in such a way that it is

obvious he has decided already that no adequate reason can be offered. When the rhetorical question is asked, it is with no pretence of finding out where the respondent is.

The honest question is not a "What is . . . " or a "Tell me how . . . " question. It is likely to begin with phrases which refer to the respondent's mind, phrases such as "What do you think . . . " or "Can you tell me why you . . . " (See Chapter III) And this is to be expected, since the honest questioner is trying to learn what another believes. (7) Nevertheless, the phrasing of the question is not a certain guide to its honesty. A "Why do you think . . . " question could be asked rhetorically or be asked as a way of checking up on the student. Ultimately, what determines the honesty of a question is the intention of the questioner: if she acknowledges that she does not and cannot know in advance what her students believe, and if she remembers that her task is, first of all, to find out where they are, then her questions are likely to be honest. (8)

While there is much to be said for the honest question on pedagogical grounds, before I say it, I wish first to point out that neither the checking-up question, nor the rhetorical question, asked when it is assumed no good answer can be given, are acceptable

forms of social behavior in our society. When they are asked, they are asked by persons who assume they are in a position of power, or by persons who believe they have been wronged, in just those circumstances when the normal rules of courtesy are being ignored or forgotten, or have been suspended. Since there is no reason why teachers should not be bound by the rules of courtesy, there are good grounds to avoid using these two sorts of question in the classroom. To a degree, teachers themselves, at least implicitly, recognize their shortcomings. For example, the older the students, the more circumspect the teacher in her way of asking checking-up questions. At the university level, teachers are more likely to put checking-up questions to the group as a whole than to particular students. (And of course they will ask checking-up questions of individuals on written exams.) The older the student, the more likely he would resent being catechized. It is bad manners to quiz people without being given permission to do so, and it is equally bad manners to assume that others know nothing about a given subject, that they have no beliefs about it, that whatever beliefs they do have are not to be taken seriously. Good manners require that we give other persons a chance to state their positions as completely as they care to;

that we in turn state our interpretations of their positions, so giving them a chance to correct us, and that we do these things before we tell them all we know. The honest questioner begins with the assumption that she does not know the other's mind, and her questions are intended to acknowledge that ignorance. Thus it seems obvious enough that on the grounds of courtesy alone, honest questioning is justified as a form of social interaction, but it remains to be seen how it may be justified specifically as a form of interaction in the classroom.

Honest Questioning as Teaching

So far, I have argued that honest questioning is a way to find out where a student is, indeed, that it would be hard to find a better way to do so. If this is so, then, if it could be shown empirically, that, for example, students learn more when the teacher finds out where they are before she begins teaching than when teachers do not do so, honest questioning would be justified. However, I am not interested in justifying honest questioning in this way, because I am not proposing that honest questioning is a preliminary to teaching but that it is a teaching technique, and it is this claim which must be justified.

I first presented and defended honest questioning as a way for the teacher to achieve what she is likely to accept as a useful short-range goal, that of finding out where the student is. But I now present and defend honest questioning as a way for a teacher to achieve what I will assume is her long-range goal, that of bringing her students to knowledge. That is her long-range goal, but it is not the one on which she must focus. The goal the teacher must focus on is her immediate goal of finding out where the student is. She must learn how to achieve that goal, and the way to do so is by learning how to ask honest questions. There is nothing unusual in suggesting that a person concentrate on short-range goals, as a comparison with other practices will show. For example, a tennis player's long-range goal may be to play well enough to win matches. But that long-range goal, if it is achieved at all, is the outcome of a series of small tasks properly understood and properly performed. The immediate goal of the tennis player is to hit the ball, and she must find a way to do that consistently. In order to accomplish this goal, she must learn the technique of keeping her eye focused constantly on the ball. Hitting the ball may not be the whole of the game of tennis, but it is an essential part of it. Finding out what the

student believes and why he believes it is not the whole of teaching, but, I intend to show, it is central to that process, just as hitting the ball is central to tennis. A teacher can no more teach in the classroom by thinking of her long-range goal--bringing her students to knowledge--than a tennis player can play tennis on court by thinking of her long-range goal--winning games.

The analogy can be worked out a little further. There are a limited number of techniques a tennis player may use to help her to hit the ball. The use of electronic devices and over-sized racquets would violate ethical principles and the principles of the game as it is now defined. Similarly, the teacher is limited in the techniques at her disposal for finding out where the student is. Her techniques must violate neither general ethical principles nor the principles of teaching. I make the assumption that the cardinal ethical principle governing any form of social interaction is that it do no harm to the other's capacity for rationality, and the cardinal ethical principle of teaching is that no harm must be done to the student's capacity to know. In what remains of this chapter, I will begin to show that honest questioning, fostering as it does the student's rationality and his capacity to know, is amply justified on ethical grounds as a teaching technique.

To say that a technique is justified on ethical grounds is to say, at least, that it can be seen as a rational action. (9) Teaching itself as a practice can only be justified if it is a practice which promotes the rationality of the students. Perhaps no one could be found to dispute this: what teacher would deny that she wished her students to be rational? However, I do not think that all teachers have the rationality of the student as their explicit goal, and of those who do, I do not think that all either have a clear sense of what they mean by rationality, or mean what I mean by it.

Stated in the most general way possible, I identify that action as rational which is undertaken for the sake of ends in themselves. What <u>are</u> ends in themselves are persons and practices. It is consistent with the thinking of Kant to say that an action towards a person is rational if undertaken in recognition of the fact that that person is an end in himself and must be treated as such. (10) It is consistent with the thinking of Michael Oakeshott to say that an action is rational if it is part of a practice and undertaken for the sake of the end of that practice. (11) I accept Oakeshott's position, with the qualification that such an action can be considered rational if and only if that practice as a whole recognizes that others are ends in

themselves. It may be that this qualification would be unnecessary given an adequate description of the concept of practice. But lacking that, I include it, since otherwise, an action undertaken in war, to give one example, could be considered at one and the same time to be rational from the point of view of Oakeshott's principle, but not from the point of view of Kant's principle. It is true that an action within the practice of war might be undertaken for the sake of warfare itself, but since that practice is an expression of an inability to treat others as ends in themselves, that is, as rational beings, then one must, if one accepts both criteria, either define practices in such a way that destructive behaviors are excluded from the definition, or, as I have done, qualify Oakeshott's criterion so that destructive practices cannot be considered rational. (12) Actions are appraised first of all in terms of their rationality because rationality is the human end. (13) It follows from the claim that rationality is an end in itself, and from the description of rational actions, that to treat others as ends in themselves is itself a human end or good, and to engage in practices for the sake of the ends of those practices is also in itself a human end or good.

What it means to treat other persons as ends in

themselves I shall try to say below. First I shall say what it means to engage in a practice for the sake of the ends of the practice. Perhaps this idea can be understood by considering the question "Why are you doing that?" which may be asked of any action. The question has at least three interpretations. It might be a question asked from the point of view of practice, to find out why a person is doing that specific action. It might be a question asked about the agent, that is, why <u>that person</u> is engaged in that practice, asking, in other words, why it is a good for him or her. Thirdly, the question might be about the contribution of the practice to human good. It is easier to answer this last question than it is to answer the first two. The answer to the question, "How does this practice contribute to the human end or good?" is that human rationality is a good in itself, and any practice, providing it recognizes other persons as ends in themselves, is an expression of human rationality, therefore, the practice is a good in itself.

To answer the second question: If asked why <u>I</u> am baking a loaf or two of bread, a reasonable answer might be that bread provides great nourishment for my family. If the question is why <u>I</u> became a professional baker, a reasonable answer would be because I enjoy the practice

of bread baking and know that good bread contributes to human welfare. These would be good reasons, and, given normal circumstances, my bread baking would be considered rational action. If I said I became a bread baker strictly as a way to make money, then my action would be irrational. It would be irrational first of all on the grounds that I seemed to have mistaken a means (money) for my end, and it would be irrational on the grounds that I was using the practice for an end outside the practice. I was not engaged in that practice for the sake of that practice, that is, for its proper end, which is the end intrinsic to it. It is, says Aristotle, the proper end of the flute player to play the flute. (14) Writing, not money making, is the proper end of the practice of writing, although one may hope to make a living at it.

The interpretation of rationality offered here differs greatly from some modern interpretations, of which Rawls' might be taken as an important example. Rawls gives as a definition of a rational plan that plan which advances a person's interests and says that "it will generally be rational . . . to realize and train mature capacities. . . " since human beings enjoy the exercise of these. (15) Stated as it is, in purely formal terms, Rawls' definition of the rational not in

terms of practices or activities, but, rather, in terms of means (rational plans) to ends (a person's interests) appears to be consistent with that "technical rationality" referred to by Crittenden in which "we decide upon the goal to be achieved and then devise the most appropriate means for achieving it." (16) Crittenden is employing Oakeshott's analysis of what the latter sees as the prevailing and mistaken notion of rationality. I have already cited Oakeshott on the nature of rational conduct. In the same place he says that the quality which distinguishes rational conduct is its "faithfulness to the knowledge we have of how to conduct the specific activity we are engaged in." (17) An action is rational if it contributes to the practice of which it is a part. From Oakeshott's point of view, not only is rational conduct in the modern sense of means end reasoning not truly rational, it is impossible. Any action which is intelligible is part of a practice and may be described in the terms of that practice. Which brings us back to the first interpretation of the question, "Why are you doing that?"

If a person is mixing warm water and yeast, a reasonable response to the question "Why are you doing that?" is that the water dissolves the yeast and starts its growth. If the mixture does not start to bubble in

a few minutes, then I conclude the yeast is not viable. The response suggests that the question might as well have been phrased "What are you doing?" What I am doing is proofing the yeast. And if the person who asked the question next asks why the yeast starts to grow, then that person is no longer asking a question within the practice of bread baking, but one within the practice of botany. The question "Why are you doing that?" asked of the person who is mixing yeast with water could also be answered, "I am baking bread." If the questioner persisted, asking why I was mixing yeast with water, an appropriate answer would be, "Because that is how you bake bread, that is what bread baking is." (If I knew you were bread baking, and I knew how to bake bread, then it would be silly to ask why you are mixing yeast with water, unless I knew that you intended to make an unleavened bread. And under that circumstance my question might be rhetorical.) The point that Oakeshott wishes to make, if I interpret him correctly, is that my mixing of yeast with water is not just a matter of means end reasoning. I do not mix the yeast and water "in order to," but rather "for the sake of." I am baking, and this is part of the practice of baking. He seems to be saying, much as Aristotle does with respect to the good life, that the means and the end are one. (18) At

least for the person who is faithful to the practice, there is no distinction between means and ends, no instrumental thinking. The person who is a cook faithful to the practice of cooking, cooks for the sake of the practice. A cook may indeed think of better ways to conduct that practice, but unlike the person who simply uses the practice, a cook would understand when, for example, a search for "efficiency" might be destructive of the practice. I take it that the action of the person who paid his secretary to "personalize" his Christmas cards and mail them out for him would exemplify the irrational, since it demonstrates the belief, typical of instrumental reasoning, that means can be separated from end. (19)

Oakeshott's remarks are made from a point of view within the framework of the practice. He does not, apparently, see practices nested or subordinated one to the other in the way that Aristotle does. One could, however, ask of my engagement in the practice of bread baking whether it is a good for me. The question might be asked for a variety of reasons. For example, today at least, that practice might not so readily be seen to be part of another practice known as household economy. Or, even if bread baking were to be seen as a part of the practice of household economy, the question could be

asked whether my bread baking does make a contribution to that practice. It may be that the local baker bakes a bread which is better for health and cheaper than mine, and that my talents can be more effectively used elsewhere. (20) To summarize, a rational action is one which is guided by knowhow, and is undertaken for the sake of the end of person or practice. If it is action directed toward persons, then it must have been undertaken for the right motive, (21) which Oakeshott says is the "habit of affection." (22)

Having said what I mean by rationality, I must now spell out in greater detail what I mean when I say that honest questioning is itself rational action. If honest questioning is itself rational action, then it is a way of treating persons as ends in themselves, and it is a part of a practice, contributing to it. If honest questioning is a way of treating persons as ends in themselves, then it is a way of treating persons as rational beings. If honest questioning is a part of teaching practice, then it contributes to the end of that practice, which is growth in the students' knowledge.

To treat another as an end in himself is to treat another in terms of his end, that is, as a being capable of rationality. It is to treat others as if they were

capable of recognizing and acting on behalf of proper ends. At the level of discourse, treating another as an end in himself is shown as the obverse of being willing oneself to give reasons for belief and actions. That is to say, treating another as an end in himself is manifest as a willingness to assume another has reasons and is able to recognize what constitute good reasons for belief or action. (23) A good reason for an action or a belief is that it is acceptable within the framework of a practice. An intelligible answer to a request for a reason accounts for the action or the belief within the terms of a practice. The honest questioner is acting on the assumption that the student has reasons for his beliefs and actions and that these may be good reasons, or, if they are not, that he will reco nize that they are not. Honest questioning satisfies one condition of rational action.

If an action is rational, then it is not just the right action (justifiable as part of a practice), it is done for the right motive (for the sake of the practice). I said earlier that the honest questioner was finding out what the student believed and why he believed it, and that it was likely that she would find out not just his substantive beliefs, but his affective beliefs. Re-stating that in the light of what I have

said about rationality, I am saying that the honest questioner, who is finding out what the student believes and why he believes it, is finding out whether the student can justify his beliefs and actions as part of a practice and whether his actions are undertaken for the right motive.

Obviously the honest questioner will only learn of both aspects of the student's rationality if she understands her questions to have reference to both aspects. "Why do you believe or do that?" can be a request for justification within the framework of the practice, or a request for justification of a choice of a practice. A teacher who asks a student why he thinks so and so is such a bad writer (having learned that he does think so) might be on the way to learning of the student's motives for his presence in the course. From the student's answers the teacher may learn that he believes literature is boring and is taking the course only to fulfill a requirement. He is using the course as means to end. If the student's action, say his enrollment in a course, is rational, then he understands it to be part of a practice (or a necessary condition for engagement in that practice) to which he is committed. Unfortunately, as I have already noted in footnote 4 of this chapter, and as is attested to by the

transcript, I have more often than not avoided dealing with what may be referred to as the student's attitudinal beliefs about the subject or course in which he is enrolled. It is evident from the transcript that I did not ask students "Why are you doing this (i.e., taking this course)?" (24) What this avoidance of the affective means is that I fail to treat students fully as persons capable of rationality, since I do not ask them either to consider themselves as ends or to consider the ends of the practice with which we are engaged. There are consequences of this avoidance of questions of motive. In avoiding questions of motive and confining my honest questions to questions about the content of the course, I restrict myself to promoting one part of the student's rationality, the part which recognizes beliefs or actions as justified insofar as they are acceptable within given practices.

It remains for me to show, then, that honest questioning may be seen as rational action in the sense that it contributes to the end of the practice of teaching and specifically that it promotes the rationality of the students by bringing them to know more about a practice. (I use the word "practice" instead of the word "discipline," considering disciplines in a narrow sense to be a subset of

practices.) Since one cannot engage in a practice for the sake of the end of the practice unless one knows how to engage in the practice, the teacher must teach students how to engage in a practice. (That is but another way of saying that knowing, in some sense of knowing, is a condition of rationality. See above, page 117.) The question to be answered is, "Is it the case that discussions of substantive beliefs lead toward knowledge of a practice?" Is it the case that the effect of the teacher trying to find out what the student believes and of the student trying to make himself understood is that the student comes to know? It is certain that at some time during such discussions the teacher will think she understands what her student said but reveal by her paraphrase or example that she does not. It can happen that the teacher who does not understand and knows she does not asks the student to paraphrase or give an example. The student can or cannot give a paraphrase or an example. If he can, then the teacher may understand. If she understands, then she gives a paraphrase or an example or a counter-example. The student may or may not accept the paraphrase or the example. He may recognize that the paraphrase is equivalent, or that the example fits, but may decide that what he said is not what he meant. He

may qualify his position. He may, in the face of the teacher's counterexample, abandon his position completely. The teacher may not be able to think of a counterexample, and may conclude that the student has a good reason for his belief. The list is not exhaustive. Other sorts of situations can occur, most of them causing some puzzlement to student or teacher. There is no assurance that the student will see that he has not said what he meant or that he overlooked facts of his own experience, since it is possible that his position is coherent. But it can be said that insofar as the student and teacher are well cast in their roles, then the teacher will, through honest questioning (her effort to understand his position), more often than not bring the student to recognize that he is not sure what he means or how to say it, that what he said was not true or that he has no good reason to believe it. (25) He cannot account for his beliefs in terms of a practice, and, therefore, they are not rational. In short, the student finds that he does not know what he is talking about. Given the fact that it is the end of teaching to bring the student to know, if this, awareness of ignorance, is the outcome, honest questioning does not seem to have much to recommend it. But it will be shown in Chapter VI that this technique, although it produces

doubt and uncertainty as its first effects, does subsequently result in the student's coming to know. (26)

1. Faint echoes of Aristotle hover about the belief that the teacher ought to begin where the student is. Although Aristotle would not have agreed that this was necessary for a teacher of "science," he understood it to be necessary in certain situations, as in discussions of ethics, which proceed not from but to first principles. Aristotle Nicomachean Ethics 1095b.

2. John Frederick Herbart, Outlines of Educational Doctrine, trans. Alexis F. Lange, annotated Charles DeGarmo (New York: The Macmillan Company, 1901). The term analytic may be applied "wherever the pupil's own thoughts are expressed first, and these thoughts, such as they chance to be, are then, with the teacher's help, analyzed, corrected, and supplemented." P. 106. The first thing to be done, "in a school where many children are to be taught together, is to make the children more alike in their knowledge. To this end the store of experience which they bring with them must be worked over . . . " p. 112. De Garmo comments that "From being an end of schoolwork, therefore, analytic instruction has passed to the realm of a useful means for arousing the mental activity of the children concerning the regular lessons of the schoolroom. It is, in modern terms, an apperceptive basis for all instruction." P. 117.

3. The usage here is very loose. The teacher who is trying to find out where the student is, is trying to find out where he is with respect to some subject-matter in particular. She is trying to find out what he believes about Bruner's theory, or chemical bases, or the presidency. Furthermore, when I say that if she finds out what the student believes and why he believes it she will find out what the student knows, I mean that she will find out some of what he knows and some of what he does not know about a given subject. Another point. If the student reveals his affective beliefs about a subject, the teacher is finding out what does and what does not interest him. Nevertheless, if a student claims that he has no interest in learning about the presidency and the teacher invites him to (in effect) say why, it is likely that the ensuing discussion will be of interest to him, precisely because it is a discussion of his beliefs.

4. Although I acknowledge that I do, in fact, fail to demonstrate the effect of honest questioning on those beliefs which reflect the student's feelings and

values, I shall be arguing that the teacher must take into account both sorts of beliefs if she is to promote rationality. This idea is related to one of John Dewey's: "That man has two modes, two dimensions, of belief, cannot be doubted. He has beliefs about actual existences and the course of events, and he has beliefs about ends to be striven for, policies to be adopted, goods to be attained and evils to be averted. The most urgent of all practical problems concerns the connection the subject-matter of these two kinds of beliefs sustain to each other. How shall our most authentic and dependable cognitive beliefs be used to regulate our practical beliefs? How shall the latter serve to organize and integrate our intellectual beliefs . . . Man has beliefs which scientific inquiry vouchsafes, beliefs about the actual structure and processes of things; and he also has beliefs about the values which should regulate his conduct." Quest for Certainty, (New York: G. P. Putnam's Sons, A Capricorn Book, 1960), p. 18. Had the teacher in Chapter III addressed the students' values, their feelings about the subject, it would not have been by direct questions, e.g. "How do you feel about the subject (history of education)?" or "Why are you here in this course?" Given the way schools are presently organized, and the kinds of demands made on students, such questions could be very difficult to tackle. However, attitudes do affect learning for better and for worse. And a teacher must recognize when a student or a group of students have feelings which interfere with their learning. Without for a moment implying that a teacher should do counseling with her students, or dwell exclusively on feelings, I do suggest there are times when, for the sake of an individual student, the group as a whole, and for her own sake, those beliefs which are affective in character must be acknowledged and their reasonableness considered.

5. I make the assumption, which I will not defend, that the student will reveal his beliefs to the honest questioner. To question that assumption is to question the very possibility of communication. Gilbert Ryle's words: "if you do not divulge the contents of your silent soliloquies and other imaginings, I have no other sure way of finding out what you have been saying or picturing to yourself . . . I find out most of what I want to know about your capacities, interests, likes, dislikes, methods and convictions by observing how you conduct your overt doings, of which by far the most

important are your sayings and writings." Concept of Mind (New York: Barnes and Noble Books, A Division of Harper and Row, 1949), p. 61.

6. The choice of "non-honest" to contrast with "honest" needs a word of explanation. "Non-honest" is a term I chose in lieu of "dishonest." "Dishonest" suggests deliberate intent to mislead or to deceive. I have chosen to label those questions teachers ask to which they do know the answers "non-honest" in order to avoid making that false suggestion. I first heard the phrase "honest question" when it was used by a young music teacher making a presentation at an National Association of Independent Schools convention in Chicago in the 1970's. I do not remember her name, but I am grateful to her for the idea.

Various observers have described the peculiarity of teachers' questions. C. J. B. MacMillan writes: "Teachers' questions about the subject matter are not an essential part of teaching. Indeed, the teacher-question-student-answer pattern of teaching has an element of inauthenticity, for the information a teacher generally seeks by asking a question is not the answer to the question itself, but rather information about whether the students know the answer." "Questions and the Concept of Motivation," Philosophy of Education 1968: Proceedings of the Twenty-fourth Annual Meeting of the Philosophy of Education Society, 1968, (Edwardsville, Illinois: Southern Illinois University), p. 248.

In Speech Acts, An Essay in the Philosophy of Language (Cambridge: University of Cambridge Press, 1970) John Searle writes, "There are two kinds of questions, (a) real questions, (b) exam questions. In real questions S wants to know (find out) the answer; in exam questions, S wants to know if H knows." P. 66.

The literature on questioning has a short history. While some psychologists, philosophers, and a few others with an interest in schooling have thought about questions, their nature has only recently been the focus of a great deal of interest on the part of philosophers. Persons interested in acquainting themselves with current thinking on the subject may find Questions, ed. Henry Hiz, Synthèse Language Library, vol. 1 (Dordrecht: D. Reidel, 1978) a useful, if technical, starting point.

7. There is an interesting asymmetry in the questioning that goes on between teacher and student. If a student asks a teacher a question, he is likely to

ask a "What is . . ." or a "Why is . . ." question. The assumption appears to be that it is within the teacher's capacity to explain the existence of the objects and events of the world. But when the teacher asks the student a question, if he gives what is the accepted answer, she may well ask him how he knew. It is as if the student is supposed to trust the teacher while the teacher is supposed not to trust the student. The student is more likely to be called on to justify his beliefs than the teacher is. The premises of the teacher's syllogism are likely to be taken as the explanation of the occurrence referred to in the conclusion, while the premises of the student's syllogism are likely to be taken as the reasons for his belief. See R. Edgley, who discusses a related point for a different purpose, in his article "Practical Reason," R. F. Dearden, P. H. Hirst, and R. S. Peters, eds., Education and the Development of Reason (London: Routledge and Kegan Paul, 1972), pp. 303-319.

8. George Gusdorf describes the person who will "be open to the speech of others . . . continually striving not to reduce it to the common denominator of banality, but to find in it something original." It is, Gusdorf believes, necessary that the teacher be open in this way, for "by doing this . . . by helping the other to use his own voice, one will stimulate him to discover his innermost need. Such is the task of the teacher, if, going beyond the monologue of instruction, he knows how to carry the pedagogical task into authentic dialogue where personality is developed." Speaking, trans. and ed. Paul T. Brockelman (Evanston, Il.: Northwestern University Press, 1965), p. 125. I believe that the only way one could be such a listener is by recognizing, as the honest questioner does, how ignorant one is of the other.

9. Cf. Israel Scheffler, who writes that reason is "a moral as well as an intellectual notion," and that the general notion of rationality is "theoretically applicable to both the cognitive and the moral spheres." Science and Subjectivity, 2nd ed. (Indianapolis, Indiana: Hackett Publishing Company, 1982), p. 2. See also John Dewey, who would object to the equation of the moral and the rational if rational were taken in its narrow sense, as divorced from experience, but not if reason is understood in what he believed was a modern sense, as "the ability to bring the subject matter of prior experience to bear to perceive the significance of

the subject matter of a new experience." Democracy and Education (New York: The Free Press, A Division of the MacMillan Co., 1966), p. 343. Dewey identifies intellectual qualities and moral qualities, for example "open-mindedness, single-mindedness, sincerity, breadth of outlook, thoroughness, assumption of responsibility for developing the consequences of ideas which are accepted." Ibid., pp. 356-7.

And in James McClellan one finds "The terms 'logic' and 'ethics' are used throughout this book (though not, I think, by most logicians and moral philosophers) to designate those most general canons of rational thought and action discernible at our present level of cultural development." Philosophy of Education, Prentice-Hall Foundations of Philosophy Series (Englewood Cliffs, New Jersey: Prentice-Hall, 1976), pp. 2-3.

10. "Man and every rational being exists as end in itself, not merely as means for arbitrary use by this will or that; but he must in all his actions . . . be regarded at the same time as an end." Immanuel Kant, Groundwork of the Metaphysic of Morals, 428 Ab. 46. The demand for consistency is part of the demand for rationality. It accords with the demand for consistency that I must regard others as ends in themselves, since to do so is to act in accord with a universalizable precept. It is inconsistent to act on precepts I would not willingly universalize.

11. Oakeshott writes that rational conduct is "acting in such a way that the coherence of the idiom of activity to which the conduct belongs is preserved and possibly enhanced." Rationalism in Politics (London: Methuen, 1962; University Paperback, 1981), p. 102. The parallel idea in Alisdair MacIntyre's thought is expressed thus: "For all reasoning takes place within the context of some traditional mode of thought, transcending through criticism and invention the limitations of what had hitherto been reasoned in that tradition; . . . " After Virtue (Notre Dame, Indiana: University of Notre Dame Press, 1981), p. 206.

12. War, for Aristotle, was an activity engaged in not for its own sake, but for the sake of peace. While warlike acts may exhibit practical virtues, war is not an exhibition in itself of human rationality. "Warlike actions are completely so (for no one chooses to be at war, or provokes war, for the sake of being at

war: any one would seem absolutely murderous if he were to make enemies of his friends in order to bring about battle and slaughter); . . . " Aristotle Nichomachean Ethics 1177b5. I do not need here to deny that there may be good reason not to regard others as capable of exercising rationality. I do, however, assert that rationality is inherently social, meaning that the rationality of one is dependent on the rationality of others. (This is different from, although it is compatible with, the common claim that reason is public in character, as public character is described for example in R. S. Peters' "Reason and Passion:" "It is public, not just in the sense that its vehicle is language whose concepts and rules of syntax are a public possession, but in the further sense that, even when it takes place in the individual's head, it is an internalization of public procedures--those of criticism, the production of counter-examples and the suggestion of different points of view." R. F. Dearden, P. H. Hirst, and R. S. Peters, Education and the Development of Reason, p. 212.) It may be that I have good reason to believe that another is going to behave irrationally, and, in particular, to behave irrationally toward me. Irrational behavior is a greater or lesser threat. I may be greatly threatened and I acknowledge that in such a situation the action which it may be necessary to take in order to survive is less than fully rational. To say that any effort directed toward survival is, therefore, perfectly rational, is to obscure the concept. Absurd action may be required if I am to survive. But this is to admit the obvious--that the environment, especially the human environment, can threaten and destroy our capacity for behaving rationally.

13. Aristotle, Nichomachean Ethics, 1177b-1178a. In Alisdair MacIntyre's interpretation: "In man's exercise of his rational powers therefore the specific human activity consists, and in the right and able exercise of them lies the specific human excellence." A Short History of Ethics, (New York: The MacMillan Company, 1966), p. 62.

14. The function, or the good, of the flute player is to play the flute. Aristotle Nichomachean Ethics 1097b25.

15. John Rawls, A Theory of Justice (Cambridge Ma.: The Belknap Press of Harvard University Press, 1971), pp. 428-429.

16. Brian Crittenden, Education and Social Ideals (Don Mills, Ontario: Longman Canada, 1973), p. 172.

17. Oakeshott, Rationalism in Politics, p. 102.

18. Again see Alisdair MacIntyre's After Virtue: "But the exercise of the virtues is not in this sense a means to the end of the good for man. For what constitutes the good for man is a complete human life lived at its best, and the exercise of the virtues is a necessary and central part of such a life, not a mere preparatory exercise to secure such a life." P. 140.

19. I do not intend to suggest that the making of cards, the designing of them, and the making of each individually are properly parts of sending Christmas greetings. The practice of sending holiday greetings, if it has significance at all, is taken as a sign that the sender spent a moment at least thinking of the recipient. It may be difficult to draw the lines delineating a practice, but if none at all can be drawn, there is no practice. If someone does design and make a card just for one person, it is likely to be received not simply as a greeting card, but as a very personal gift, and the sender has engaged in the practice of gift giving.

Oakeshott refers to the instrumental mind "as, in some respects, the relic of a belief in magic." Rationalism in Politics, p. 93. At the conclusion of Reason and Nature, Morris R. Cohen writes that "it may not be unfair to claim that only a rationalistic naturalism can liberate us from false alternatives between means and ends. It does so by showing that logically the end or aim of any rational conduct is not something outside of our activity itself but a character or pattern of life itself. If the end is thus a whole which includes the necessary means, it is to be judged and justified (if at all) by the means which it involves." 2nd ed. (Glencoe, Illinois: The Free Press, 1953), p. 446.

20. MacIntyre, A Short History of Ethics, p. 74. And also, John Herman Randall, Jr., Aristotle, pp. 268-269: "the function of the intelligent or 'prudent' man . . . (is) to make the very best he can out of every situation." (New York: Columbia University Press, 1960).

21. Aristotle, Nichomachean Ethics, 1105 17a-18b,

interpreted by Sir David Ross as: "Aristotle here lays his finger with precision on the distinction between the two elements involved in a completely good action--(a) that the thing done should be the right thing to do in the circumstances, and (b) that it should be done from a good motive." Aristotle, 5th ed. (London: Methuen, 1964), p. 194.

22. Oakeshott, Rationalism in Politics, p. 61.

23. Cf. R. S. Peters: "A reasonable man is one who is prepared to discuss things," "Reason and Passion," in R. F. Dearden, P. H. Hirst, and R. S. Peters, Education and the Development of Reason (London: Routledge and Kegan Paul, 1972), p. 212. And in particular, a rational man honors "demands for relevant reasons," Scheffler, Science and Subjectivity, p. 2.

In her discussion of conversation, Ruth Saw writes, "If we accept some form of Kant's maxim, 'Be a person and treat others as persons', we must not add, but, some creatures having the human form are not worthy of the name 'person'. It is safer to assume that any creature having the human form is a person, is to be treated as such, and is to be found worthy of being engaged in rational enterprises, including that of conversation." "Conversation and Communication." Thinking, The Journal of Philosophy for Children 2 (May, 1980):62.

24. Ideally, students who fail to see the point of taking a course would not enroll in it in the first place. Such students are unlikely to derive much benefit from it and are wasting their own time and that of their teachers. If by some mischance they do enroll, the teacher ought to be permitted to counsel them out. As the situation stands, the efforts of many engaged in schooling appear to be misguided by the belief that it is up to the teacher to "motivate," and the belief that the way to do this is by some version of behavioristic conditioning or by techniques which rely on instrumental reasoning. Jane Addams described the results of similar efforts on the part of teachers at the turn of the century: "The one fixed habit which the boy carries away with him from the school to the factory is the feeling that his work is merely provisional. In school the next grade was continually held before him as an object of attainment, and it resulted in the conviction that the sole object of present effort is to get ready for something else. Democracy and Social Ethics (New York:

Macmillan, 1902), pp. 188-9. Dewey speaks of the "continuity of ends and means" on page 323 and elsewhere in Democracy and Education.

25. See Chapter III, items 22, 23, 28, 30, 115, after 121, 140 for specific instances. But specific instances do not tell the whole story. What is more to the point is that by the end of the discussion all the students had become less certain of some of their previous beliefs.

Students do find that in the course of honest questioning they are likely to contradict themselves. This result leads some students to identify honest questioning with "the Socratic method." There are resemblances between the techniques, and the resemblances are not accidental. But the techniques are not identical. A careful consideration of similarities and differences would be lengthy. It could properly include a history of dialectic before Socrates, and would certainly note the changes undergone by dialectic throughout the dialogues of Plato. No complete account could fail to outline the arguments of the commentators trying to say once and for all whether Socrates' professions of ignorance were sincere. The various uses of dialectic would be described and the evaluations of these by Plato and Aristotle would be noted. A large amount of space would be devoted to a presentation of the views of Plato and the views of Aristotle on the relationships between dialectic and knowledge and between dialectic and teaching as these views are interpreted by numerous modern commentators.

26. By way of anticipating later arguments, and also by way of summarizing this chapter, I quote from Ernst Cassirer's Essay on Man: "Only by way of dialogical or dialectic thought can we approach the knowledge of human nature. Truth is by nature the offspring of dialectic thought--it cannot be gained except through a constant cooperation of the subjects in mutual interrogation and reply: it is not an empirical object; it must be understood as the outgrowth of a social act. We may epitomize the thought of Socrates by saying that man is defined by him as that being who, when asked a rational question, can give a rational answer. Both his knowledge and his morality are comprehended in this circle. It is by this fundamental faculty, by this faculty of giving a response to himself and to others, that man becomes a 'responsible' being, a moral subject." (New Haven: Yale University Press,

1944), p. 6.

CHAPTER VI

BRINGING STUDENTS TO KNOW

In this chapter I want to show that honest questioning does lead the student to "knowing that" and to "knowing how," and does so despite the fact that its immediate effects are likely to be puzzlement and uncertainty on the part of the student, who cannot say why he believes what he does, and cannot even say exactly what he means. In order to show that honest questioning leads to "knowing that" and to "knowing how," I will have to say what I mean by those phrases.

Any teaching technique reflects a theory of knowledge, whether or not that theory is explicitly recognized by the teacher. For example, the requirement that students remember what a teacher says or what the book says, when it is the centerpiece of practice, suggests that a teacher thinks of knowledge as information, of knowing as a matter of remembering

words, or that she thinks of remembering what is said as a condition of knowing which must precede understanding. (1) Those suggestions may not in fact represent the teacher's notion of knowledge, for although a technique reflects a theory of knowledge, it may not reflect her theory of knowledge. This is to say that while a teacher inevitably has some ideas about the nature of knowledge, these may not be the ideas reflected in what she does. A teacher's ideas may not be well thought out and their relationship to technique may not be well understood. It is not to be expected that teachers appreciate the subtle problems with which epistemologists wrestle, much less that they delay their teaching until those problems are resolved. Nevertheless, if a teaching technique is to be justified, then it must be shown that the knowledge it is intended to lead to is knowledge in some acceptable sense of the word.

However, because an adequate definition is as yet unformulated, whatever acceptable sense of the word "knowledge" a teacher chooses, it will be partial and approximate. What follows does not pretend to provide a justification of honest questioning from the perspective of a complete theory of knowledge. There is no satisfactory complete theory. Thus, I try to justify honest

questioning by describing connections between it and those ill-defined concepts which are traditionally taken to be the conditions of propositional knowledge. According to that definition, knowledge is justified true belief. (2) It is a definition that has never been without its detractors. Plato rejected the idea of knowledge as justified true belief on the ground that it is circular and regressive. To cope with the problem of regressiveness, self-evident necessary truths have been proposed, having intellectual intuition as their source. At the opposite end of the scale are those basic contingent statements which refer to firsthand experiences. But if these two possible forms of knowledge are excluded, what can be called derivative knowledge is left, and it is that knowledge which is defined by the conditions of belief, truth, and evidence. (3)

For reasons of pedagogy, a teacher may be forgiven for ignoring the question of ultimate truth and intuited knowledge. If there are absolute first truths which must be intuited, then they cannot be taught. Nor can basic contingent truths be taught, although if there are such truths, students can perhaps be put in their way. What a teacher will be concerned with primarily are not absolute first truths, but those which are

relatively prior and with derivative knowledge. (4) A teacher works in the middle ground, and if she knows what she is about then she understands that "knowledge is rational because inquiry is a self-corrective process by which we gradually become clearer about the epistemological status of both our starting points and conclusions." (5)

Given the traditional definition of knowledge, it is obviously necessary that the teacher concern herself in some way with the students' beliefs: if students believe nothing, then, assuredly, they know nothing. In an earlier time, it might have been taken for granted both that the students would believe what they were taught, and that a teacher should try to get her students to believe. Today, however, some teachers would think it presumptuous to try to affect students' belief systems, and some students would object if they suspected that a teacher was in any way trying to affect their beliefs. Undoubtedly there are good reasons for both teachers and students to be cautious, and undoubtedly there is confusion as well as caution. Both teachers and students resist what they might take to be efforts to propagandize, as well they should. But they may also not understand that belief and knowledge have a relationship to each other, that is, they may not think

of belief as a necessary condition of knowledge. They may think of belief as referring solely to matters of religion, politics, or values in general. Furthermore, they may think that the only way beliefs are affected by others is by efforts which must be propagandistic. Students often do not include sound argument when they suggest the ways beliefs are formed (perhaps because they have been exposed to so little of it). But even without the confusion on the matter, difficult-to-resolve questions, both ethical and pedagogical, surround the matter of the formation of belief. (6) Fortunately, the honest questioner need not address them, since, in her effort to try to find out where the student is, she is not trying to persuade him to accept new beliefs but is trying to learn what he already believes. (7)

If the teacher is to find out what a student knows, then she must be able to evaluate the truth of his beliefs and be able to assess whatever justification he gives on their behalf. This may seem obvious, and it also may seem obvious that, if the teacher judges a student's belief false, she will not need to ask him why he believes it. But to conclude so would be mistaken. The teacher will ask the student why he believes what he believes, regardless of whether she believes what he

believes, and she will do so for several reasons. There is always the possibility that she is mistaken herself, or that she has misunderstood, which she does not know until she hears him out. On the assumption that the student is capable of rationality, she will give him a chance to state his reasons. The most important reason, however, for the teacher to ask for reasons even for beliefs which are in fact mistaken, is that the student must follow them where they lead in order to discover their inadequacies. Beliefs do not relax their grip easily: it is possible that neither a teacher's opposition nor her evidence will be sufficient to break their hold. It is also imperative that a teacher ask the student to account for those beliefs which she accepts as true: she wants to find out what he knows, and true belief is not knowledge. (8)

But to put the matter as I have put it above is to put it as if truth and justification existed apart from each other. That this is the case is likely to be the assumption of most teachers. However, it is less likely to be the assumption of philosophers, some of whom take the different position that truth is defined in terms of the justification condition. (9)

Consider the first possibility, that we do justify our beliefs independently of their truth or falsity.

"Truth" in this case is taken to refer to some state of reality which exists regardless of human awareness of it. That is the commonsense version of truth. And according to it, our beliefs are true or false regardless of whether we can or cannot justify them. If this is so then we can say "my belief is justified and it is true," but not "my belief is justified, therefore, it is true." But we could also say "my belief is justified and it is false," for the criteria of truth or falsity are taken to be something apart from the means of justification. (The naive may say that a belief is justified because it is true, but there is no need to dissect that position here.) (10) The honest questioner could take this position on the relationship between truth and justification, in which case, she would evaluate a student's belief as true or false. Practically speaking, what she meant by true or false would be what is or is not received opinion. Justifying a belief would not be a matter of the student ascertaining its truth or falsity, but of defending his right to it. The teacher could not expect the student to discover the falsity of a belief in the course of trying to justify it, since falsity exists independently of our ability to justify. Given my understanding of what it means to justify, to be discussed below, this position

is incoherent; that is, I cannot conceive of truth and justification in ways which allow me to see them as independent. (I am not, of course, denying that there is a "reality" which exists independently of human knowledge of it, but am asserting that, by definition, human beings cannot conceive of it.) It may well be that an argument for honest questioning could be construed by someone who can see truth and justification in this way, but I cannot, and so must make my argument on the assumption that truth and justification are not independent.

The main alternative to the common view that truth is independent of our ability to justify it, is that, if we can justify a belief, then we will consider it provisionally true: being able to justify <u>is</u> what we mean by true. James McClellan briefly notes benchmarks in the evolution of this position:

> When Descartes says that he will accept no proposition as true that doesn't meet his tests for clear and distinct ideas, he is saying in effect that 'true' means 'having been examined and found to be a clear and distinct idea.' With Kant, and more particularly with Dewey, this redefinition of ends in terms of procedures is made more explicit. (11)

In the interpretation of the pragmatists, we <u>decide</u> the truth or falsity of our empirical beliefs according to whether we can or cannot justify them according to some physical test: a warranted assertion is true. We have

no criteria for determining truth apart from the methods of inquiry by which we justify a belief. The object of inquiry is the knowledge that our propositions are or are not warrantable. True beliefs, understood to be provisionally true, are those beliefs we can justify at the present moment. (12)

At this point, a distinction must be made. I have accepted the traditional definition of knowledge as justified true belief and said that a teacher need not concern herself with absolute first truths or principles. And that is true. But, as already suggested, an honest questioner will have to concern herself with relatively first truths and this is because the beliefs expressed by the student will not all be derivative, or a posteriori. The student's beliefs will necessarily be divisible into those which are a posteriori, and thus empirical, and those which are analytic a priori or function as such. The pragmatists' description of the relationship between truth and justification applies only to a posteriori, or empirical propositions. What, then, is to be said regarding the relationship between truth and justification in the case of a priori propositions?

The beliefs the student has which reflect his way of categorizing the events and objects of the world are

his a prioris. They are those beliefs which are functioning for him as definitions, which describe his concepts. I do not wish to take the position that definitions are simply stipulations, or that they must lead backwards to ostensive definitions and ultimately to sense data. I do not wish to take an empiricist position on the matter of definitions, (13) nor do I wish to commit myself to an idealist view that definitions are of essences. All that I intend to say about a priori propositions is that they describe concepts and can be appraised as adequate or inadequate, if not as true or false. In the case of an individual's concepts, to say that they are adequate or inadequate is to say, at least, that they are publicly acceptable: the language is not being used in a wholly idiosyncratic fashion. (Logical coherence must be a criterion of the adequacy of any set of concepts. It is likely that the set of public concepts does not yet form a completely coherent network, nor yet does any subset. Consider, for example, the subset of concepts associated with the concept of education.)

Whatever position one takes on the relationship between truth and justification, or of the criteria by which concepts are judged adequate or inadequate, both sorts of belief, those expressible as a priori and those

expressible as a posteriori propositions, must be justified. And whatever one takes to be the object of knowledge as such--a picture of the world as it is, or the more modest objective of the pragmatists, the knowledge that propositions are warranted--the methods of justification will have important characteristics in common. This claim is true, despite the fact that a priori and a posteriori propositions are distinguished from each other precisely in the way their "truth or falsity" come to be known. A posteriori propositions are those the truth of which can be determined by experiment and observation, by the skillful employment of all the paraphernalia and equipment of scientific inquiry. But the tools of inquiry include, at least, the powerful tool known as logic. I say, "at least," since Dewey argued for the identity of inquiry and logic. Logic was not to be taken as it had been taken, as but a tool to demonstrate the truth of what was already known. Dewey believed, as Newton and Bacon believed, that rules of reasoning were "legislative of procedures as well as demonstrative of the truth of . . . conclusions." (14) Dewey enlarges the concept of logic, identifying it with the entire process of inquiry. The point I wish to emphasize is that logic, reasoning (meaning the practice of, not the formal study of), is the means of coming to

know.

Now, by definition, a prioris cannot be put to empirical test. How would a student try to justify the proposition, for him an a priori, "education is everything that a person learns?" He could be asked whether his concept is consistent with others' concepts of education, these to be suggested to him by way of examples. His concept can be tested by presenting hypotheses derived from it in the form of examples, to see if he can use the concept consistently. If he can, then he can say that learning to murder is a part of the education of a person who learns to murder, and he cannot say that education is necessarily improving. One would want a person to justify an idiosyncratic concept, for example, a concept of knowing that does not include the truth condition (in some sense of truth), by showing that it is preferable on the grounds of consistency. In short, a prioris, whether idiosyncratic or public, are to be tested by means of the techniques of concept analysis, and concept analysis, as much as experiment, is an exercise of reasoning skills. It is in this perfectly obvious sense that I mean that a prioris and a posterioris are to be justified using some of the same methods. Both sorts of proposition rely on the use of reasoning skills for their justification. That claim

should cause no objection whatsoever, and yet it bears elaboration.

It is still not clear what is meant by justifying, and it will not help to translate justifying as "having evidence." "Having evidence" does not seem to apply at all when speaking of a priori propositions, and it is not clear what it means when speaking of a posteriori propositions.

What does it mean to have evidence? If evidence can be had, can it be given? If the student memorizes the evidence, does he have it? Scheffler comes to this formulation:

> In every case where evidence is required for the right to be sure, knowing involves not merely having adequate evidential data but also appreciating their value as data, in the light of an appropriately patterned argument . . . But what is it now to have such an argument? . . . Certainly he (the student) must do more than produce an accurate physical replica of the original proof (argument) he has seen; he must understand the proof, see its point. (15)

What we now have is a claim that if I have evidence for an a posteriori proposition, I understand the relationship between the proposition which states the evidence and the proposition being defended to be the relationship "reason to believe." The relationship is a logical one. If a person can place a proposition in the context of an argument which serves to demon-

strate the meaning of the proposition and at the same time to show how its truth or falsity may be ascertained, then that person can be said either to understand that proposition or to know how, in principle at least, to justify that proposition. For example, to understand the proposition "Chicago is a large city," is to be able to place it as the conclusion of an argument: "If a city is inhabited by at least one million persons, then it is a large city. Chicago is (according to the latest census figures) inhabited by more than one million persons. Therefore, Chicago is a large city." Taking the proposition "You'll get better teachers if you pay teachers better" to be an untested hypothesis, one might ask the speaker either "What do you mean by that?" or "How would you know that, or how could you know that?" and might receive in answer to either question (from a sophisticated student) that "If the hypothesis is true as stated, then it could be shown that, other things being equal, of two groups of teachers, those in the group having the higher salaries will be better teachers than those in the group having lower salaries, according to some criteria which, it is agreed, will indicate better teaching." If an empirical proposition can be understood, then it has meaning. In Scheffler's paraphrase of Peirce, "To have meaning . . .

it must embody conditional predictions testable by the senses," (16) an acceptable formulation if "it" is taken to refer only to empirical propositions.

If to understand an empirical proposition is to be able to place it within the framework of an argument which specifies the conditions of its justification, what does it mean to understand what functions as an a priori, a definition of a concept? Understanding of a proposition which functions as an a priori is a matter of seeing what follows from it, of seeing it as a premise of an argument. What follows from it serves to test the adequacy or inadequacy of that concept by showing the relationship between it and other concepts, as can be seen in the case of the example of the concept of education proposed above.

If I have evidence for the truth of an empirical proposition or can present the case for the adequacy of a proposition functioning as definitional, then I understand the proposition. Understanding is thus shown to be a necessary, though not sufficient, condition of justifying a belief, and a necessary, though not sufficient condition of knowing. Justifying is linked to understanding, and understanding is linked to intelligibility. If the student understands the proposition in which his belief is expressed, then he

can place it within the context of argument, and that is to say he can speak intelligibly, in a strong sense of intelligibly. (17) Speaking intelligibly is, therefore, also a prior condition of propositional knowledge, by which I mean to say that the discovery of knowledge is not the accomplishment of some sort of non-verbal process of inquiry which results in a belief which may then be justified in words. The struggle to know, or discover, cannot be distinguished from the struggle to communicate, or justify. As has already been noted, Dewey refers to true propositions as those which can be justified, which are, that is, found warrantable when tested through experiment. But Dewey suggests an alternative way of characterizing true propositions, one which emphasizes the social nature of truth. He cites Peirce's as the best definition of truth: "The opinion which is fated to be ultimately agreed to by all who investigate." (18) Kennedy interprets Peirce and John Dewey to be saying that

> the 'truth' as here conceived implies that the processes of investigation, if pushed far enough, will give one certain answer to every meaningful question. In actual practice, however, many inquiries are interminable and the truth value of any particular belief must depend upon the indefinite prolongation of that inquiry. Characteristically, applications of the method of science do not result in certainty but in progressive approximations to an eventual consensus. (19)

Consensus is the key word. The inquiry process is not a private affair, for "No isolated individual, however intelligently he applies "scientific method," can be sure of his results." (20) Knowledge is public in the sense that it is a joint or collective creation of mankind. All inquiry presupposes a "social or public context that is the medium for funding the warranted conclusions and norms for further inquiry . . . Inquiry both requires such a community and helps to further the development of this community." (21) If propositions are true, they are fated to be agreed on and they are intelligible. The world of knowledge is public and sharable, and the struggle to speak intelligibly is a condition of entrance into it.

Honest questioning can be seen as the effort to understand by a person who has, at least, an intuitive feeling for what it means to understand. The teacher who is willing to acknowledge that a student may have good reasons for his beliefs and gives him a chance to express these has a better chance of promoting intelligibility than the teacher who quickly concludes that she does understand and judges that he is right or wrong. The teacher as honest questioner demands greater explicitness of the student and of herself. In ordinary conversations, participants do not demand of each other

explicitness, at least until they recognize that they have not, in fact, been commmunicating. A responsive listener sometimes supplies adequate support for a proposition, and gives the speaker credit for speaking intelligibly even though he is not doing so. An obtuse listener may, being unable to supply the necessary supports, accuse the speaker of not making sense when perhaps the speaker simply thought the supporting premises too obvious to mention. A credulous listener may not recognize what it means to support a proposition, will accept any proposition as stated, and cannot be said to understand at all in a strict sense of understanding. It may be true that, other things being equal, the greater the listener's ability to evaluate the speaker's argument, the more likely her questions will be to reflect her understanding of the inquiry process and thus the more effectively she will promote intelligibility, but that is a matter I do not wish to take up. I am content to say that the effort of a teacher to find out what the student believes and why is an effort to understand what he says, and that honest questioning, itself a form of inquiry, is well-adapted to that end.

In answering honest questions, the student will find out what? It has already been said that he finds

out, often, that he is not saying what he wants to say, does not know what he wants to say, and so on. In the case of beliefs which have empirical content, he may find that, on the basis of what he already recognizes as evidence, he must modify a belief or contradict himself. Occasionally he will convert a belief to knowledge, finding that he can justify it. It is not being claimed that the efforts of a student to respond to honest questioning will be sufficient to enable him to justify his a posteriori beliefs. A student may come to understand what he believes, and that means that he knows what would count as evidence for it. One outcome of discussion might be a proposal for an experiment. In the case of those beliefs which function as a prioris, honest questioning alone can be sufficient to enable the student to recognize their inadequacy or adequacy, although it may not be sufficient to enable him to discover a more adequate concept to replace a less adequate one.

Some "knowledge that," may be one outcome of a discussion, but this, however valuable, is not the most important outcome. More important by far is the "know how" which results. It was said earlier that "knowing that" depends on understanding. I restate that claim here in a more general, and a decidedly ambiguous form:

"knowing how" is prior to "knowing that." In one sense, that means that knowledge of how to justify precedes propositional knowledge. The student may not, as a result of honest questioning, be able to justify a particular belief, but he will learn how to justify. That is the sort of "know how" towards which honest questioning leads, and I shall say why it is a more important outcome than "know that."

First, the student has beliefs, as all persons do. He may be able to convert a small portion of his beliefs to knowledge new to him or new to the human race. But he cannot possibly convert all of his beliefs to first-hand knowledge. All of us are dependent on the knowledge of others. If the species is to accumulate knowledge, then individuals must be able to trust others and know when <u>not</u> to suspend belief until it can be converted to knowledge. If we are to "share" knowledge then we have to be able to evaluate the propositions of others. We do this in two ways, first by evaluating the trustworthiness of others in a moral sense--would they intend to deceive?--and second by evaluating their trustworthiness in an intellectual sense--are they competent inquirers? We can participate in knowledge only to the extent that others are trustworthy. If they are not, then we are foolish to believe what they tell

us and wise to suspend belief until we know. (22) Knowledge is a social product in every sense of the phrase. It is generated collectively as a result of social interaction, and it is generated in an individual through social interaction. It comes into being as the effort is made to share it, or, in other words, as the result of the attempt to justify beliefs. Our chief means of evaluating the intellectual trustworthiness of others is our own skill at evaluating argument. Each human being must, if he is to "share" in knowledge be able to evaluate the arguments of others, and if he is to be able to "share" his knowledge with others, he must be able to place his beliefs within the framework of argument. He must, in short, know what it means to know how to justify beliefs. (23)

If what I have said is true, if "knowing that" depends on knowing how to justify and if knowing how to justify is of such individual and collective importance, then the teacher should teach students how to justify beliefs. But the ability to justify depends on understanding, so one must ask how the teacher can bring about understanding. In fact, although we sometimes do speak of the teacher making a student understand, we are as likely to speak of the student's understanding as a condition of his learning. It is certain that we do not

speak of teaching a student to understand. (It would sound as odd to ask how one could teach the student to understand as to ask how one could teach another to hear. Hearing can be trained, but only if there is some prior capacity to hear.) But it is the case that what goes on between teacher and student can affect the student's sense of what it means to understand. In particular, the teacher's effort to understand what the student says prompts the student's understanding of what he says. Put another way, the student learns to justify, by trying to justify. (24)

That sounds like a psychological claim, one that ought to be dealt with in subsequent chapters. So, in a sense, it is, and so it will be. But it is also a claim about the relationship between "knowing that" and "knowing how," conceived as a relationship between theory and practice, which is not the way it has previously been discussed in this chapter. In How We Think, John Dewey describes the process of thinking or problem solving as a matter of suggestion, converting felt perplexity into a problem, forming of hypotheses and gathering of data, the elaboration of ideas, or reasoning in the narrow sense, and the testing of hypotheses. (25) Perhaps the more accomplished one is as a thinker the more one approaches that idealized

version, but if Dewey had intended that model as a prescription for thinking, then the same comments could be leveled against it that Ryle levels against the rules of logic:

> Rules of correct reasoning were first extracted by Aristotle, yet men knew how to avoid and detect fallacies before they learned his lessons, just as men since Aristotle, and including Aristotle, ordinarily conduct their arguments without making any internal reference to his formulae. They do not plan their arguments before constructing them. Indeed if they had to plan what to think before thinking it they would never think at all; for this planning would itself be unplanned. (26)

Dewey did not intend his model to be a prescription, but a description, idealized, of how thinking proceeds. And he certainly did not think he was proposing an instructional model. Dewey well understood the distinction between the order of knowledge and the order of learning. I am consistent with Ryle and with Dewey on this point. I maintain that learning how to justify is one kind of learning how and that it is learned as other learnings how are learned: by practice. Ryle describes "knowing that" as theorizing, and theorizing as but a kind of practice learned by practice. He echoes Vygotsky when he writes that "this trick of talking to oneself in silence is acquired neither quickly nor without effort; and it is a necesary condition of our acquiring it that we should have

previously learned to talk intelligently aloud and have heard and understood other people doing so." (27) I sai that the proposition "'know how' precedes 'know that'" is ambiguous. Besides meaning that knowing how to justify this particular proposition precedes my knowing that this proposition is the case, it means that knowing how to justify precedes my knowledge of the principles of justification, that is, precedes any explicit knowledge that these are principles of reasoning or inquiry. (28) This is to echo Dewey, echoing Aristotle: "while inquiry is the causa cognoscendi of logical forms, primary inquiry is itself causa essendi of the forms which inquiry discloses." (29) A few paragraphs above I said knowledge comes into being as a result of an effort to justify our beliefs. It is also true that on an individual and on a collective level our effort to know brings into being our ways of knowing.

In this chapter I have argued that honest questioning does lead the student to knowing. I have ar ued by showing what is meant by "knowing that" and by showing the ways in which it may be said that "knowing how" is a condition of "knowing that." In making "knowing that" dependent on understanding, I am making it dependent on ability to use the language. But

"knowing that" is propositional knowledge and propositional knowledge is knowledge that can be expressed in linguistic symbols. The distinction implicit in the chapter is one which is aptly paralleled in the distinction between learning to say rules of grammar and learning to use the language. Why the distinction is important, and hence, why honest questioning brings the student to know, are the questions to be taken up in the next chapter.

1. It will already be obvious that I wish to distinguish knowing from remembering, although remembering may be a condition of belief and, therefore, a condition of knowing that. It would make no sense to speak of someone with no ability to recall anything whatsoever of his past experience as knowing anything. But remembering is not synonymous with knowing. That there is a distinction between the two is apparent to students who are required to memorize masses of material which make no sense to them, although the distinction is sometimes ignored by the teachers of those students. The practice of teachers who ignore the distinction between remembering and knowing exemplifies what is called the "transmission of information model of teaching/ learning." Israel Scheffler criticizes this, which he refers to as the impression model of teaching/learning, in both its sensory and verbal variants. He does so because the student is "heir to the complex culture of belief built up out of innumerable creative acts of intellect of the past, and comprising a patterned view of the world. To give the child even the richest selection of sense data or particular facts alone would in no way guarantee his building up anything resembling what we think of as knowledge much less his developing the ability to retrieve and apply such knowledge in new circumstances." "Philosophical Models of Teaching" Harvard Educational Review 35 (Spring 1965):134.

2. Encyclopedia of Philosophy, s.v. "Knowledge and Belief," by Anthony Quinton. I understand that what is meant by each of these conditions varies according to whether a philosopher is rationalist, empiricist, pragmatist, positivist or other. A teacher may wish to find a position of safety with respect to knowing, in territory over which epistemologists no longer dispute, but if there is no such territory, perhaps she can be forgiven for jumping borders if she can show that an irresponsible eclecticism is not her goal. An alternate solution to the problem is offered by David Harrah: "The difficulties with the concept of knowledge are very deep. No one has yet produced a set of necessary and sufficient conditions for knowledge--a definition that works in all cases and is not subject to counter-examples. The best that a teacher can do, if the tea her insists on using the notion of knowledge, is to instill in the student some caution about making knowledge claims. The safe locution is 'I believe that P is true, and I have good reasons for believing it'.

Correspondingly, instead of analyzing questions in terms of 'make me know', it might be better to analyze in terms of 'make me believe, and have good reasons for believing'. There are many problems that still have to be resolved concerning the notion of good reason, but we are much more likely to obtain a satisfactory theory of good reasons than we are to obtain a satisfactory theory of knowledge." "What Should We Teach about Questions?" Synthese 51 (1982):27. One easily accessible colllection of papers on the problem of knowledge as seen by twentieth century philosophers is Knowledge and Belief, ed. A. Phillips Griffiths, Oxford Readings in Philosophy (London: Oxford University Press, 1967).

3. Encyclopedia of Philosophy, s.v. "Knowledge and Belief," by Anthony Quinton.

4. Aristotle may not have agreed. On occasion at least, Aristotle distinguished didactics from dialectics: "Of arguments in dialogue form there are four classes: Didactic, Dialectical, Examination arguments, and Contentious arguments. Didactic arguments are those that reason from the principles appropriate to each subject and not from the opinions held by the answerer (for the learner should take things on trust): dialectical arguments are those that reason from premises generally accepted, to the contradictory of a given thesis . . ." Aristotle On Sophistical Refutations 165b. But H. Tredennick writes that "Clearly Aristotle is thinking of 'dialectic,' as a means of instruction distinct from science (which seeks only to discover and demonstrate the truth) . . ." Aristotle Posterior Analytics, trans. H. Tredennick. Loeb Classical Library (Cambridge, Ma.: Harvard University Press, 1960), p. 24, fn. b.

5. John Dewey, Quest for Certainty, p. 383.

6. The educational literature, most of which emerges from the field of psychology, says little about the formation of belief. Perhaps philosophers of education are more willing to deal with the matter. Israel Scheffler does and is sure that the teacher ought to affect the student's belief. Although he is writing from the position of one who believes that knowledge is transmitted from the teacher, what he writes can be read as partial endorsement of honest questioning: "It is crucial that we recognize not only the ramifications of belief in conduct but also the influence of motivation

and social climate on verbal expression. If we aim to engage the student's belief and not simply to shape his verbal output, we need to be able to communicate with him. For this to be possible, we need to create an atmosphere of security, so that verbal expression may approximate genuine belief. Such an atmosphere itself would seem to require an emphasis on rational discussion free of constraint and free of propagandistic tendencies: this emphasis underlies the common or standard sense of teaching." Conditions of Knowledge, Keystones of Education Series (Glenview, Il.: Scott, Foresman, 1965), p. 90.

7. There is plenty of research to substantiate the belief that prior beliefs can interfere with the acquisition of new beliefs. See, for example, the now classic Remembering by F. C. Bartlett. The interference can occur in the form of the distortion, or assimilation to schema noted by Bartlett and by Piaget. If prior beliefs can interfere in this or other ways, the teacher has an additional reason to find out what the student believes before she tries to implant new beliefs. This is a psychological matter and will be dealt with, indirectly, in the next chapter. Psychologists, however, are not the only ones to recognize the pedagogical value of beginning with those beliefs a student has. Scheffler's reference to Poincaré's essay, "Mathematical Definitions and Education," is relevant here if one can accept the comparability of "images and intuitions" to "beliefs." "Poincaré suggests the importance . . . of respecting the initial (faulty) images and intuitions of students in the process of mathematical education. If we reject these images and intuitions prematurely and force upon the students our superior formal constructions resting upon premises that 'seem to them less evident than the conclusion, what will the wretched pupils think? They will think that the science of mathematics is nothing but an arbitrary aggregation of useless subtleties . . .' Poincaré counsels initial encouragement of the pupils' intuitions and images so that, working with them, the pupils will begin to realize their inadequacies of themselves, at which point our formal demonstrations will be welcome and beneficial." Scheffler, Conditions of Knowledge, p. 71.

8. As may be seen in the transcript, there are many ways to ask a student why he believes what he believes. One doesn't always ask for reasons in those words, although one sometimes might. Ryle says that the

question "Why do you believe?" is a question about motive, not a request for a reason or evidence. Concept of Mind, p. 134. Strictly speaking, Ryle may be correct. But however it is phrased, I do not think the question is so taken. I have never known anyone to respond that they believe out of fear, or because a belief suits their purposes or makes them feel good, and if anyone were to make such a response, I would think it odd, or not to be taken seriously. People cannot always give a reason, but they interpret the question as a request for one.

9. The correspondence theory claims that there is some one to one correspondence between propositions and the world as it really is. Whatever that means, we cannot get outside ourselves to see whether there is such correspondence. Presumably, however, if we are to survive in the world, our beliefs should correspond to our experience of the world. If we stick our fingers in the fire, we will get burned. And we will get burned whether we do or do not believe it. Our recognition of the effects of our actions is a condition of our survival, a necessary, but not a sufficient condition, for we may after all choose not to survive. According to one interpretation of the coherence theory, the truth or falsity of a statement is determined as it is or is not "a member of system whose elements are related to each other by ties of logical implication." Encyclopedia of Philosophy, s.v. "Coherence Theory of Truth," by Alan R. White. It is plain that it is possible for humans, individually and collectively, to produce systems of beliefs which are internally consistent but have no reference to the world, e.g. mathematical structures. Therefore, if truth is expected to have some reference to the world, coherence is not a sufficient condition of truth. And yet it seems also obvious that coherence must be a condition of truth. What can it mean to say so? First, it is sensible to recognize that consistency has two dimensions. It can refer to our efforts to categorize the things and events in the world in some way. Certain phenomena which warm my body, burn it if I get too close, are to be categorized as similar and conveniently labelled "fire." Adequate classification schemes are the foundation of knowledge, and categorization is our chief and most difficult intellectual task. It is not one I can perform alone. My consistency is judged by others, and it is judged not simply by observing my actions, but by observing my language, that is, my

efforts to symbolize my experience. Coherence is a condition of communication and refers to interhuman intelligibility. And it may be that there is a relationship between coherence and the description of correspondence given above. While we can devise a coherent set of propositions bearing no relationship to our experience, in practice we usually do not do so. As human beings we are not compelled to act but are free to symbolize action. Coherence does not guarantee truth, but is a test of truth: if we disagree with ourselves, or with others, at least one of our propositions is wrong. The test of coherence itself doesn't tell us which proposition fails to correspond, and we must test each against other propositions, or against actions. This position is in part close to Hamlyn's: "Interpersonal agreement provides the criterion for the concept of truth, the point of application through which the concept of truth becomes intelligible, and without which truth is impossible." The Theory of Knowledge, Modern Introductions to Philosophy, ed. D. J. O'Connor (London: The MacMillan Press, 1970), p. 142.

10. It may be that most of us speak in ordinary conversation as if we accepted the position that truth is independent of justification. But perhaps we do not always do so. We may believe that truth is independent of our ability to justify it, but not that the ability to justify is independent of the truth. We may be inclined to believe that a particular belief cannot be justified because it is not true. Another view of the relationship between justification and truth is exemplified when the reply "Because it's true," is offered to a "Why do you believe x?" question. The multiplicity of positions on the relationship between truth and justification indicate that there may be as many lay views of truth itself today as there are professional views. One I find to be common amongst students is the view that truth is entirely relative to the believer: a belief can be true for one person but not for another.

11. James E. McClellan, "Dewey and the Concept of Method: Quest for the Philosopher's Stone in Education," School Review 67 (Summer 1959):222.

12. "Knowledge which is merely a reduplication of ideas of what exists already in the world may afford us the satisfaction of a photograph, but that is all." John Dewey, Quest for Certainty (New York: G.P. Putnam's

Sons, Capricorn Books, 1960), p. 137. Knowledge is something else, something other than an acquaintance with things as they really are. Dewey wanted "a philosophy which holds that we experience things as they really are apart from knowing, and that knowledge is a mode of experiencing things which facilitates control of objects for purposes of non-cognitive experiences." Ibid., p. 98. He argued that "the scientific way of thinking about things does not give the inner reality of things--it is simply an instrumental way of thinking about things." Ibid., p. 136. Dewey's choice of the word "control", echoing as it does both the idea of man's claim to dominion over the earth and Bacon's assertion that "knowledge is power," will not go unchallenged in these times. "Knowledge" may in fact be used to control, but one can accept much of Dewey's position without either defining knowledge as an instrument of control or accepting control as its purpose. If humankind learns that fecal bacteria poison drinking water, humankind can arrange to protect the drinking water source from this form of pollution. But in this case, if control is being exerted, then it is over man as much as nature. If Dewey does not mean by control "exploitation or manipulation of the environment" in disregard of long range consequences, then his idea that control is the purpose of knowledge becomes acceptable.

The justification condition is sometimes referred to as the evidence condition, and there are different descriptions of it as the evidence condition. Roderick Chisholm's "the proposition must be one which, for him, is evident," [Theory of Knowledge, 2nd ed. (Englewood Cliffs, New Jersey: Prentice-Hall, 1977), p. 102.] may not mean the same as Israel Scheffler's "X has adequate evidence that Q." (Conditions of Knowledge, p. 21.) Leaving the question unanswered, and the differences between Chisholm and Scheffler unanalyzed, I shall make the assumption that, adequately interpreted, "having evidence," "being evident," "warrantable," and "justifiable" would not be inconsistent with each other and would at least overlap in meaning.

13. As the quotation cited on pages 132-3 indicates, Dewey took "first principles" not as absolute truths, but as hypotheses. For discussion, see his Logic, A Theory of Inquiry, especially Chapter VIII.

It is a bad example that McClellan chooses, but I think it may be figured out from it what Dewey meant by concept or definition: "When Dewey argues that the

statement "This table is real" takes its meaning from the concrete operations by which we adjust ourselves and other objects to this table, it is clear that he means for method to define reality and not vice versa. This contrasts with the common-sense notion of the chemist, let us say, who would think that his procedures of quantitative analysis were good to the extent that they told him what the table was really composed of, while Dewey is saying that the statement "The table is really a molecular structure of form F" means that certain concrete operations, themselves subspecies of general philosophical method, were performed on the table." "Dewey and the Concept of Method . . . ," School Review 67 (Summer 1959):222. It is an odd example, because the table is not defined simply as wood. The predicate does not define table although it may be a fruitful hypothesis about wood.

14. McClellan, "Dewey and the Concept of . . . ," School Review 67 (Summer 1959):215. By making reasoning a part of or synonymous with inquiry, the illusion that the boundary between the context of discovery and the context of justification can be clearly demarcated is destroyed.

15. Scheffler, Conditions of Knowledge, p. 70. In discussing the question of the evidence, or justification condition, and a person's knowledge of his own feelings (physical sensations and emotions), Scheffler concludes that we must grant that individuals know that they have a headache even though we do not require them to offer evidence: "It would seem, then, that the evidence condition is too strong a general requirement for propositional knowledge. For in such cases as we have lately considered, a person may indeed know that Q without having adequate evidence that Q." Ibid., p. 60. There are various grounds on which to differ with Scheffler on this point. One may admit that in some sense of know individuals know what they feel. One may say with Dewey that neither direct experience of things as they are, nor reports of things as they are, are what we mean by knowledge. If one is a teacher, one may si estep the matter altogether. A headache is a private experience whether one does or does not want to speak of awareness of it as knowledge, and teachers should be primarily, if not exclusively, concerned to initiate the student into not private but public knowledge.

Scheffler has distinguished several kinds of knowings. It is in consequence of this distinction that

Scheffler writes that "While, however, there may indeed be contexts in which knowing X conveys the connotation of understanding X, it does not seem plausible to make the proposed general reduction. A person may say without contradiction, 'I know the doctrines of the existentialists, but I don't understand them.' Or we may say of a child, 'He knows Newton's laws (or Shakespeare's plays) but doesn't yet understand them.'" Ibid., p. 17. The knowing that Scheffler refers to here is remembering. While remembering may be a condition of knowledge, it may not be a temporally prior condition. It is not necessary to remember a bit of information before coming to know it. I insist that teachers should keep the distinction between remembering and knowing in mind, and would say with McClellan that if the student cannot know in the strong sense, which does include having evidence, and therefore understanding, he ought not be required to know in the sense of remember. At page 70 Scheffler appears to take a position which includes that of McClellan: "being evident" in McClellan's terms must be close to what Scheffler means by 'appreciating their value as data.' See also Ryle, Concept of Mind, p. 54: "Understanding is a part of knowing how."

16. Scheffler, Conditions of Knowledge, p. 42. And elsewhere he writes: "it does not follow that the student will know these new facts simply because he has been informed; . . . knowing requires something more than the receipt and acceptance of true information. It requires that the student earn the right to his assurance of the truth of the information in question. New information, in short, can be intelligibly conveyed by statements; new knowledge cannot . . . To know the proposition expressed by a sentence is more than just to have been told or to have grasped its meaning, and to have accepted it. It is to have earned that right, through one's own effort or position, to an assurance of its truth." Scheffler, "Philosophical Models of Teaching," Harvard Educational Review 35 (Spring 1965):137.

17. McClellan, "Dewey and the Concept of . . . " School Review (Summer 1959):228. Although we do speak of understanding the world on those occasions when we can predict events, we do not in fact understand the world, nor is it intelligible. Predictability is not a sufficient condition of intelligibility. The motions of

the planets are predictable but that is not the same as saying that the motions of the planets are intelligible. If we insist on such an equation, we are then committed to saying that those forms of psychopathic behavior which are predictable are intelligible. To deny the intelligibility and, therefore, the understandability of the world is to quarrel with John Dewey (Quest for Certainty, p. 210 and Encyclopedia of Philosophy, s.v. "John Dewey.") if he meant that the world is literally understandable, literally intelligible. Perhaps most people would take Dewey's side. Nonetheless, it cannot be the case that the non-human world and the speech of a human being are understandable or intelligible in the same way. If the world is understandable, it is predictable by man. If what a person says is understandable, it is coherent, not merely predictable.

It is when we speak of human beings as being understandable that we approach the core of the meaning of the concept "understand," yet further distinctions must be made. For sometimes we understand how another feels and sometimes we understand how another thinks and our understandings may not be of the same kind. Even the phrase "understand how you feel" is ambiguous. For example, we may say we understand another person when we mean that we know or think we know what his feelings are, perhaps even sympathize, but nevertheless say that there is no reason to feel that way. But in this sort of case the word "understanding" is being pushed into service beyond the borders of its core meaning. I say this not because understanding in a strict sense can have no reference to matters of feeling. It is well within the boundaries of the core meaning of understanding to say that we understand how another feels when we know why that person feels as he or she does and believe they have good reason to do so. We commonly, and I believe correctly, make the assumption that people do have reasons for feelings, and if a person has no good reason that we can see for feeling as he or she does, we say we do not understand those feelings. If we say we understand how someone feels and mean that we acknowledge that person has a reason to feel as he or she does, then our usage is consistent with what I take to be the central meaning of the word "understanding".

We may also say that we understand when we see how a person made a mistake. And we mean that we can see how they thought and can perhaps explain to them what they didn't understand. In a strict sense we didn't understand their position, since in a strict sense it was unintelligible. But we say we can understand when

we can reconstruct some argument so that we see how, if they took this as the premise, they got there, or, see how, if they didn't know this or mistook x for y, their reasoning followed. When, however, a person's procedures appear to have been quite without reason, then we are baffled and neither understand nor know what to do to help.

I would like to say that it is not persons we understand but what persons say when they speak intelligibly. If I cannot make a case strong enough to sustain that position, then I will retreat to the position that the words "understand" and "intelligible" are homonymous.

18. John Dewey, Logic, The Theory of Inquiry, (New York: Holt, Rinehart and Winston, 1938), p. 345n.

19. Gail Kennedy, "Dewey's Logic and Theory of Knowledge," in Guide to the Works of John Dewey, ed. Jo Ann Boydston (Carbondale, Il.: Southern Illinois University Press, 1970), p. 83.

20. Ibid., p. 82.

21. Encyclopedia of Philosophy, s.v. "John Dewey" by Richard Bernstein.

22. Scheffler: "What seems indubitably more appropriate in all these cases of knowing is an emphasis on the processes of deliberation, argument, judgment, appraisal of reasons pro and con, weighing of evidence, appeal to principles, and decision-making, . . . It is in terms of such principles of deliberation, or the potentiality for it, rather than in terms of simple vision, that the distinctiveness of knowing is primarily to be understood." "Philosophical Models of Teaching," Harvard Educational Review 35 (Spring 1965):138. William James is quoted by Gail Kennedy as having written "thinking is one mode among others--a peculiarly efficient one--of adapting to an exigent environment." "Dewey's Logic and Theory of Knowledge," Guide to the Works of John Dewey, p. 63. And John Dewey wrote: "By means of symbols, whether gestures, words or more elaborate constructions, we act without acting. That is, we perform experiments by means of symbols which have results which are themselves only symbolized, and which do not therefore commit us to actual or existenial consequences. If a man starts a fire or insults a rival, effects follow; the die is cast. But if he

rehearses the act in symbols in privacy, he can anticipate and appreciate its result. Then he can act or not act overtly on the basis of what is anticipated and is not there in fact. The invention or discovery of symbols is doubtless by far the single greatest event in the history of man. Without them, no intellectual advance is possible; with them, there is no limit set to intellectual development except inherent stupidity." Quest for Certainty, p. 151.

23. "Those educators who stress so-called discovery and problem-solving methods in schooling may, in fact, be operating upon the general presumption that such methods lead to strong knowing as an outcome. An emphasis on teaching, with its distinctive connotations of rational explanation and critical dialogue, may have the same point: to develop a sort of learning in which the student will be capable of backing his beliefs by appropriate and sufficient means." Scheffler, Conditions of Knowledge, p. 10. "We can see the whole course of a child's education as involving the progressive incorporation, and increasingly autonomous use, of these standards . . . The implicit appeal to standards of adequacy in knowledge attributions means that, in an important sense, these attributions have a normative function as well as a descriptive one: They attribute belief in "Q" and affirm the truth of "Q," but they also appraise the believer's grounds for belief, in the light of assumed standards." Ibid., p. 58.

24. The claim that the student's efforts to win the teacher's understanding will result in the student's coming to speak more intelligibly is not as much at variance with ordinary experience as one might at first think. Although the roles are reversed, it is a claim which finds support in the anecdote of the professor who reported that he looked up, having said what he had to say, and saw a sea of blank faces. He paraphrased what he had said and still looked out on a sea of blank faces, and so he paraphrased again. This time, he reported, wrily, he understood what he had said. Such experiences are not unusual. A further reason why the student should do the talking and in particular should talk about his beliefs has to do with what might be thought of a motivation. John Passmore skirts my meaning when he writes that "A child will be encouraged to be critical only if he finds that both he and his teacher can be at any time called upon to defend what

they say--to produce, in relation to it, the relevant kind of ground. This is very different from being called upon, on a set occasion, to produce a case in favour of one side in a debate." "On Teaching to be Critical," The Concept of Education, ed. R. S. Peters (New York: Humanities Press, 1967), p. 198. I would go much further than that, saying that the student cannot reasonably be expected to defend what he has read or heard if he doesn't believe it, and then I would say that, therefore, if the student is not encouraged to defend his own beliefs, it is unlikely that he will learn to be critical in the desirable sense. I suspect that one reason why teachers often fail to get students talking in class is that they are asking students to talk on matters about which they have no opinions whatsoever, i. e., about what the teacher has asked them to read.

25. John Dewey, How We Think (Boston: D. C. Heath, 1933), p. 107.

26. Ryle, Concept of Mind, p. 30.

27. Ibid., p. 27. See Lev Vygotsky, Thought and Language, trans. and ed. Eugenia Hanfmann and Gertrude Vakar (Cambridge, Ma.: The M.I.T. Press, 1962). I hope that what I have said will not be seen to be contradictory to this: "The force of the evidence condition may be illustrated historically by reference to St. Augustine's theory of teaching. Augustine argues against the idea that the teacher transmits knowledge through words. Words are signs referring to reality, he says, and knowledge is not a matter simply of having the words. It requires also a personal confrontation with the reality to which the words refer. Without such confrontation, the student may, at best, acquire belief, but not knowledge." Scheffler, Conditions of Knowledge, p. 55.

28. Ryle, Concept of Mind, p. 41. A discussion of the possibility of reducing "knowing that" to "knowing how" with reference to Hartland-Swann and Jane Roland would be useful here, but I must forego it for now. A propos of the point I am making: "for it is only in the practice of an activity that we can acquire the knowledge of how to practise it," and the whole of the essay from which that quotation is taken, Michael Oakeshott's "Rational Conduct," Rationalism in Politics (London: Methuen, 1962), p. 101.

29. Dewey, Logic, The Theory of Inquiry, p. 4.

CHAPTER VI

HONEST QUESTIONING AND COGNITIVE DEVELOPMENT

I would like now to show some relationships between honest questioning and Piagetian theory. I shall make no effort to summarize Piaget's work. Taken as a whole his theory is complicated, and, according to many critics, it is seriously flawed. I shall mention some of the flaws in my discussion as I try to fit honest questioning into the Piagetian framework, but I leave open the question of the stability of that framework as a whole. Since Piagetian theory is not accepted by all, it might be asked why one would choose it as a point of reference. An answer to that question is that it is sensible to try to show one's own relationship to a major figure, in order to locate oneself; one chooses as points of reference major figures, such as Aristotle or Kant, not their critics. Critics have challenged Piaget's position at its foundations: on the source and nature of "structures,"

an on the relationship between language and thought, yet it seems likely that much of what Piaget has proposed--what he has proposed, for example, on the role of activity and cognitive conflict in development--will endure.

Points of Contact with Piagetian Theory

There are, briefly, four points I shall make. First, I will try to say how it is that I can claim any sort of relationship to a theory of cognitive development. My effort may be seen as quixotic given that the effects of honest questioning ("knowing that" and "knowing how") do not seem to be effects which Piaget would identify as cognitive development. Second, I will show that, while I agree with Piaget that words cannot substitute for action in cognitive development, action on words can be genuine action. The significance of this point is that the student engaged in answering honest questions is active, not passive. The third point I will argue is that honest questioning is a form of social interaction representative of the kind of social interaction which is, according to Piaget, necessary for cognitive development. The fourth point I will make is related to the third: it is that honest questioning leads to cognitive conflict, which is

necessary if development is to take place. If I can make these points, I will have shown that honest questioning is justifiable from a Piagetian point of view on the grounds that it is likely to foster cognitive development, and I may also have shown how the effects of honest questioning might be explained in terms of Piagetian theory. Whether I have been able to do the latter depends on whether one accepts Piaget's account, on whether one accepts knowing how as dependent on or as implying cognitive development, or on whether one accepts that two different phenomena, i. e. cognitive development and knowing how can be explained in the same way.

I will not dwell long on the first point. I cannot begin to establish that what Piaget means by cognitive development is the same as what I mean by knowing how. By cognitive development, Piaget is referring to the development of logico-mathematical thinking, best exemplified by scientific thinking. Piaget distinguishes development from physical knowledge of the world, which includes, for example, knowledge of the shapes, colors, weights of objects. (1) By knowing how, I am speaking in particular of knowing how to justify, and that means, knowing how to reason, how to place propositions within the framework of an argument.

Knowing how to justify is a skill dependent on, at least, if not identical with, the ability to use language. It is a skill which clearly does include the ability to think hypothetically, and this ability to think hypothetically, to reason on symbols, is the mark of the person who has reached the formal operational stage of thinking. This, according to Piaget, is the highest stage of thinking. Perhaps it would be safe to say that the way one goes about trying to justify a belief is an indicator of one's level of cognitive development. It may be, but I am trying to show that cognitive development will be promoted by honest questioning, which is to say that it can be promoted by the use of words.

Piaget speaks of logico-mathematical knowledge as discovered, or constructed, and, as is well known, he claims that these discoveries precede language. This is one of the basic issues on which critics challenge him. Piaget is claiming that logico-mathematical knowledge is essentially non-linguistic, while others claim the contrary. Brian Rotman argues that Piaget misunderstands "the nature and status of proof, seeing it as a relatively unimportant part of mathematical thought subsidiary to the invention or discovery of structure." (2) Rotman, a mathematician himself, says that there

are parts of mathematics, the calculus being just one example, "where the method of argument and not the creation of new structure is central." (3) Piaget has separated, mistakenly, the context of discovery from the context of justification. "Contrary to the assumptions of Piaget's structuralist outlook, an important part of mathematical creativity consists of using mathematics as a language; a language for talking about parts of the mathematical world itself." (4) Despite the efforts of Rotman and others, the debate over the relationship between language and thought will continue, and hence the question whether cognitive development is the same as "knowing how" cannot yet be resolved. I shall assume the worst case, that the two are not the same and argue my case from that point of view.

As I have already acknowledged, it might seem that if cognitive development is not the same as "knowing that" and "knowing how," then it is absurd for me to try to lean on Piaget for support. The situation appears to be analogous to that of a farmer arguing that particular methods of cultivation will produce firm apples on the grounds that someone else claims they will produce juicy peaches. But the situations are not analogous. I am claiming that honest questioning effectively initiates individuals into public modes of knowing, and I have

previously shown why it may be said to do so. It seems highly unlikely that one can be so initiated unless one has achieved a high level of cognitive development, but I do not need to say any more about the matter. All I claim in this chapter is that given the conditions of cognitive development as Piaget describes them, honest questioning, which does further the growth of knowledge in the student, also seems likely to further cognitive development.

My second point could also be dealt with briefly, unless one wishes, as I do, to discuss the concept of activity. The brief way to deal with the point is as follows. Honest questioning is a way of using words, a way which, I claim, is likely to promote cognitive development. But Piaget emphasizes the necessity of the child's own activity for development. It may again, therefore, seem odd to look to Piaget to find support for honest questioning. However, my emphasis on the linguistic interaction is not intended to imply that action on the part of the student is not necessary for development. The classroom environment, especially of the young child, should be rich in objects of interest that invite activity, and the students' activities ought to be the focus of attention in the classroom. It is these activities, past, present, or

future, which are to be talked about, which must be talked about for the sake of maximum cognitive development. Piaget emphasizes the activity of the student, and my main concern is that form of activity known as social interactivity, in particular, interactivity between teacher and student, which necessarily manifests itself as an oral transaction. My emphasis reflects a belief that the kind of talk which takes place between the teacher and the student will to some extent determine the nature of the experience that results from that activity, or will, in other words, determine to some extent what is learned. Whether Piaget would agree with this formulation is, fortunately, immaterial. It is enough for me to say that I accept Piaget's position that activity on the part of the student is necessary for development.

I wish to note, however, that it is not entirely clear what Piaget means by "activity." Irving Sigel and his co-authors note that the "theoretical and empirical characterization (of the concept) has been much too vague." (5) Furth's effort to clarify--action "is generally synonymous with behavior"--is not helpful. (6) The infant's grasping scheme is the repeatable, organized aspect of his behavior and it is that aspect which constitutes the action. However, it should not be

understood from this that an action is necessarily overt. An action may be wholly internalized and appear to lack any physical component but it is an action nonetheless. (7) As Barbel Inhelder and her colleagues put it, "being cognitively active does not mean that the child merely manipulates a given type of material; he can be mentally active without physical manipulation, just as he can be mentally passive while actually manipulating objects." (8) That activity is not limited to physical activity is a significant qualification to the concept, and one of which I shall make use. There are other considerations to be kept in mind, but they may be understood best in the light of Piaget's position on the role of language in cognitive development.

As is well-known, Piaget's position is that those general structures through which we organize behavior (those logico-mathematical forms of thought such as causality, order, number, class, hierarchy) antedate language, at least in their primitive form. And even after language is acquired, as new structures develop, they result at all levels of development from the child's actions on the world. What is not so well-known is that Piaget does grant that language makes a contribution to development. Barbel Inhelder and Annette Karmiloff-Smith have tried to set Piaget's

record straight. They refer to his first book, The Language and Thought of the Child, wherein Piaget wrote that "language first accompanies action as if it were a very part of it, whereas with the gradual process of decentration, language can replace effective action." (9) Since Inhelder was closely associated for many years with Piaget, it may be safe to conclude on the basis of this article that he had not entirely renounced what he had written in this early work. Even if it is not safe, one can draw on Piaget's own later material for support of the point that he does not wholly reject a role for language in cognitive development.

Inhelder and Karmiloff-Smith, in the same article from which the above citation was made, say that the child must go beyond the here and now, "which is only possible through representation--in other words, through development of the semiotic function." (10) For the sake of development it is vital that a person be able to represent reality to himself, through images, objects, personal symbols, or language. If he could not, he would be confined to the sensorimotor level of intelligence. And so Piaget concedes that

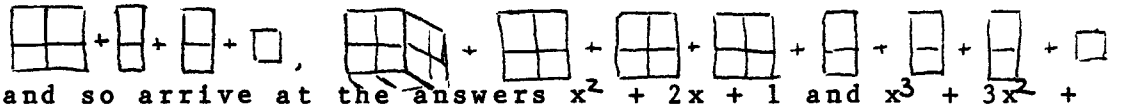
> (it) is quite possible that language is a necessary condition for the achievement of logical structures. But this does not by itself make it a sufficient condition of logical formation, even less as far as the more elementary logico-mathematical

structures are concerned. (11)

piaget has little to say about the function of language in development prior to the stage of formal operations, but, once they are achieved, language

> profoundly transform(s) thought by helping it to attain its form of equilibrium by means of a more advanced schematization and a more mobile abstraction . . . language indefinitely extends the power of these operations and confers on them a mobility and a universality which they would not have otherwise. (12)

An example may illustrate the ability of language to confer power on the operations of thought. (13) It is possible for a concrete operational child, using Dienes blocks, to solve the equations $(x+1)^2 =$ _____ or $(x+1)^3 =$ _____ , substituting any number from 2 through 10. He can use the blocks to build models:



and so arrive at the answers $x^2 + 2x + 1$ and $x^3 + 3x^2 + 3x + 1$. But unless the child can begin to operate on the symbols, discerning the pattern by formal abstraction, he cannot solve equations of the general form $(x+1)^n$ where x is greater than ten and n is greater than three.

Piaget's point--that regardless of whether language develops prior to logic or logic prior to language, language appears to be, at least, a tool without which our logical capacities cannot develop

fully--may be more fully appreciated by way of an analogy. A person may possess good balance walking on the ground. But if he learns to walk a tightrope, he may develop his skills of balancing to a much greater degree. Furthermore, unless a person's innate capacity to balance is severely limited, that capacity cannot be developed to the utmost without a tightrope or its equivalent. In the absence of tightropes or other tools more challenging than the ground, one could not notice great differences in balancing abilities: a sidewalk smoothes out variations in more than one way. The tightrope, in contrast, by permitting the development of capacity, amplifies differences in capacity. So, too, the child's elementary operations, his rudimentary logical structures, are developed in his encounters with the environment. But those logical structures may be developed to their utmost only if he is given good tools. (14) And yet, the matter is still stated in a somewhat misleading fashion. For we do give children a multitude of tools, but usually not to develop skills unrelated to their use. Normally, we do not give the child a bicycle in order that his balance may be improved. We give him a bike so that he may learn to ride a bike, and we give him a bike because it is the best tool we have for learning to ride a bike. Piaget

is willing to concede that a vital tool for developing logico-mathematical structures to their highest level is language. Most of us would perhaps value the capacity to use language for the sake of its own ends. But, in any case, Piaget, emphasizing the necessity of the child's own action, would have to concede that the best tool for developing the capacity to reason with language is language, unless he wants to say that learning to reason with language is comparable to learning the physical characteristics of the world, that is to say, comparable to learning arbitrary relationships.

Language is a convenient system of notation or representation, and some such system of notation is necessary for the fullest development of formal operational thought. (15) The person capable of formal operational thought can operate on representations. He can, for example, operate on linguistic signs. However, it is not the signs themselves, but the student's actions on them that will nourish his thinking, a point deserving of amplification.

Piaget insists that the verbal sign must not be mistaken for the structure, and he has good reason to insist. Adults are only too ready to make the assumption that their provision of a definition of a word suffices for the child's understanding. They are

ready to make the assumption that words must precede the child's efforts to learn some new skill, such as bicycle riding. But if the child is to learn to ride a bike, then he must get on the bike and try to ride it. (16) Similarly, if the child is to acquire a concept, of which the word is but the representative sign, he must act. (17) Obviously, the child cannot acquire his action schemes except by his own actions. His knowing how to ride a bike is quite independent of any knowledge he may have of a verbal description of riding a bike. This point is obvious, even though it is often ignored by parents and by teachers. But there is a less obvious point to be made explicit. If the child must himself try to ride a bike to learn to ride a bike, so, if the child is to learn how to represent his experiences in language, then he must try to represent his experiences in language. The adult cannot substitute his words for the child's experience, and this implies that he cannot substitute his representation of experience for the child's efforts to represent his experience. We act on objects and we act on signs. We cannot substitute our words for another's actions on either objects or signs.

I have now presented my second point. I anticipated that the objection could be made that, since I am proposing a way of talking with students and making

claims about their resultant use of language, it is absurd for me to begin to compare my position to Piaget's. I am talking about words and Piaget is talking about actions. To summarize, my first way of dealing with the objection is to take the term "activity" as signifying physical and mental activity on objects, and to say that I do not deny the necessity of such activity for development. My second way of dealing with the objection is to show the vagueness of the concept of activity in Piaget's work. Once one admits that by activity Piaget does not mean simply physical activity, it is easy enough to extend the concept to cover the activity of using language to represent experience, and to say, therefore, that, since using language qualifies as an activity, using language may make some contribution to cognitive development in Piaget's sense. (18) But it is not necessary to work this hard to establish a claim that language contributes to cognitive development. Piaget himself concedes the point. He acknowledges the necessity of language at least for the development of formal operational thinking capacities.

The least that can be said for honest questioning so far is this: the student must learn to represent his own experience if he is to be able to achieve the

level of formal operational thought, which is characterized by the ability to operate on signs. Given the assumption that the student can only acquire the concept of representing his own experience in signs (in a Piagetian sense of "acquire the concept of . . . ") through his own efforts to do so, then, if he is to achieve the level of formal operational thought, he must make the effort to represent his own experience in signs. Honest questioning may be described exactly as a means of stimulating the student to perform the action of representing his own experience.

The third point I wish to make is that honest questioning is the kind of social interaction which Piaget says is necessary for cognitive development. Piaget himself neither defines "social interaction," which one might have expected him to do given that the word "action" appears in the phrase, nor, alternatively, does he explicitly distinguish between forms of social interaction which do and those which do not contribute to cognitive development. Although Piaget does not say what he means by social interaction, he does describe some characteristics of social interaction which promote development, and I shall list these after I present a summary of his argument for the hypothesis that social interaction is a necessary condition of cognitive

development.

Social interaction is one of the four factors which contribute to development. (The others are: maturation, activity, and equilibrium.) (19) The specific contribution of social interaction is that it results in decentering and as a result of decentering, thought becomes more objective. Decentering is the inverse of egocentrism, which, in turn, is described as:

> nothing more than lack of co-ordination, a failure to 'group' relations with other individuals as well as with other objects. There is nothing here that is not perfectly natural; the primacy of one's own point of view, . . . is merely the expression of an original failure to differentiate, of an assimilation that distorts because it is determined by the only point of view that is possible at first. (20)

Egocentrism ebbs and flows as development progresses, reasserting itself as the individual enters each new period of development, subsiding as the child masters each new stage, but never wholly disappearing. (21) It is unavoidable, yet it is undesirable, described as, in the quotation above, an "assimilation that distorts," or as an excess of accommodation: a child may, for example, imitate without recognizing that he is doing so. Egocentrism always results in a disequilibrium between assimilation and accommodation, that is to say, a failure of adaptation. Since thought which is not fully adapted is not fully operational,

egocentric thinking is not fully operational. The individual, thinking egocentrically, is unable to coordinate his own actions. In a social context, egocentric thinking is thinking which is not fully cooperational, that is to say, the individual, thinking egocentrically in a social context, cannot coordinate his point of view with that of others. Fully decentered thought would be formal operational thought and fully operational thought would be equilibrated thought. A state of equilibrium between assimilation and accommodation is the goal, the end point without which such changes as occurred in the individual as a result of maturation, physical and social experience could not be considered development. "The most profound tendency of all human activity is progress toward equilibrium." (22)

Movement towards this given goal of equilibrium, and thus to objective thought, depends on the ability to decenter, and if decentering is to occur, then social interaction is necessary. (23) Neither maturation nor activity (on objects), each necessary, is sufficient to produce it. The actions of the child on objects may not promote decentering since children can and do "readily distort physical experience to fit pre-existent schema." (24) It is instead social interaction which prompts decentering, which "changes the very structure of the

individual." (25) "Without interchange of thought and co-operation with others the individual would never come to group his operations into a coherent whole: in this sense, therefore, operational grouping presupposes social life." (26) Piaget refers to operational thought as thought in its logical aspect and to cooperational thought as thought in its ethical aspect. Both of these depend on the decentering which results from social interaction. It is social interaction which leads to the "control and exercise of the critical spirit, which alone can lead the individual to objectivity and to a need for conclusive evidence." (27)

What is particularly interesting from the point of view of my effort to defend honest questioning is Piaget's suggestion that the greater power of social experience compared to physical experience derives from the fact that it is mediated. Employing the three media--"language (signs), the content of interaction (intellectual values) and rules imposed on thought (collective logical or pre-logical norms)" (28)--social interaction compels recognition of facts, provides a ready-made system of signs which modify his thought; presents the individual with new intellectual values (the content of thought), and imposes on him an infinite series of obligations. The "infinite series of

obligations" are the obligations to abide by the rules of logic if cooperation is to be achieved. "Logic requires common rules or norms; it is the morality of thinking imposed and sanctioned by others." (29)

The child who wishes to communicate with others cannot assimilate reality wholly to his own fantasies. If social interaction is to be sustained, then the interactors are constrained by conventions of the media which must be learned and observed. It is inevitable that social interaction will produce conflict, and conflict is itself a necessary condition of development. "All development is composed of momentary conflicts and incompatibilities which must be overcome to reach a higher level of equilibrium." (30) The conflict that results from the effort to communicate can in turn lead to a restructuring of thinking, although this is not always the result. Many times conflict leads to no decentering for any of the persons involved. Thus, the assertion must be qualified to read that social interaction can lead to decentering if the interpersonal conflicts so generated lead to awareness of intrapersonal conflicts. It is not disagreement with others but consciousness of the shortcomings of our own thinking which moves us to develop intellectually. (31)

Theodore Mischel has tried to show that little

more needs to be said to explain why, when an individual experiences such intrapersonal conflict, he is likely to try to resolve it and is likely to do so in the direction of greater equilibrium. The explanation for the transitions to be found in development "coincides with their justification--it consists in exhibiting the 'failures and insufficiencies' of the earlier way of thinking, the greater coherence, 'reversibility,' etc., which thinking achieves at the next stage. . . " (32) Mischel summarizes his interpretation of Piaget on motivation with the observation that to say that formal operational thought is more logical than concrete operational thought is both to justify movement in the direction of such thought and to explain it.

Points of Contact: Piaget and Classroom Practice

I now want to tease out from the masses of his material what Piaget has said about the forms of interaction which do promote cognitive conflict, especially within a school setting, and to show that honest questioning has such a form. Piaget has not made a systematic effort to study the effects of various forms of interaction on cognitive development and his comments are scattered throughout his work. Nevertheless, what he has written is consistent with his

position on the function of language for development and on the nature and function of activity, or, at least, it is consistent with my interpretation of his position on these topics.

In Piaget's opinion, peer interaction is more effective at promoting the appropriate sort of conflict than interaction with adults is. The reason for this greater effectiveness is the reciprocity which characterizes interaction between peers. Productive of conflict as they are, exchanges with peers can be frustrating, but they effect movement to "multi-perspective reversibility" and hence to more logical thought. (33) I interpret Piaget to be making a claim about what is but not about what must be. It cannot be the case that peer interaction is necessarily more effective than interaction with adults. It would simply make no sense to say that an individual's intelligence necessarily develops better as a consequence of contact with persons of the same level of development. Nevertheless, in view of the fact that, as has already been noted in this chapter, adults frequently use words in ways which are inappropriate, in particular, use words to substitute for action, it must be admitted that Piaget has a point. It is obvious that the quality of reciprocity is lacking in many adult/child social

interactions, including those between teacher and student. But although many adults are inept, it does not follow that they must remain inept when it comes to stimulating cognitive conflict. Piaget himself has provided rough guidelines, noting some features of a reciprocal relationship between a teacher and student.

Piaget has provided a theoretical framework describing cognitive development and the conditions of its occurrence. It is possible to justify honest questioning by showing that it is a form of social interaction characterized by reciprocity and stimulating cognitive conflict. That is, it is possible to justify honest questioning solely by reference to the theoretical framework. But another way to test the claim that honest questioning finds support from Piagetian theory is to see how closely it fits with whatever relatively specific suggestions for pedagogy Piaget himself made in consequence of that theory. There are not a great many of these suggestions, for Piaget did not write extensively on education. Many of his suggestions took the form of criticisms of current practices, and I shall note these first.

Generally speaking, Piaget's targets are the methods which place the student in a passive role. The lecture is one such method. So, too, are some of the

methods designed to compensate for the shortcomings of the lecture. (34) The demonstration by the teacher, the assigned experiment performed by the student, audio-visual aids, and programmed materials, all fail to require genuine activity on the part of the student. Teachers make demonstration experiments as if "it were possible to sit in rows on a wharf and learn to swim merely by watching grown-up swimmers in the water." (35)

If the sole object of instruction was that the student memorize the facts of a discipline, then, of the methods mentioned in the preceding paragraph, programmed instruction is the most defensible: "if the ideal of that method is merely to elicit correct repetition of what has been correctly transmitted, then it goes without saying that a machine can fulfill these conditions correctly." (36) But memorization of facts is not an appropriate end for education (though some memorization may be justifiable as a means). The general aim of education is, properly, the formation of intelligence, of individuals "who are capable of production and creativity and not simply repetition." (37) Schools cannot be places which concern themselves merely with the transmission of information. They must concern themselves with education, for without education "the individual would not know how to acquire his most basic

mental structures." (38) If the individual is to be able to adapt to his surroundings then what he must learn and must, most likely, learn in school are the standards of logic and of ethics. (39)

The more modern methods, such as demonstration, laboratory work, programmed learning machines, fail as the old methods did in so far as they "foster associations without giving rise to genuine activities." (40) New methods or old, the approach is essentially verbal, and this is true of audio-visual aids, for "there exists a verbalism of the image just as there is a verbalism of the word." (41) If intelligence is to be developed, then active methods must be employed so that the student may rediscover for himself the fundamental truths and methodology of the field. "It is not by knowing the Pythagorean theorem that free exercise of personal reasoning power is assured; it is in having rediscovered its existence and its usage." (42) And new methods or old, the approaches fail to promote social interactivity characterized by reciprocity. If intelligence is to develop, students must be permitted to work together. "No real intellectual activity could be carried on in the form of experimental actions and spontaneous investigations without free collaboration among the students themselves . . . " (43) Piaget distinguishes

this "free collaboration" from those "collective exercises . . . in reality no more than a mere juxtaposition of individual work carried out in the same place." (44) However, in addition, if reasoning activity is to be established in the child, it is necessary that the "surrounding social structure entail . . . not merely cooperation among the children but also cooperation with adults." (45)

In The Psychology of Intelligence Piaget writes that "in order to teach others to reason logically it is indispensable that there should be established between them and oneself those simultaneous relationships of differentiation and reciprocity which characterize the coordination of viewpoints." (46) The burden falls on the teacher if anything resembling such a relationship is to be created. Piaget gives but a few hints to help her do this, hints which serve to describe honest questioning, partially, if not completely. If the teacher is to establish a relationship characterized by reciprocal interaction, then she must (and Piaget quotes Rousseau approvingly on this point) begin by studying her pupils whom she surely does not know. (47) That is to say that she must herself be a decentered listener. She must not assimilate what the student says to her own structures. She must learn to speak "to the child in

his own language before imposing on him another ready-made and over-abstract one" (48). providing "counter-examples that compel reflection and reconsideration of over-hasty solutions. What is desired is that the teacher cease being a lecturer, satisfied with transmitting ready-made solutions; his role should rather be that of a mentor stimulating initiative and research." (49)

There is nothing radically new in Piaget's criticisms of or proposals for reform of teaching practices. Educators from Comenius on have urged that somehow sheer verbalism be eliminated and that instruction be made more meaningful to the child. Permitting the child to be, in some sense, more active, has been suggested frequently. Piaget's recommendations are familiar to students of education. His way of justifying those recommendations is somewhat different, but it is not wholly unique. For example, Piaget's emphasis on the necessity of cognitive conflict for development finds precedent in the Socratic dialogues and in the work of John Dewey, and in one form or another the concept of cognitive conflict plays an important role in the theories of many contemporary writers, amongst them John McVicker Hunt and Jerome Bruner.

I set out to deal with four separate points, and now, having done so, I find that I can collapse my findings into two conclusions. First, I can say that honest questioning is a form of activity requiring the student to represent his own experience in symbols. Since representing experience in symbols is necessary if the student is to achieve the level of formal operational thought, honest questioning is justified on the grounds that it is a way to satisfy a condition of formal operational thought. Second, I do not try to say that the end result of honest questioning, learning how to justify, is the same as cognitive development in Piaget's sense. But I can say that this form of social interaction does lead to cognitive conflict, and that, therefore, honest questioning is justified since cognitive conflict fosters cognitive development.

1. Piaget does not dwell on the idea of concept formation in the usual sense of concept formation. His concern is for logical concepts, such as the concept of inclusion, subtraction, inside, and so on. In The Moral Judgment of the Child, an early book, Piaget does deal with the development of concepts such as justice and fairness. But for the most part he shows little interest in the development of such concepts as conflict, explain, bicycle, justice, person, mother. And in a strict sense of develop, Piaget might not think of these concepts as developing. (But see note 17 below.) These concepts are surely not identical with the physical characteristics their referents possess, if they possess any. Nor can they be considered identical with any logical relationships which may be used as partial illustration of their meaning. In his paper "Development and Learning," Piaget writes that "Knowledge is not a copy of reality. To know an object, to know an event, is not simply to look at it and make a mental copy or image of it. To know an object is to act on it." Journal of Research in Science Teaching 2 (1964):176. Although Piaget does not speak of the purpose of knowledge as control as Dewey did, the two describe knowledge in almost identical terms. See Chapter V, footnote 12.

2. Brian Rotman, Jean Piaget: Psychologist of the Real (Ithaca, New York: Cornell University Press, 1977), p. 131.

3. Ibid., p. 156.

4. Ibid., p. 156.

5. Irving E. Sigel, David M. Brodzinsky and Roberta M. Golinkoff, eds., New Directions in Piagetian Theory and Practice (Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1981), p. 23.

6. Hans Furth, Piaget and Knowledge, 2nd ed. (Chicago: The University of Chicago Press, 1981), p. 291.

7. Hans Furth, Piaget for Teachers (Englewood Cliffs, New Jersey: Prentice-Hall, 1970), p. 38.

8. Barbel Inhelder, Hermine Sinclair, and Magali Bovet, Learning and the Development of Cognition, trans. Susan Wedgwood (Cambridge, Ma.: Harvard University

press, 1974), p. 25.

9. Barbel Inhelder and Annette Karmiloff-Smith, "Thought and Language," in Topics in Cognitive Development, vol. 2, Language and Operational Thought, ed. Barbara Z. Presseisen, David Goldstein, and Marilyn H. Appel (New York: Plenum Press, 1978), p. 4.

10. Ibid., p. 8.

11. Jean Piaget "Language and Intellectual Operations," trans. Hans Furth. In Hans Furth, Piaget and Knowledge, 2nd ed. (Chicago, Il.: The University of Chicago Press, 1981), p. 122. At the end of this article, Hans Furth includes some notes and a quotation from Piaget's associate, Hermine Sinclair, in which she apparently denies even this much to language: "Language can direct attention to pertinent factors of a problem, just as it can control perceptual activities . . . language can prepare an operation but is neither sufficient nor necessary to the formation of concrete operations." P. 130.

12. Jean Piaget, Six Psychological Studies, trans. Anita Tenzer (New York: Vintage Books, A Division of Random House, 1968), pp. 91-3.

13. Hans Furth defines operation as, "In the strict sense, the characteristic interiorized generalizable action of mature intelligence; . . . In the wide sense, operational is here taken to include preoperational but exclude sensory-motor actions." Piaget and Knowledge, p. 295.

14. Jerome Bruner uses Weston La Barre's notion of evolution by prosthesis to describe the implement systems humans have developed: "(1) amplifiers of human motor capacities . . . (2) amplifiers of sensory capacities . . . (3) amplifiers of human ratiocinative capacities of infinite variety, ranging from language to myth and theory and explanation." Jerome S. Bruner, Rose R. Olver, and Patricia M. Greenfield, et al., Studies in Cognitive Growth (New York: John Wiley, 1967), p. 56. Bruner does not make the point I would like to think further about, and that is that the amplifiers have the effect of enlarging the difference between those with least capacity and those with most capacity. The person with minimum capacity to use language may nonetheless appear to be more intelligent

with language use than without it. The person of great capacity to use the language will appear more intelligent many times over: the use of language amplifies the differences between the less and the more fortunate.

15. Harry Beilin is another, like Rotman, who challenges Piaget's version of the limited usefulness of language by describing mathematics. "The power of mathematics, in creating new knowledge, for example, comes not only from its theories or ideas as Sinclair implies, but also from its created languages and formalisms. Ideas concerning number, for example, could make no progress until there was a notational system for representing numbers, first in the natural language and later in more abstract notations. . . . Inasmuch as languages (natural and artificial) are constructed by the same processes of mind as nonlinguistic constructions, it is purely arbitrary to hold that these constructions are incapable of yielding new knowledge when other constructions are able to." Irving E. Sigel, et al., eds., New Directions in Piagetian Theory and Practice, pp. 122-3.

16. This is a restatement of the discussion in Chapter VI, to the effect that one does not learn how to by learning that.

17. For Piaget, "having a concept of" is having some internalized, repeatable action scheme. If the child can grasp, then he has the concept of grasping. At least this is what I conclude after reading Flavell: "Although the terms schema and concept are not completely interchangeable, Piaget has recognized a certain similarity between them: 'The schema, as it appeared to us, constitutes a sort of sensorimotor concept, or more broadly, the motor equivalent of a system of relations and classes.'" John H. Flavell, The Developmental Psychology of Jean Piaget (New York: D. Van Nostrand, 1963), p. 54. I deduce from these statements that if the child looks, he has the concept of looking, but that conclusion is, I believe, at variance with what is ordinarily meant by "having the concept of looking." But Hans Furth's interpretation of Piaget on concept appears to be different from Flavell's. I admit I cannot be certain of this, since I am not absolutely clear what Furth is saying. He writes that a concept is, "In a logical sense, a mental construct of the generalizable aspect of a known thing; it has an intension (or comprehension) answering the question,

"What is its essence?" and an extension answering the question as to which things are exemplars of the concept. In a psychological sense, a concept is identical with an individual's internal structure or scheme and corresponds to the level of that structure. . . . In its verbal manifestations, concept is a verbalized expression of a logical concept together with its verbalized comprehension; however, verbalization is extrinsic to the logical concept as such." Hans Furth, Piaget and Knowledge, p. 292. The conversation about the relationship, if any, between "acquiring a concept" and "having a concept" has been going on for some years. The participants include Piaget, Stephen Toulmin, and D. W. Hamlyn. D. W. Hamlyn's discussion of the question in his paper "Epistemology and Conceptual Development," in Cognitive Development and Epistemology, ed. Theodore Mischel (New York: Academic Press, 1971), pp. 3-24, is a good place to acquaint oneself with the issues.

18. Harry Beilin again: "From what Piaget has written it appears that action is to be interpreted in the very broadest sense. It ranges from large muscle movement to movement of the eyes, to the 'action' of the mind in thought . . . Linguistic activity has as much claim then to activity as nonlinguistic activity. I suggest then that linguistic forms and linguistic activity are fully capable of inducing operational structures either by algorithmic or heuristic means . . . " Irving Sigel, et al., eds., New Directions in Piagetian Theory and Practice, p. 124. Inhelder and Karmiloff- Smith provide an intriguing quotation from Piaget, without giving a source: "Nommer, c'est agir sur les objets." To name an object is to act on it. "Thought and Language," p. 8.

19. The editors of New Directions in Piagetian Theory and Practice write that "Whereas some have criticized Piaget for his failure to attend to the social context in which knowledge is constructed, others have rediscovered in Piaget an acknowledgment of the general influence of the social sphere. Unfortunately, . . . Piaget fails to discuss the details of the linkage between social and cognitive development." P. 23. Some writers use the term "experience" instead of "activity" and distinguish experience from social interaction on the basis that experience takes place in the physical world. In the paper "Development and Learning," Piaget defines equilibrium as "active compensation, self-regulation." Journal of Research in Science

Teaching 2 (1964):181.

20. Jean Piaget, The Psychology of Intelligence, trans. Malcolm Piercy and D. E. Berlyne (London: Routledge and Kegan Paul, 1950), p. 161.

21. John Flavell, The Developmental Psychology of Jean Piaget, p. 224; David Elkind, Children and Adolescents, Interpretive Essays on Jean Piaget (New York: Oxford University Press, 1970), p. 65.

22. Jean Piaget, Six Psychological Studies, p. 70.

23. It is not clear to me that thought which is decentered is necessarily objective, even though it may be the case that objective thought is decentered thought. But see D. W. Hamlyn for a discussion of this: "The criteria of objectivity are to be found in such notions as decentration and reversibility. Nevertheless the satisfaction of conditions such as that decentration must have taken place (and how does one decide that it has?) and that the structure of thought manifests reversibility can at best amount to the satisfaction of necessary conditions for the attainment of objectivity, not sufficient conditions." Experience and the Growth of Understanding (Routledge and Kegan Paul, 1978), p. 55.

24. John Flavell, The Developmental Psychology of Jean Piaget, p. 279.

25. Jean Piaget, The Psychology of Intelligence, p. 156.

26. Ibid., p. 163.

27. Jean Piaget, To Understand Is to Invent, trans. George-Anne Roberts (New York: Grossman Publishers, 1973), p. 108.

28. Jean Piaget, The Psychology of Intelligence, p. 156.

29. Ibid., p. 163.

30. Jean Piaget, "Development and Learning," Journal of Research in Science Teaching 2 (1964):185.

31. Piaget made a similar point in The Language

and Thought of the Child. There he contrasted egocentric thought with directed thought. Egocentric thought is characterized by its use of personal symbols and reliance on images and as a result is largely incommunicable. Directed thought, by contrast, is communicable and is ruled by logic. We are all capable of egocentric thinking and Piaget makes the point by referring to an experience many people have had. It is common to come upon a solution to some problem in privacy, not recognizing the inadequacies of the solution until the moment it is exposed to the public. "The mere fact, then, of telling one's thought, of telling it to others, or of keeping silence and telling it only to oneself must be of enormous importance to the fundamental structure and functioning of thought in general, and of child logic in particular." Language and Thought of the Child, trans. Marjorie Gabain (New York: The New American Library, A Meridian Book, 1974), p. 64. In their article referred to previously, "Thought and Language," Inhelder and Karmiloff-Smith write that "the child's attempt to convince others of his own arguments and the clash with their different views is a dialectic process that gradually induces internalized argumentation. Indeed, the conflict generated by becoming aware of contradictions is a very necessary step toward cognitive growth." P. 5.

A non-Piagetian explanation of the effectiveness of social interaction for development is provided by Sigel, who says that social experiences relevant to the development of representational thinking are distancing behaviors: "a class of events and interactions which 'demand' the child to separate [sic] himself/herself mentally (via representation) in space or time from the ongoing observable field. . . . (Distancing behaviors contribute to the creation of discrepancy, and the effort to resolve discrepancy) creates the potential for cognitive construct reorganization." Irving E. Sigel, et al., eds., New Directions in Piagetian Theory and Practice, p. 206. Jerome Bruner makes a similar point about the value of school for development, saying that it provides "the same opportunity (as writing) to use language out of context--even spoken language--for, to a very high degree, what one talks about are things not immediately present." The Relevance of Education (New York: W. W. Norton, 1973), p. 48.

32. Theodore Mischel, "Piaget: Cognitive Conflict and the Motivation of Thought," in Cognitive Development and Epistemology, ed. T. Mischel (New York: Academic

Press, 1971), p. 345.

33. John Flavell, The Developmental Psychology of Jean Piaget, p. 201.

34. Strictly speaking, the lecture is a monologue. If mutual understanding (mutual equilibration) is the goal of communication, then the lecture in most cases must be ruled out. Piaget is fond of employing a model from cybernetics to describe the thought process, whether inter- or intrapersonal. A well-calibrated thermostat corrects itself frequently so that the temperature in a room does not deviate greatly from the "ideal," that is, the chosen temperature. The furnace must be turned on and off at fairly frequent intervals. The trouble with a monologue is that the speaker and the listener can be led far indeed from the "ideal," that is, the goal of mutual understanding.

35. Jean Piaget, Science of Education and the Psychology of the Child, trans. D. Coltman (New York: Orion Press, 1970), p. 51.

36. Ibid., p. 77.

37. Jean Piaget, To Understand Is to Invent, p. 20.

38. Ibid., p. 52.

39. Ibid., p. 46.

40. Ibid., pp. 7-8. Piaget does exempt from this criticism the use of computers when the child is permitted to do the programming and is thus inventing for himself.

41. Jean Piaget, Science of Education and the Psychology of the Child, p. 74.

42. Jean Piaget, To Understand Is to Invent, p. 106. Active methods will not be successful if they ignore the interests of the child. When one recalls that Piaget carefully notes that the child may be in motion but not active and may be active though physically still, one may be willing to consider the possibility that being interested is at least a property of being active. Perhaps it is the case that if one is not interested, then one cannot be active. Methods

requiring physical or mental activity foster the development of intelligence insofar as they call forth the interests of the students. This is not to imply that the student ought to be permitted to do anything he wants to in school but is to recognize that, like any other person, a student "is an active being whose action, controlled by the law of interest or need, is incapable of working at full stretch if no appeal is made to the autonomous motive forces of that activity." Jean Piaget, Science of Education and the Psychology of the Child, p. 153.

43. Jean Piaget, To Understand Is to Invent, p. 108.

44. Jean Piaget, Science of Education and the Psychology of the Child, p. 174. John Passmore distinguishes between problems and exercises: "wherever possible and as soon as possible, substitute problems for exercises. By a problem I mean a situation where the student cannot at once decide what rule to apply or how it applies, by an exercise a situation in which this is at once obvious." "On Teaching to be Critical," in The Concept of Education, ed. R. S. Peters (New York: Humanities Press, 1967), p. 206. John Dewey makes a similar point many times over. He distinguishes between the genuine problem, of concern to the child, which the child knows he has solved, and the teacher imposed exercise. In the case of the teacher imposed exercise, very often the child does not know when he has "got the right answer." See The School and Society, rev. ed. (Chicago: University of Chicago Press, 1974) p. 146 and Democracy and Education, (New York: The Free Press, 1966), pp. 153-6.

45. Jean Piaget, Science of Education and the Psychology of the Child, p. 169.

46. Jean Piaget, The Psychology of Intelligence, p. 162.

47. Jean Piaget, Science of Education and the Psychology of the Child, p. 140.

48. Jean Piaget, To Understand Is to Invent, p. 19.

49. Ibid., pp. 15-16.

50. Piaget's preferred method of observation is the clinical interview, in which the experimenter asks subjects questions about apparatus of various sorts. The technique is, in essentials, like that of honest questioning. The interviewer does not try to correct the subject, but tries instead to get him to give reasons for his answers. Piaget and Inhelder themselves recognized that the clinical interview might be pressed into the service of teaching. The clinical interview, with or without materials, may have an effect on the child's thinking if it brings him up against "something which surprises him or causes him to recognize a contradiction." Margaret Donaldson, Children's Minds (New York: W. W. Norton, 1979), p. 156. When the child is at a transition point, it is possible to create situations and to ask questions which will generate conflict. It is not easy to learn to ask questions in this manner. Researchers at the Geneva Institute must be trained for a year in the use of questioning techniques before they are allowed to conduct experiments on their own. Howard Gardner, The Quest for Mind: Piaget, Levi-Strauss, and the Structuralist Movement (New York: Knopf, 1973), pp. 67-68.

CHAPTER VIII

TEACHING AS A HELPING RELATIONSHIP

Introduction

Education as a whole is supposed to affect the student's intellect or, if one prefers the alternative phrasing, his cognitive development. Some would say education ought also to affect the student's emotional development. Whether one agrees that it ought to or not, it is a fact that the quality of the interactions between student and teacher has its effect on the student's feelings. And this is important to recognize whether one is concerned with the consequence of those feelings for his emotional development or is primarily concerned with the consequence of those feelings for his cognitive development. While no one kind of teacher behavior will affect all students in exactly the same way, it is likely that particular methods will be distinguishable in terms of the emotional effects they are most likely to have. A teacher must consider the

likely emotional effects of her teaching style and must evaluate these in turn according to the likelihood that they will make possible the sort of learning she hopes for.

In this chapter, I will show why it is that the emotional effects of honest questioning are likely to be those that will permit learning to take place. Specifically, I shall show to what extent honest questioning may be said to be compatible with Carl Rogers' description of a helping relationship, and to what extent honest questioning is not compatible with this description. There are several reasons why a comparison with Carl Rogers' work is appropriate. In Chapter V I said that the teacher was obliged to treat the student as a potentially rational person, and that this implied treating him as an end in himself. A chief attraction of Carl Rogers' clinical practice is that it is grounded in the belief that one must "treat the client as an <u>end</u>, . . . not as a <u>means</u> for alteration to fit some preconceived pattern of what he takes to be normal or healthy, or "better." (1) Treating persons as ends in themselves is what Rogers means by ethical behavior. (And ethical behavior is, in Rogers' view, not a means to an end but an end in itself.) Another reason to place honest questioning in relationship to Rogers' work

is that this work is known to many educators, and even teachers who do not know it directly testify to Rogers' influence when they speak of the "facilitation of personal growth," of the importance of "not judging others" and of being "open to experience." (2) Rogers himself has declared that the conditions which he names as those necessary and sufficient to a therapeutic relationship are the conditions of any helping relationship and in particular are the conditions of any relationship which promotes what he calls "significant learning."

But the fact that Rogers' work is grounded in ethical principles and is well known does not guarantee the soundness of all his proposals. Some of these appear to be based on mistaken assumptions which may be tacitly shared by many of those who place their faith in Rogers. Precisely because Rogers speaks for so many, his assumptions need to be carefully examined. In what follows, I will sound very critical of Rogers, since I will be calling attention to a number of difficulties, especially to various instances of a lack of conceptual clarity. I hasten to say that my analytic approach does not indicate a failure to appreciate what Rogers has done.

Rogers himself did not care that he "lacked formal

clarity." (3) Lack it he certainly did, and it may be that he chose the wrong mode of expression for his ideas. His informal style, with its stabs at definition, its references to clinical experience and to empirical tests, is not successful as science writing. On the whole, Rogers' work reads more like inspirational literature and might read better if expressed in avowedly poetic language. (4)

Conditions of a Helping Relationship

First of all I shall try to show that in asking honest questions the questioner is likely to be satisfying a number of the conditions of a helping relationship. (5) Whenever Rogers states the set of conditions for a helping relationship, whether he is referring specifically to the therapist/client relationship or to the teacher/student relationship, the set of conditions is the same. The one exception to this is that the condition listed first below is sometimes omitted. By "helping relationship" Rogers means a relationship in which at least one person "has the intent of promoting the growth, development, maturity, improved functioning, improved coping with life of the other." (6)

These are the six conditions as given in Rogers' "systematic statement of his developing theory" (7):

1. (Sometimes omitted) That two persons are in contact.
2. That the first person, whom we shall term the client, is in a state of incongruence, being vulnerable, or anxious.
3. That the second person, whom we shall term the therapist, is congruent in the relationship.
4. That the therapist is experiencing unconditional positive regard toward the client.
5. That the therapist is experiencing an empathic understanding of the client's internal frame of reference.
6. That the client perceives . . . the unconditional positive regard of the therapist for him, and the empathic understanding of the therapist.

The emphasis throughout is Rogers'. As I discuss each condition, I will include, if Rogers has provided them, definitions of the emphasized constructs. (8)

Each of the conditions offers challenges to the understanding. Rogers' attempts to define his concepts are rarely successful: perhaps that is why the definitions have been changed from time to time. While the first condition is stated straightforwardly enough, its meaning is not clear because the meaning of "contact" is not clear. Rogers' definition is not helpful: if persons are in contact, then "each person must make a perceived or subceived difference in the experiential field of each other." (9) (A "subceived difference" is a difference of which one is not consciously aware.) This effort to be precise is not

satisfactory. How could one show that one person did not make a "subceived difference" in the experiential field of another and what is an "experiential field?" Perhaps, if one thinks of "contact" as some sort of acknowledgment of the other, then one can accept Rogers' interpretation that it is some sort of relationship, and the condition then amounts to a statement that if there is to be a helping relationship then there must be a relationship. Rogers does not say that the relationship must be a good one. And although teachers must sometimes fail to establish a good relationship with a student, although it may be possible that a given teacher will not be making even a subceived difference to a given student, I think it can be taken for granted that almost any teacher makes at least that--a subceived difference--to the student. At any rate, it would be very difficult to show that no relationship and, therefore, no contact of any sort exists between a teacher and her student. Thus, I think it can be safely said that no special effort needs to be made to show that the teacher who uses honest questions is in contact with her students.

The third condition on Rogers' list and the second that I shall discuss, is the condition of congruence. In a helping relationship the person known as the helper

"is congruent in that relationship." It is difficult, as will be seen, to figure out exactly what that means. The work from which the conditions were quoted was published in 1959. There Rogers writes that in order to be congruent "the therapist's symbolization of his own experience in the relationship must be accurate." (10) By "accurate symbolization" Rogers means that "the hypotheses implicit in the awareness will be borne out if tested by acting on them." (11) Rogers had put it differently, and more simply, in 1958 when he wrote that, when the therapist is congruent, he "is freely and accurately aware of what he is experiencing at this moment in the relationship . . . " (12) An example of incongruence fits the description: "if he is experiencing threat and discomfort in the relationship, and is aware only of an acceptance and understanding, then he is not congruent in the relationship." (13) But in a later formulation, Rogers writes that the concept of congruence "may be still further extended to cover a matching of experience, awareness, and communication," (14) and he draws a distinction between two kinds of incongruence. He refers to incongruence between experience and awareness as defensiveness, and the incongruence between awareness and communication as falseness or deceit. (15) Rogers' use of "defensive"

concurs with standard psychoanalytic usage insofar as he applies it to internal conflict. But he apparently wants to restrict it to such conflict, leaving out its extension by psychoanalysts to include "techniques for dealing with external situations which evoke objective anxiety." (16) In ordinary usage the term "defensive" does refer to ways of dealing with what is perceived to be a threat from the outside and is applied when it is believed that the threat is merely imagined or that it is being responded to inappropriately. The upshot of this discussion is that if I am being defensive in this ordinary sense but aware that I am being defensive, then, in Rogers' sense of the term, I am not being defensive, but am, on the contrary, being congruent. If, on the other hand, I am displaying defensiveness (or any other emotion), but deny that I am being defensive (or . . .), then I am defensive in Rogers' sense. That is to say, I am defended against perceiving my own defensiveness, which perception would presumably be threatening to me.

It is not too difficult to understand what Rogers means by congruence between experience and awareness. It is more difficult, for me at least, to understand what he means by congruence between awareness and communication, or rather to understand exactly what this

requirement entails. Rogers himself shows some uncertainty over what this absence of falseness either is or implies. As an example of falseness, Rogers cites the case of Mrs. Brown who was bored by the party but says to her hostess, "I enjoyed this evening so much." (17) A discrepancy exists between her awareness and her communication, and she is, therefore, according to Rogers, false. That is clear enough. But it is not clear whether, to be congruent, the helper must avoid saying what is false, or must say whatever it is she is feeling. "Should she also express or communicate to the client the accurate symbolization of her own experience?" Rogers asks. (18) He partially answers the question by saying that if the helper found herself persistently focused on her own feelings rather than those of the client, then she should express those feelings. If the therapist is focused on her own feelings and communicates what she is feeling, then she is being congruent in that relationship. In this case, however, the feelings on which she is focused or perhaps the direction of her focus interfere with her ability to satisfy another condition of the helping relationship, that of empathic understanding.

I shall take it that the helper is to be congruent in a relationship in the two senses of not being

defensive and not being false, acknowledging that I am not sure what "not being false" means or entails. If the honest questioner is to be shown to satisfy the condition of congruence, then she must be shown to be, as honest questioner, neither defensive nor false. It would be hard to prove, but it may be that the ability to be congruent in the sense of non-defensive is a condition of the ability to ask honest questions. At least it is true that the honest questioner must be capable of accepting the fact that she does not understand. That is to say, she must not be defensive about her own failure to understand: she must not deny it to her own awareness, and defend herself by, for example, blaming the student for not making sense. Not understanding is threatening to many people, and perhaps most especially to teachers, who are "supposed to know." If, in order to be congruent, Rogers will allow that one must be aware of feelings, "feelings" being generously interpreted to include experiences which are the source of those feelings (see discussion of empathic understanding below), then the question, "if she asks honest questions is she congruent?" can be rephrased: "if not aware of what she is experiencing (not congruent) could she ask honest questions?" Specifically, could she ask honest questions if she denied that she doesn't

understand?

Though it may be unlikely that one could question honestly yet be defensive, just as it may be unlikely that a woman who married for money could sustain the fiction that she loved her husband, it is not inconceivable that it could be done. But it is logically impossible for a person to ask honest questions and be false. What could it mean to say that in asking a question she was expressing what she did not feel? If she is asking, she is asserting nothing, and so she is not saying what she does not feel. If a teacher asks a student why he thinks chemistry is useless but does not want to listen to his answer, she may be said to be being false--her way of asking the question may imply an interest she does not feel--but in that case her question could not be classified as honest.

That honest questioning is indicative of congruence within a relationship may be shown another way. Rogers claims that the person whose communication is congruent with his awareness and experience cannot say things like, "He is stupid," or "He is intelligent." The reason why one cannot make these sorts of remarks is because one cannot have direct experience of another's stupidity or intelligence, and if one is to be congruent one must refer to one's own experience: "If the person

is thoroughly congruent then it is clear that all of his communication would necessarily be put in a context of personal perception." (19) As a consequence of this more inclusive interpretation of congruence-as-absence-of-falseness, Rogers rejects the use of the declarative sentence in which the other is the subject. So does the honest questioner, for whom the reference point is always the context of personal perception. She wants to know, in effect, if this is what the student meant, if she has understood, if he could help her understand. If the necessary and sufficient conditions of congruence are lack of defensiveness, lack of falseness (interpreted to mean communication expressed as personal perception), then it is fair to say that the honest questioner is congruent.

Unfortunately, lengthy though the discussion of it has been, the concept of congruence cannot yet be disposed of. If those conditions are necessary, they are not sufficient. The self-concept has to be taken into account. "The state where the self-concept embraces more or less all of your potentialities is called <u>congruence,</u> to signify that the self-concept has not shriveled to only part of what you are and can be." (20) From this it follows that, if I am angry and this anger, of which I am aware and which I communicate

verbally, conflicts with my self-concept, I am not congruent but incongruent, since my self-concept fails to include at least some of my potentialities, in this case, the potential for anger. I have no desire to show that the honest questioner is congruent in this sense and would not have chosen to add to the confusion if it were not that it is this interpretation of congruence on which the concept of incongruence, to be examined next, is founded.

When Rogers states that a condition of a helping relationship is that the client be "in a state of incongruence, being vulnerable, or anxious" he means that the client is to sense a "discrepancy between the self as perceived and the actual experience of the organism." (21) I shall take it that either the vulnerability or the anxiety result from the incongruence. It is preferable that the client be in a state of anxiety rather than mere vulnerability, for "anxiety is a state in which the incongruence between the concept of self and the total experience of the individual is approaching symbolization in awareness." (22) From this it sounds as if Rogers sees incongruence as a necessary condition of anxiety. If he does, he is wrong. Incongruence cannot be more than a sufficient cause, for anxiety has many sources. (23) I may be anxious if you

threaten my person, though your threat is not to my self-concept. That is a minor quibble. It is true that in a classroom situation, students often experience anxiety and that the source of this anxiety is a threat to their self-concept. The anxiety students experience in a classroom is triggered by the fear that they may not know what they are supposed to have learned, by the constant exposure to the risk of failure, by the constant exposure of their own ignorance. (24) The honest questioner does not intend to threaten the student's self-concept. And yet her questions do provoke in him an awareness of incongruence, since, as she expresses her failure to understand the student, he becomes aware that he isn't making sense to her or to himself and this experience is almost sure to be incongruent with his concept of himself as a person who does make sense. If the experience of incongruence is sufficient to cause anxiety, then the student who is asked honest questions is likely to experience the anxiety which Rogers considers a condition of a helping relationship.

A fourth condition of a helping relationship is the condition of unconditional positive regard, which the therapist is to feel for the client. Rogers claims that "to feel unconditional positive regard toward

another is to 'prize' him," (25) and it is from Dewey that he borrows the word "prize" used in this way. In Democracy and Education Dewey wrote that

> "to value means primarily to prize, to esteem; but secondarily it means to apprize, to estimate. It means that is, the act of cherishing something, holding it dear, and also the art of passing judgment upon the nature and amount of its value as compared with something else." (26)

It is valuing in the sense of apprizing that implies evaluating, writes Dewey, and it is this sort of valuing that Rogers wishes to avoid. Unconditional positive regard "means an outgoing positive feeling without reservations, without evaluations." (27) Thus, if one prizes a person without apprizing him, then one recognizes his intrinsic value as a person and does not evaluate his worth in relationship to others' worth. Unconditional positive regard implies not only not comparing one person with another. It implies not comparing a person's various behaviors with one another. Directly after his reference to Dewey, Rogers writes that a parent "prizes his child, though he may not value equally all of his behaviors," (28) from which one might conclude that a parent could be showing unconditional positive regard toward a child if she prized him but disapproved of his unkind behavior toward his grandmother. But in the next paragraph Rogers totally

excludes such apprizing of behavior if the condition of unconditional positive regard is to be satisfied. To prize another is to show "unconditional positive regard towards the experiences of which the client is frightened or ashamed, as well as toward the experiences with which the client is pleased or satisfied . . . " (29)

At this point problems arise. Why should the helper show unconditional positive regard for, that is, prize, those experiences of which a person is frightened? If a person is afraid of his own violent temper why ought the helper prize that violence? If a person wishes to become less violent, does that not imply he has himself apprized that violence? A person may wish not to be shamed for his feelings of violence, may want the helper not to gloss over his feelings of violence, and may want the helper to accept his self-report as true. That is not to say he wants that violence prized. Rogers' discussion of the construct of unconditional positive regard does not raise these sorts of questions, and he provides too few examples to enable one to clarify for oneself. (30)

Rogers' formal definition of unconditional positive regard reads: "if the self-experiences of another are perceived by me in such a way that no self-experience can be discriminated as more or less

worthy of positive regard than any other then I am experiencing unconditional positive regard for this individual." (31) Given the criteria, I do not see how anyone could satisfy the condition of unconditional positive regard and I can understand why Salvatore Maddi was driven to write "Rogers does not literally mean that every possible action must be approved, regardless of the consequences to yourself and others." (32) And yet, evaluation is to be excluded if the helper is to achieve empathic understanding and if she is to communicate congruently. Later in the chapter I will discuss the inadequacy of Rogers' interpretation of the concept of evaluation and the consequences of his rejection of evaluation for his educational proposals.

It has already been stated that the honest questioner does not evaluate the students' responses as wrong or right, and she certainly does not evaluate them or the student as good or bad. If this sort of non-evaluation is sufficient to show unconditional positive regard, then the honest questioner satisfies the condition. However, Rogers chose prizing as a synonym for unconditional positive regard and prizing is an attitude, not simply a form of speech. In attempting to justify honest questioning, it was said, in Chapter V, that the honest questioner treats others as if

capable of being or becoming rational. To ask honest questions is to treat another in terms of his own ends, that is to say, as if he had intrinsic value. To treat someone in terms of his own ends cannot be wholly inconsistent with having unconditional positive regard for him.

The fifth condition of a helping relationship is no less troublesome to deal with than the others have been. This is the condition that the therapist "experience empathic understanding of the client's internal frame of reference." (33) This definition of Rogers is referred to in Lauren Wispé's article on sympathy and empathy in the International Encyclopedia of the Social Sciences. Wispé gives as his own brief definition the following: "the self-conscious awareness of the consciousness of others." (34) The Oxford English Dictionary Supplement definition of empathy is "the power of entering into the experience of or understanding objects or emotions outside ourselves." (35) This is not far from Rogers' descriptions of the empathic helper "who can sense the client's private world as if it were (his) own, but without losing the 'as if' quality." (36) But when Rogers adds that the empathic helper "can both communicate his understanding of what is clearly known to the client and can also

voice meanings in the client's experience of which the client is scarcely aware," he extends the meaning of empathic understanding considerably. (37)

Empathic understanding is, as Rogers admits, a condition difficult to achieve. Given that empathic understanding is a condition of a helping relationship, this is unfortunate. But fortunately, Rogers is able to conclude on the basis of research that "'understanding' the client's meanings and feelings . . . is essentially the attitude of desiring to understand." (38) But to say that understanding is desiring to understand is false. If Rogers is playing on two meanings of "understanding," he merely hints by way of single quotation marks that he is doing so, and he leaves the reader with an unresolved paradox. Furthermore, if Rogers means that "desiring to understand" is empathic understanding, then he has moved far from the original meaning of empathy. According to Lipps, who is credited with coining the word which is the German equivalent, "Einfühlung," and with articulating the concept, and according to the dictionary definition cited above, empathy was the power of entering into the experience of another, not the desire to enter the experience of another. Worse yet, in saying that understanding is desiring to understand, Rogers contradicts his own claim

that the empathic helper has the ability to communicate his understanding. Could Rogers possibly mean that the empathic helper has the ability to communicate his desire to understand?

It may further the effort to make sense of the construct of empathic understanding, if one looks at an example given by Rogers himself. A therapist might say to a client, "You resent her criticism," and in so saying might be demonstrating that she does in fact understand the client's meanings and his feelings about his mother. Therefore, according to Rogers' own description, the therapist has demonstrated empathic understanding. However, Rogers denies that empathic understanding was demonstrated. Rogers rejects the use of the declarative statement on the grounds that it is unlikely to be perceived as an expression of empathic understanding. A declarative statement is likely to be perceived as "an evaluation, a judgment made by the counselor, who is now telling the client what his feelings are." (39) The client feels that her condition is being diagnosed, not that she is understood. Rogers suggests that the therapist form his responses differently; as for example, "If I understand you correctly, you feel pretty resentful towards her criticism. Is that right?" Ordinary experience confirms Rogers'

suggestion that a response expressed in this hypothetical form is likely to be less threatening to the client. The person who sees that you're irritable today and says so may be quite correct, but, in saying so, shows a failure to understand that you would prefer she didn't say so. It seems that a generous or complete empathic understanding would include the understanding that people have feelings about not being understood, about being misunderstood, about not being able to make themselves understood, and also have feelings--possibly ambivalent ones--about being understood itself. In the therapeutic situation many of the feelings expressed directly or indirectly by the client are going to be feelings about which he has feelings. The form which Rogers proposes for the expression of empathic understanding--a hypothetical phrased as a question--conveys recognition of this fact tactfully.

It looks as if Rogers' empathic understanding consists of 1) the desire to understand and 2) the ability to communicate that desire to understand. (40) It is quite true that the honest questioner may be described as one who has the desire to understand and communicates that desire to understand. It is also true that the questions she asks in her effort to understand conform to the model of communication proposed by

Rogers. Therefore it would seem safe to say that the honest questioner demonstrates empathic understanding. But I think it is not safe to come so quickly to this conclusion. There is some difficulty over the concept of understanding. There is understanding as an emotional response, and there is understanding as I described it in Chapter VI, which is an effort to understand in terms of a public language, a public context. If it were to be shown that the honest questioner demonstrated empathic understanding then it would have to be shown first that she could not very well ask honest questions that were perceived as honest unless she were sensitive to students' feelings and second that empathic understanding also depended on or inc uded an ability to communicate one's effort to understand in terms of public language and context. At this point I can only admit that it is not possible to show that the honest questioner invariably satisfies the condition of empathic understanding, even though my personal experience leads me to believe that most students do accept honest questions as expressions of an effort to understand, which leads to the next point.

The sixth and final condition of the helping relationship is that the client perceive that the helper does have both empathic understanding of him and

unconditional positive regard for him. The helper cannot control another's perception. But if in fact the helper does have empathic understanding of and unconditional positive regard for the client it is likely that the client will perceive it. The client who cannot recognize it cannot be helped. Similarly, if the student is capable of perceiving empathic understanding and unconditional positive regard, it is likely that he will perceive the honest questioner as demonstrating these qualities, and if the student is not capable of such perception, then it is likely that the student is capable of learning in only the most minimal sense of learning.

I cannot show conclusively that the honest questioner, as honest questioner, can satisfy all the conditions which, according to Rogers, a helper must satisfy. However, as I have said, I think it likely that the person who, in fact, can habitually ask honest questions will satisfy most of them. If so, the honest questioner is likely to establish something close to what Rogers describes as a helping relationship.

Helping Relationships and Learning

Rogers claims that within a helping relationship significant learning occurs (41) and that all learning should be significant. Rogers appears to be thinking of significant learning both as process and product. In the process sense, learning that is significant is characterized by the personal involvement of the student, is self-initiated, is pervasive, is evaluated by and is meaningful to the learner, (42) and in the product sense, significant learning results in a more fully functioning person. In consequence of significant learning within a therapeutic situation:

> The person comes to see himself differently. He accepts himself and his feelings more fully. He becomes more self-confident and self-directing. He becomes more the person he would like to be. He becomes more flexible, less rigid, in his perceptions. He adopts more realistic goals for himself. He behaves in a more mature fashion. He changes his maladjustive behaviors, even such a long-established one as chronic alcoholism. He becomes more acceptant of others. He becomes more open to the evidence, both to what is going on outside of himself, and to what is going on inside of himself. He changes in his basic personality characteristics, in constructive ways. (43)

Presumably, significant learning in the classroom would have similar results. Rogers characterizes such learning as learning which makes a difference, is functional, and pervades the person and his actions. (44) Because this sort of learning is not the sort that

commonly occurs in schools, Rogers is critical of classroom practices, critical in particular of the imposition of knowledge by teachers who often think of themselves principally as lecturers and who are constantly evaluating. In his opinion, these practices cannot lead to significant learning. Certainly I am in sympathy with Rogers' objection to the definition of knowledge as information and to constant lecturing by teachers. But his proposals for reform seem to me to be inadequate. They are inadequate partly because they are based on an inadequate interpretation of significant learning, which in turn derives from an inadequate interpretation of a cluster of concepts, including subjective, objective, conflict and evaluate. In this section, as in the previous section, my objections are objections to Rogers' concepts.

If it is true that a helping relationship results in significant learning, then, to the extent that honest questioning satisfies the conditions of a helping relationship it results in significant learning, and no more need be said. But I have not been able to show that honest questioning does necessarily satisfy the requisite conditions of a helping relationship. The honest questioner knows that she may not understand what the student says, and since, in that case, she can

hardly be said to prize what he says, it is difficult to attribute to her unconditional positive regard. Furthermore, whether her way of dealing with her uncertainty of understanding does or does not demonstrate empathic understanding depends on which of Rogers' definitions of empathic understanding one is using. Nevertheless I claim that honest questioning does result in significant learning, and intend to show that this is plausible by showing how Rogers' concept of significant learning is inadequate.

Rogers claims that "significant learning occurs more readily in situations perceived as problems." (45) One sort of problem is a state of incongruence which is the result of the student becoming aware of the gap between self-concept and self-experience. For example, a student engaged in the process of significant learning may learn that he is prejudiced, which fact may conflict with his self-concept. This learning changes the student in some way. That is what makes it significant learning. (46) Rogers also writes that "significant learning takes place when the subject matter is perceived by the student as having relevance for his own purposes." (47) To exemplify this sort of situation, he asks us to think of two students taking a course in statistics, one of whom is fulfilling a course re-

quirement, while the other is learning what he knows he needs to complete a research project. The latter student finds his learning meaningful, as any student does when he is learning what will help him solve his problems. Rogers offers no examples of other kinds of problems which might lead to significant learning, which does not mean he does not think there are other kinds. And of course other sorts of problem can be sources from which significant learning can spring. A third sort of problem can arise for a student when he is confronted with different theories. Suppose a student has read Rogers and read Skinner and is bewildered. He wants to believe Rogers, yet is unable to refute Skinner. This is not the sort of problem that will drive a client to therapy, yet it can produce painful tension and may be grounded in incongruence. The student may find Rogers' ideas more in keeping with his deepest beliefs about man, and thus about himself and, therefore, the fact that Skinner cannot be easily refuted is threatening to his self-concept. There is at least a fourth kind of problem which engages students' attention, and this is the kind of problem which is like a puzzle, one in which the self-concept may not be at all at risk. Rogers omits from his characterization of problems "puzzles" undertaken for the sheer pleasure of trying to solve

them, simply out of an urge to understand or exercise one's capacities, but the resultant learning is no more inconsequential than is the learning that results from the play of young animals. My first conclusion about significant learning is that it can arise from a wider variety of problems than Rogers specifies. That is important, since it may be that a variety of problems requires a variety of conditions for solution, and also that there will be differences in what counts as a solution, as significant learning in the product sense.

First, under what conditions can persons deal effectively with problems? Rogers has one answer, "learning, particularly if it is significant, is often a threatening thing." (48) Certainly when the outcome of significant learning is greater congruence, it must be the case that learning is threatening. If a person is to become more congruent, then he must recognize his own incongruence and that recognition is threatening. But, says Rogers, the threat from external sources can be and must be minimized if significant learning is to take place and this is exactly what the conditions of the helping relationship are intended to do. The helper who provides empathic understanding and unconditional positive regard satisfies the others' need for acceptance and thus the level of threat may be kept

within the range at which significant learning can occur. (49) Keeping threat to a minimum, says Rogers, is all it takes to make significant learning possible. Furthermore, one can do no more than this. (50) The helper cannot assist or speed up the process of significant learning by telling the other what to do or what to think. To support this point, Rogers cites both his own clinical experience, and research by Heine, who found that in therapeutic situations, clients perceived the therapist's direct advice to be unhelpful. (51) The advice is unhelpful, and it is quite unnecessary, for the fact is that given the conditions of a helping relationship, learning occurs and that learning is progressive, not retrogressive. (52)

While I would agree with both Rogers (and with Piaget) that it is probably futile, and possibly hurtful to point out to the student inconsistencies between beliefs, or beliefs and actions, or actions and actions, since he may fail to recognize the inconsistencies or may find them too threatening, I do not think the teacher must remain as passive as Rogers says a helper should be. Rogers, himself, does recognize that there are some differences between significant learning in psychotherapy and significant learning in a school setting. For him, the principal difference seems to be

that in a school setting, the student (unlike a client in therapy) does not have all the data he needs to solve his problems. But it is not up to the teacher to decide when or what information he needs, so Rogers casts the teacher in the role of a resource person, who can make information available to the student on demand. The role is still a passive one, that of a kind librarian, a non-threatening person who gives no advice unless it is asked for. But I believe there is more to teaching than this. What more there may be can be seen by considering whether the various kinds of problems outlined can in fact all be dealt with in the way Rogers proposes.

It may be that the sort of incongruence experienced by the client in therapy can best be resolved using Rogers' approach, by talking to a "reflecting mirror." It may be that certain sorts of problems can best be solved by doing in Rogers' sense of doing, by "placing the student in direct experiential confrontation with practical problems, social problems, ethical problems and philosophical problems, personal issues, and research problems, (which) is one of the most effective modes of promoting learning." (53) But the sort of problem referred to above, in which the student could not make a choice between Skinner and Rogers, while it involves the self-concept, is resolved

differently. One thinks about it and one acquires information, and one talks, but not as if to one's doting grandmother who smiles and nods her head. When considering a choice of principles, whether in the physical or the social sciences, one talks with others, exchanging views. Even the fourth sort of problem, the puzzle sort, which may be thought of as presenting the purest cognitive challenge, that is, a reasoning problem, may be solved more readily (see Chapter VII) as a result of social interaction which brings with it other points of view. Rogers allows for the existence of only two possible sorts of relationships between the helper and the helped, one in which the helper is authoritarian and the helped is passive, and one in which the helped is active and helper is passive. He does not consider the third possibility of interaction between the helper and the one being helped. (54)

About the "puzzle" sort of problem another observation may be made. It may be true that the more serious a problem is the more commanding of attention it is. But Bruner has suggested that if learning is to be readily transferable, then it takes place in conditions of playfulness and of freedom from excessive drive. (55) Rogers said that significant learning took place in the context of problems, and his description of problems

clearly indicates that to him problem is always a trouble. I have tried to show that significant learning (learning that makes a difference) can result from a variety of problems, and that these cannot all be characterized as troubles. Rogers' paradigm model of the sort of problem that results in significant learning is the problem of incongruence, and that is a troublesome problem. But Rogers has said that significant learning is more likely to result when the student is personally involved and his effort self-initiated. And that is another way of saying that significant learning is more likely to occur in the context of problems, and is at the same time another way, and a better one, of defining the student's problem.

The honest questioner recognizes that the student is likely to learn better when his attention is engaged. Her questions are addressed to his beliefs and these beliefs, about himself or about the world, are matters of some concern to him and rather easily engage his attention. As the teacher asks honest questions, problems emerge. The student finds that he has no good reason to believe what he does, or finds that some of his beliefs are inconsistent, or that they do not quite make sense. Whether these problems will be troubles or puzzles or some other sort of problem depends on a

variety of factors. The point is that the teacher, although she does not give the student problems, has an active role in bringing those he has into awareness.

In his description of significant learning, Rogers seems to have made a mistake parallel to one many teachers make in our time, although the mistake was called to the attention of the teaching community by Dewey sixty years ago, and more recently by P. H. Hirst and R. S. Peters. The mistake concerns the most important matter of interest. Dewey distinguished between three uses of "interest:" as engagements or involvements, as what touches or influences a person, and as attitudes towards some object or other. Dewey wrote that the pedagogical problem is to "nurture his (the student's) sympathetic interest in characteristic traits of the world in which he lives" (56), and it is clear that he objected to "making interesting by extraneous and artificial inducements." (57) Ideally, the three interests would coincide, and it is part of the teacher's problem to help the child to care about and engage in what does touch him. P. H. Hirst and R. S. Peters make a useful distinction between interest in the psychological sense and interest in the valuative sense. (58) The psychological interpretation of "interest" has motivational relevance, since it refers

to what catches the child's attention. The valuative interpretation of the notion refers to whatever is in the child's interest. Hirst and Peters do not think that these two sorts of interest will necessarily coincide in the child. The pedagogical problem is one of beginning with what interests the child and leading him to recognize what is in his interest.

An enthusiastic follower of Rogers might say that she wanted her students to learn what is significant to them, failing to notice that the word "significant" is ambiguous in a way parallel to the way the word "interest" is ambiguous. Would she mean she wanted students to learn about what they already considered significant or that she wanted them to recognize the significance of what perhaps they did not want to learn? In one sense significant learning is learning that begins with what is already of concern or interest to one. In another sense, significant learning is <u>significance</u> learning, that is, learning what is significant to one. This still does not sort out the ambiguities well enough. Consider the case of a person who is wholly negligent of his diet, who learns about the effects of that diet on his health. Objectively, this learning is significant, but unless he learns to care about what he learns, that learning is subjectively

insignificant. In the fullest sense, significant learning would be that learning in which the subjectively and the objectively significant coincide.

In other words, "significance " too, may be thought of as having a psychological and a valuative sense. Of course Rogers wouldn't intend the valuative sense of significant learning. He makes very clear that evaluation is a source of threat, one that should be dispensed with, and in his mind it is closely linked to the concept of control. Rogers has no wish to control and he does not wish to choose for others. Rogers' consistent refusal to choose for another explains some features of his list of the outcomes of therapy. (See page 231.) Not one of the outcomes is a specific skill or a specific content. Rogers acknowledges no specific goods for man. Fully functioningness is to Rogers what rationality is for Rawls: a purely formal concept. (59) But it does not follow from the fact that I ought not "choose" others' goals for them, that one goal is in fact as good as another. I may recognize that it is objectively in your best interest to be healthy even though I ought not force you to take steps to protect your health. (60)

The difficulties that Rogers has with notions such as significant, evaluate, conflict, and control, are

closely intertwined, I believe, with the difficulty Rogers admits he has with the concept of objectivity. In the paper "Persons or Science? A Philosophical Question," (61) Rogers makes an effort to reconcile a conflict in his own thinking. For many years Rogers assumed that an unbridgeable gap existed between subjective knowledge and objective knowledge. Subjective knowledge was based on feelings and could not be communicated: it was significant knowledge, characterized by a feeling of oneness with what was known (e.g. another person). Scientific knowledge, the paradigm of objective knowledge, separated self from other. The objects of knowledge were to be manipulated and controlled, and that is to say manipulation and control were the objects of knowledge! Given this view of objective knowledge, it is no wonder that Rogers considered objectivity in a relationship to be unethical, and insisted that within a relationship one had to be subjective, meaning that the relationship had to be based on feeling, not thinking. In addition, it is apparent why Rogers had a difficult time finding a place for objective knowledge within significant learning in his sense of the phrase, that is, the psychological sense, for significant learning was subjective knowledge.

Rogers did manage to find a way to reconcile the positions. He recognized the subjective roots of science in the passion of the scientist, in the source of new ideas, in the readiness to believe evidence. He began to think of objectivity as those methods which enabled one to check the reliability of either one's subjective experience or one's reliability as observer (Rogers says both). The purpose of scientific method was to provide one with more dependable belief or faith. (62) The reconciliation is based on a sketchy revision of the concepts of subjectivitiy and objectivity and a mere suggestion of a theory of knowledge, but it is a step in the right direction. (63) Rogers has not yet worked out the implications of his reconciliation for other areas of his thinking. For example, he has not yet gone so far as to say that whether they are or are not recognized subjectively, there may be objective goods for persons (more specific than those he recognizes to be consequences of significant learning). He does not, for example, recognize rationality or intelligence as universal goods. Nor has he rethought the concept of evaluation. And this brings me to my third major objection.

Evaluation has traditionally been considered to be a major task of the teacher, but it is obvious, given

any of Rogers' interpretations of the condition of unconditional positive regard, that it would be impossible to reconcile Rogers' concept of evaluation with it. Rogers is being consistent when he forbids evaluation of any sort on the part of the teacher. It is one of the criteria of significant learning in Rogers' sense that it is evaluated by the learner and only by the learner: a teacher must not evaluate in any way. That a teacher must respond to students Rogers understands, but, he says, a teacher

> can like or dislike a student product without implying that it is objectively good or bad or that the student is good or bad. He is simply expressing a feeling for the product, a feeling which exists within himself. (64)

Without question one should not imply that the student is good or bad on the basis of the work he has done or the statements he has made. But the quotation deserves fuller discussion.

While it is reasonable to avoid suggesting to the student that there are absolute standards--aesthetic, ethical, or epistemological--it is quite unreasonable to avoid informing the student, directly or indirectly, about those public standards which do exist. It is unreasonable to withhold information about them and in so doing to imply that there are no standards or that standards are worthless. It may, on the contrary, be

one of the most important functions of the teacher to teach students what the standards are and to teach them how to evaluate the usefulness of these standards. How utterly useless for the teacher to express her feelings about the work to the student without helping the student see what in his work was creating that effect! Perhaps, in any case, the teacher should express her feelings only after she has ascertained what kind of response the student is looking for. It is possible that a student might not particularly want to know how a teacher feels but does want to know her response as a representative of an educated, knowing public.

As in the case of other concepts, Rogers appears to see that, in some way, his formulation is not quite right. Life, he acknowledges, does set conditions, life does test. The student will know "that he cannot enter engineering school without so much math." (65) And the student will be faced with "the fact that he cannot join the special literature section until he has shown evidence of both wide reading and creative writing." (66) But what is this <u>life</u> which tests? Is it not a <u>someone</u> who decides whether he has enough math or whether his writing is in fact creative, and is this decision not an evaluation? Rogers writes as if he thinks it is not, as if he believes these conditions

(which are standards whether or not he sees this) have been established by some non-human agency, as if the conditions were objective in the most naive sense of objective. Rogers again fails to make conceptual distinctions and so he fails to see the difference between responses which reflect sensitivity to intersubjective standards, which are based on informed feelings, and responses which are authoritarian and arbitrary. For Rogers there is no such thing, apparently, as educated feelings, as developed sensibilities and no such thing, apparently, as a subjective response which is indeed feelingful, but is entirely inappropriate and unhelpful. Rogers is fearful lest the teacher's evaluative responses control the student. Rogers' commitment to allowing others to be is laudable. But it does not follow from the fact that one ought not control others that one cannot state the criteria which provide the source of one's responses (feelings do have sources), nor that one cannot stand in opposition to others, nor that opposition is control. (67)

I think I have now shown why the honest questioner may not satisfy all of the conditions of a helping relationship, especially those which have to do with understanding and evaluating. The honest questioner's position on the nature of significant learning and the

conditions of significant learning is different from that of Rogers. Certainly the student is or ought to be trying to solve a problem which is significant to him, but "while the problem may be found introspectively, in the private world of experience, it cannot be understood or solved except in social and scientific terms." (68) The honest questioner tries to understand, but knows she often does not. She constantly evaluates in the sense that she makes hypotheses about what the student says, and not simply in terms of its psychological significance for him, but in terms of its public significance, that is, against the standards of public intelligibility.

Human knowledge is intersubjective knowledge (69). It is created through conflict, and it is possessed through conflict. Living in this century, one can appreciate why Rogers and others abhor conflict and shun it. Conflict is so often destructive, but it need not be. And in any case, turning our heads from it will not make it go away. Those who would teach may learn from Rogers to treat the student as a person who is an end in himself, a person with feelings which must be respected. But teachers can learn also from Dewey, from Buber, from Piaget, and from all those who saw what Rogers could not, that students need to learn how to deal with

conflict. There is destructive conflict, which is always the result of a breakdown in or a perversion of communication. There is constructive conflict, which is communication raised to the highest level, which is grounded in the highest ethical standards of respect for the person, in the deepest respect for and skill at using the language, and which conforms to the rules of reasoning and the rules of the methods of inquiry (which in themselves represent mankind's moral victories). Honest questioning is a way of teaching students how to disagree, of teaching them how to engage in constructive conflict, something Rogers' helper could never do. (70)

Rogers wishes to avoid conflict and thus it is fitting that he values so highly his version of subjective knowledge, which accompanies or is the result of a feeling of oneness with the other. To be the same as, undifferentiated from the other, is a way to avoid conflict. But to become one with the other can be seen as a regression to the world of the infant, and to be a denial of the other. Obviously Rogers could not intend this result, and yet I think this is a plausible interpretation of his proposals and represents their dark side. In trying to become one with the other, in denying or ignoring our differences by keeping silent and confining ourselves to paraphrase, like very clever

parrots, we deprive ourselves and others of our greatest source of growth. (71)

1. Joseph F. Rychlak, A Philosophy of Science for Personality Theory (Boston: Houghton Mifflin, 1968), p. 150.

2. Richard W. Dettering began his article, "Philosophic Idealism in Rogerian Psychology," Educational Theory V (October, 1955) with this sentence: "The 'non-directive,' client-centered, student-centered therapy and teaching of Carl Rogers and his followers have begun to assume the proportions of a minor crusade in this country." P. 206. In the concluding section of the article, Dettering places the Rogerian emphasis on the individual in historical context, observing that when standards collapse, the individual turns inwards for the source of authority. It may be that the tide has turned away from permissiveness today, but, judging from the comments of the undergraduate students I talk with, confusion about "values," "goods," "relativism," "subjective," "objective," and a host of other concepts remains, and this confusion is "Rogerian" in character.

3. Salvatore Maddi, Personality Theories: A Comparative Analysis, rev. ed. (Homewood, Il.: The Dorsey Press, 1971), p. 91.

4. Thomas Szasz objects to regarding psychological problems as illnesses. In so far as Rogers objects to the notion of cure (see footnote 60, this chapter), there is that much similarity in the positions of the two. But Szasz further objects to the classification of psychotherapy as a science. It is, he says, an art, and he proposes for it a new name, iatrologic. The iatrologician would be a "specialist in rhetoric and logic." The Myth of Psychotherapy (Garden City, New York: Anchor Press/Doubleday, 1979), p. 216. The iatrologician works with the difficulties of the soul, and these, according to Szasz, are largely disorders of communication. A critical reading of Rogers, even by one who admires him, can lead one to think that Rogers might have done better to acknowledge that his client's problems were themselves ethical and spiritual in origin. If he had wanted to treat those problems, he would not have had to pretend to be a scientist, and perhaps then he would have been able to deal with the disorders of his own communication.

Richard Weaver pinpoints some of the sources of social scientists' and thus of Rogers' difficulties. The social scientist often fails to recognize when he is dealing with concepts and when he has, therefore,

entered the realm of dialectic and rhetoric. The social scientist is trying "to characterize the world positively in terms which can be made good only dialectically. He can never make them good dialectically as long as he is by theory entirely committed to empiricism. This explains why to the ordinary beholder there seem to be so many smuggled assumptions in the literature of social science. It will explain, moreover, why so much of its expression is characterized by diffuseness and by that verbosity which is certain to afflict a dialectic without a metaphysic or an ontology. This uncertainty of the social scientist about the nature of his data often leads him to treat empirical situations as if they carried moral sanction, and then to turn around and treat some point of contemporary mores--which is by definition a 'moral' question--as if it had only empirical aspects." The Ethics of Rhetoric (Chicago: Henry Regnery, 1953), p. 189.

5. Throughout, I shall use the term "helping relationship" rather than "therapeutic relationship." Rogers identifies the parent/child, teacher/student and the therapist/client relationships as instances of helping relationships, therefore, the use of the neutral "helping relationship" is justified.

6. Carl R. Rogers, On Becoming a Person (Boston: Houghton Mifflin, 1961), p. 40.

7. Carl R. Rogers, "A Theory of Therapy, Personality, and Interpersonal Relationships, as Developed in the Client-Centered Framework," in Psychology: A Study of a Science, vol. 3: Formulation of the Person and the Social Context (New York: McGraw Hill, 1959), p. 185.

8. "Construct" refers to mental entities which are, supposedly, precisely defined, but that precision may be spurious, and I prefer to use the word "concept" which refers to ideas admittedly vague and ambiguous.

9. Carl R. Rogers, "A Theory of Therapy, Personality, . . . " p. 207.

10. Ibid., p. 214.

11. Ibid., p. 199.

12. Carl R. Rogers, On Becoming a Person, p. 282.

13. Carl R. Rogers, "A Theory of Therapy, . . . " p. 214.

14. Carl R. Rogers, On Becoming a Person, p. 339.

15. Ibid., p. 341.

16. Charles Rycroft, Anxiety and Neurosis (Harmondsworth, England: Penguin Press, 1968, Pelican Books 1970), p. 72.

17. Carl R. Rogers, On Becoming a Person , pp. 340-41. It follows from Rogers' definition of falseness that actors who try to conceal stage fright are false, and all attempts to put the best face on the situation, or to be brave, are false.

18. Carl R. Rogers, "A Theory of Therapy, . . . " p. 214.

19. Carl R. Rogers, On Becoming a Person, p. 341.

20. Salvatore Maddi, Personality Theories . . . p. 97 and Carl R. Rogers, "A Theory of Therapy, . . . " pp. 216 and 218.

21. Carl R. Rogers, "A Theory of Therapy, . . . " p. 203.

22. Ibid., p. 204.

23. Charles Rycroft, Anxiety and Neurosis, chapter 1, where he describes several sorts of anxiety, with several sources. The narrower definition provided by Clara Thompson, Milton Mazer, and Earl Witenberg, eds. An Outline of Psychoanalysis, rev. ed. (New York: Random House, The Modern Library, 1955), p. 615, does not contradict my claim that incongruence is not the only source of anxiety: "a state of apprehension, with bodily signs and symptoms, in which the danger is not objective." George Mandler opens his article, "Anxiety," with this sentence: "Anxiety has been considered as a phenomenal state of the human organism, as a physiological syndrome, and as a theoretical construct invoked to account for defensive behavior, the avoidance of noxious stimuli, and neurotic symptoms." International Encyclopedia of the Social Sciences.

24. It is odd that in schools, those places where

learning is supposed to go on, students are most reluctant to acknowledge that they do not know. How can learning go on at all when the learner feels constantly threatened by his own ignorance? School should be the place above all where one can admit ignorance, which is not to say that one should never feel threatened or ashamed of one's own ignorance.

25. Carl R. Rogers, "A Theory of Therapy, . . . " p. 268.

26. John Dewey, Democracy and Education, (New York: The Free Press, A Division of MacMillan, Inc., paperback edition, 1966), p. 238.

27. Carl R. Rogers, On Becoming a Person, p. 62.

28. Carl R. Rogers, "A Theory of Therapy, . . ." p. 208.

29. Ibid.

30. Empirical studies do not always provide the sort of support for his theories that Rogers might like. For example, it has been shown that after therapy conducted along the lines laid down by Rogers, clients showed a smaller discrepancy between self and ideal. Such a reduction is to be hoped for, however, as Maddi writes, "it is not clear that the findings support Rogers' viewpoint. Certainly, the closer the person is to fully functioningness, the smaller should be the discrepancy between self and ideal. To be sure, psychotherapy should bring people nearer to fully functioningness. But statements of ideals are operational representations of conditions of worth, and surely, the function of therapy should be to remove these aspects of maladjustment. Ideals would be considered beneficial from the standpoint of a perfection theory, but not from that of an actualization theory. In this context, it is unfortunate for the Rogerian position that Butler and Haigh found the reduction in self-ideal discrepancy occurring as a function of therapy to be brought about primarily by a movement of self-description toward ideals." Personality Theories . . . p. 466. Rogers would have to reject Fromm's claim that we need both "mother love," which is unconditional and "father love," which is conditional. Erich Fromm, The Art of Loving, World Perspectives, vol. 9 (New York: Harper and Brothers, 1956), pp. 36-48.

32. Salvatore Maddi, Personality Theories . . . p. 96.

33. Carl R. Rogers, "A Theory of Therapy, . . ." p. 213.

34. International Encyclopedia of the Social Sciences, s.v. "Sympathy and Empathy," by Lauren G. Wispé.

35. The Oxford English Dictionary Supplement, s.v. "empathy."

36. Carl R. Rogers, On Becoming a Person, p. 284. Oddly, Maurice S. Friedman, in Martin Buber: The Life of Dialogue (Chicago: The University of Chicago Press, 1955, Phoenix Edition, 1976) sees Rogers as a follower of Buber, and tries to show similarities between their teaching, but contradicts Rogers on this matter of empathy. Interpreting first Buber, he writes on page 88 that "'Experiencing the other side' means to feel an event from the side of the person one meets as well as from one's own side. It is an inclusiveness which realizes the other person in the actuality of his being, but it is not to be identified with 'empathy,' which means 'the exclusion of one's own concreteness, the extinguishing of the actual situation of life, the absorption in pure aestheticism of the reality in which one participates.'" Friedman interprets Rogers' writings in such a way that they appear to be consistent with Buber's: "For Rogers as for Buber it is important in the process of the person's becoming that he know himself to be understood and accepted, or in Buber's terms made present and confirmed, by the therapist. For both men this means 'an active experiencing with the client of the feelings to which he gives expression,' a trying 'to get within and to live the attitudes expressed instead of observing them.' For both this implies at the same time a certain distance and absence of emotional involvement--an experiencing of the feelings from the side of the client wihout an emotional identification that would cause the counsellor to experience these feelings himself, as counsellor." P. 192. So much for empathic understanding.

37. Carl R. Rogers, On Becoming a Person, p. 284.

38. Ibid., p. 44.

39. Carl R. Rogers, Client-Centered Therapy (New York: Houghton Mifflin, 1951), p. 28. Irving Sigel writes that "Questions, irrespective of the benign appearance of the content, convey latent as well as explicit messages. The speaker may not be aware of the affective features of the message. The affective overtones of the interactions can be independent of the actual verbalizations. Questions can be characterized as hostile, arrogant, 'put downs,' etc. . . . Personal-social considerations require sensitivity not only to emotional tone and manner of the inquiry, but also to the readiness of the receiver to engage in a social interaction dialogue." Irving E. Sigel, David M. Brodzinsky, and Roberta M. Golinkoff, eds. New Directions in Piagetian Theory and Practice (Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1981), p. 211.

40. If this is the definition Rogers intends, it differs greatly from the definition given in the Oxford Dictionary, according to which, if I sensed the hostility of another, I would have an empathic understanding of that person's state, if in fact that person did feel hostility, and I would have that understanding regardless of whether I did or did not express my accurate perception.

41. Carl R. Rogers, On Becoming a Person, p. 280.

42. Carl R. Rogers, Freedom to Learn (Columbus, Ohio: Charles E. Merrill, 1969), p. 5.

43. Carl R. Rogers, On Becoming a Person, pp. 280-81.

44. Ibid., p. 281.

45. Ibid., p. 286.

46. I am not quite sure what the significant learning consists of. Take the case of the person who learns that he is prejudiced. Is learning that he is prejudiced the significant learning? Or is the ensuing greater congruence the significant learning? The congruence could come about in one of two ways. Having learned that he is prejudiced, he is more congruent if he acknowledges that he is prejudiced at the time he displays prejudice. However, most of us would incline to think that the really significant learning would come

after he recognized that he was prejudiced, and learned not to be prejudiced. But that is because we have a predetermined set of goals. See footnote 30, this chapter.

47. Carl R. Rogers, Freedom to Learn, p. 158.

48. Carl R. Rogers, Client-Centered Therapy, p. 390.

49. Rogers does not say why threat should be kept to a minimum, why it is that beyond some unspecified point threat hinders learning, but other psychologists have dealt with the problem of the relationship between motivation and learning and what some of them have said provides indirect support for Rogers' position. Jerome Bruner reviewed some of the literature on the effect of motivational level and learning and concluded that very high or very low drive lead to an increase in concreteness of cognitive activity. "There is a middle state of drive level that produces the strongest tendency toward generic learning." Jerome Bruner, Beyond the Information Given, ed. Jeremy M. Anglin (New York: W. W. Norton, 1973), p. 227. Rogers is not writing specifically about the transferability of learning, though there is no reason to deny that he would expect significant learning to be transferable. The studies to which Bruner refers were making a point which is more easily translated into Rogers' claim. Highly motivated rats learned less quickly than the less highly motivated rats. Ibid., p. 227. The comparability of the claims of Rogers and Bruner depends in part on whether one will allow that high motivation brought on by deprivation of food for thirty-six hours is comparable to the motivational level of a human being experiencing threat from an external source. If one looks at Rogers' list of outcomes, it is not far-fetched to suppose that significant learning secures what Robert White refers to as a "flexible, knowledgeable power of transaction with the environment." Robert W. White, "Motivation Reconsidered: The Concept of Competence," Psychological Review 66 (1959):326. Such learning occurs, says White, in periods of less intense motivation. White uses the example of an infant to make his point. It is when needs are satisfied that the "infant can attend to matters of lesser urgency, exploring the properties of things he does not fear and does not need to eat . . . generally accumulating for himself a broad knowledge and a broad skill in dealing with his surroundings." Ibid.,

p. 327.

50. Rogers has said more than once that he does not value teaching much. "It seems to me that anything that can be taught to another is relatively inconsequential, and has little or no significant influence on behavior. . . . I have come to feel that the only learning which significantly influences behavior is self-discovered, self-appropriated learning. . . . As a consequence of the above, I realize that I have lost interest in being a teacher. . . . Hence I have come to feel that the outcomes of teaching are either unimportant or hurtful." Carl R. Rogers, On Becoming a Person, p. 276. It is tempting to say that, in view of the fact that Rogers has "disparaged the need for intellectual prowess to help others" (Rychlak, A Philosophy of Science for Personality Theory, p. 194) it is no wonder he takes such a dim view of teaching. What Rogers says may describe what is often true of teaching, but I do not think it is necessarily true. Obviously my entire dissertation is an indirect response to Rogers' claim.

51. Carl R. Rogers, On Becoming a Person, p. 43.

52. About the second prong of Rogers' two-pronged account of the dynamics of learning I have little to say. In an effort to explain why people do move forward on their own, Rogers presents the following three conclusions about the human organism. First, individuals have a capacity to recognize, to become aware of, the incongruence between self-concept and totality of experience. Second, individuals possess the capacity and tendency to reorganize their self-concept in such a way as to make it more congruent with the totality of their experience. Third, these capacities and this tendency are released in a helping relationship. Rogers admits that his explanation of the effects of a helping relationship is sketchy. It consists of only two components: the reduction of threat and the innate capacities and tendencies of man, but he believes the account is satisfactory as far as it goes.

Somewhat confusingly Rogers refers to these tendencies towards actualization of potentialities as "conclusions" and as "hypotheses." They are his conclusions based on his work with clients and he is quite sure of them, but presumably they have not been subjected to rigorous empirical tests, and, therefore, he is willing to recognize that from the point of view

of science, they are yet hypotheses. See Carl R. Rogers, "A Theory of Therapy, Personality, . . ." p. 221 and Salvatore Maddi, Personality Theories . . . pp. 86-87.

Rogers' account of the fully functioning personality is not the account of a perfectionist. But his account does appear to depend on a tacit assumption of a "'pre-established harmony' between various persons' fields in order to account for socialization." Richard Dettering, "Philosophic Idealism in Rogerian Psychology," p. 423. Perhaps Dettering finds this assumption not credible. Richard Hofstadter remarks that the same point was made against Dewey: "To believe that Dewey's synthesis was successful required a certain credulity about the pre-established harmony between child nature and democratic culture which not everyone could share." Anti-Intellectualism in American Life (New York: Random House, Vintage Books, 1963), pp. 386-87. But is it impossible that there be no germ of truth in the idea? I wouldn't suggest that there is a pre-established harmony between any individual nature and any social order. But it is not absurd to suggest as thinkers from Aristotle through Kant to Piaget have done, that principles of rationality are perhaps a part of the species' biological equipment, in which case a tendency to become rational is part of our nature, and it would not be absurd to say that the more rational the individual, the more social he is.

53. Carl R. Rogers, Freedom to Learn, p. 162.

54. Jurgen Ruesch takes a different approach to therapy. He lists a number of therapists' attitudes which he thinks are particularly helpful to patients. Amongst them he includes unaggressive directness: "In spite of insufficient information, the therapist should draw some conclusions and make some interpretations in order to force the patient to clarify some of the confusion . . . the patient discovers great relief when, through the therapist's pinpointing, some of the fog begins to lift. The unaggressive directness of the therapist teaches the patient that he himself has to clarify contradictions in his existence. As soon as the doctor has made a statement, the patient can agree with it or oppose it. In either case, he clarifies an issue." Therapeutic Communication (New York: Norton, 1961), p. 132. Ruesch's position derives partly from his conception of psychopathology as, in essence a disturbance of commmunicative behavior so that

"therapeutic efforts should be directed at correcting faulty communication." Ibid., p. xiv.

55. Jerome S. Bruner, Toward a Theory of Instruction (Cambridge, Ma.: The Belknap Press of Harvard University Press, 1966), p. 134. See also footnote 49.

56. John Dewey, The School and Society, rev. ed. (Chicago: The University of Chicago Press, 1943), p. 141.

57. John Dewey, Democracy and Education, p. 127.

58. P. H. Hirst and R. S. Peters, The Logic of Education, Students Library of Education (London: Routledge and Kegan Paul, 1970), p. 36.

59. As Salvatore Maddi points out, "on reflection, it becomes apparent that any behavior--some act or its opposite--can express fully functioningness. As we recognized before, such a position is elastic, post hoc, and quite untestable. One cannot determine whether it is true or false." Personality Theories . . . p. 319. It is true, however, that Rogers admits that the qualities of the direction of the good life as lived by a fully functioning personality may have a certain universality. On Becoming a Person, p. 187.

60. "When someone begins getting the urge to cure others, this goes in opposition to his ethic, and therefore we find Rogers getting very uneasy with such therapeutic goals." Joseph F. Rychlak, A Philosophy of Science for Personality Theory (Boston: Houghton Mifflin, 1968), p. 190. If, as Thomas Szasz has said, the medical model is inappropriate and mental illnesses are not illnesses, but sufferings of the soul, then it would indeed be inappropriate to speak of therapists curing people. One can see why Rogers would object to the urge to cure on several grounds: the idea is associated with control, authority, and with the notion of a specific goal.

61. Carl R. Rogers, "Persons or Science? A Philosophical Question," On Becoming a Person, pp. 199-224.

62. Ibid., pp. 218-223.

63. Rogers admits that he used to think of science as "something out there." That is no doubt a common view, though a naive one. The following quotation from Maurice Friedman's book on Buber can be taken as support for this early position of Rogers, but I think it can also be seen to undermine both it and Rogers' effort to cast the teacher in the role of reactor rather than interactor: "As Marjorie Reeves has shown in her application of Buber's I-Thou philosophy to education, the whole concept of the 'objectivity' of education is called in question by the fact that our knowledge of things is for the most part mediated through the minds of others and by the fact that real growth takes place 'through the impact of person on person.'" Martin Buber: The Life of Dialogue, p. 178.

Rogers quotes Buber, and refers to him in the essay "Persons or Science?" but, if Friedman's interpretation of Buber is correct, Rogers misunderstands or chooses to ignore some at least of Buber's position. "One of these (approaches to the problem of propagandizing and legitimately influencing) is the desire to safeguard the student by demanding of the teacher an illusory objectivity, as if the teacher has no commitment to a certain field of knowledge, to a method of approaching this field, and to a set of attitudes and value assumptions which are embodied in the questions which he raises. . . . The true alternative to false objectivity and to standards set from the outside is not, of course, that subjectivity which imprisons the teacher within his own attachments or the absence of any value standards. It is the teacher's selection of the effective world and the act of inclusion or experiencing the other side, to which Buber has pointed." P. 181.

64. Carl R. Rogers, Freedom to Learn, p. 106.

65. Carl R. Rogers, On Becoming a Person, p. 290.

66. Ibid., p. 291.

67. Maurice S. Friedman, Martin Buber: The Life of Dialogue, writes: "This means that no real learning takes place unless the pupil participates, but it also means that the pupil must encounter something really 'other' than himself before he can learn." P. 177. And a few pages later: "The mark of our time, writes Buber, is the denial that values are anything other than the subjective needs of groups. This denial is not a product of reason but of the sickness of our age; hence

it is futile to meet it with arguments. All that the teacher can do is help keep awake in the pupil the pain which he suffers through his distorted relation to his own self and thus awaken his desire to become a real and whole person. The teacher can do this best of all when he recognizes that his real goal is the education of great character." Pp. 181-82. Friedman is concerned to point out the similarities between Rogers and Buber, but the differences, illustrated in the above quotations, are more striking to me.

68. Richard W. Dettering, "Philosophic Idealism in Rogerian Psychology," p. 419.

69. Dettering's critique of Rogers is in part an effort to show that contrary to what Rogers might think, the differences between himself and Dewey are great and outweigh the similarities. In summarizing, Dettering says that "one opposition which seems to run through all these differences we have discussed is between an intersubjective and an introspective concept of knowledge. Here we must especially remember Dewey's criticism of the 'introspectionist' view that 'consciousness or experience is the organ of its own immediate disclosure of all its own secrets'--a view, he says, which arose with Descartes and Locke and was 'foisted on psychology from without.' On this issue above all, Rogers must part with Dewey. Whereas Dewey relied ultimately on the consensus of the scientific community, Rogers rests on the process of self- disclosure." P. 420. The quotations from Dewey are taken from Philosophy and Civilization (New York: Minton, Balch and Co., 1931), p. 261.

70. In referring so often to reasoning skills and methods of inquiry, I fear I will seem to have excluded the various arts as important ways of knowing. I do not intend to do so. This is not the place to discuss it, but I would not wish to be thought of as making vulgar distinctions between the arts as irrational and the sciences as rational.

I wish to make a point here, not related to the one above, about the way honest questions might be used. Dorothy Heathcote is an English woman, well-known in educational circles for her method of using improvisational drama with students of all ages, and in a broad variety of subjects. Her efforts are explicitly directed to the end of significance, in both senses of the term. What is of especial interest to me is that

Ms. Heathcote uses what I call honest questions in her work. Betty Jane Wagner, in her book Drama as a Learning Medium, refers to them as real questions. (Washington, D. C.: National Education Association, 1976) Using real questions, Heathcote gets children to think very hard indeed about what they mean, and how they can show what they mean through actions. Her way is a dramatic one, if the pun may be forgiven, of doing concept analyses and thought experiments.

71. Maurice Friedman: "in conversation the tension between the meaning which the word I use has for me and that which it has for my partner can prove itself fruitful and lead to a deeper personal understanding, . . . " Martin Buber: The Life of Dialogue, p. 174. And from Richard W. Dettering, "Hegel's dialectical process mingled with the Darwinian struggle for survival to furnish the basis for Dewey's concern with conflict and challenge as a necessary factor in self-development." "Philosophical Idealism in Rogerian Psychology," pp. 418-19.

CHAPTER IX

CONCLUSION

In this, the conclusion, I will present the briefest possible restatement of the argument for honest questioning, will note the limits of its usefulness, discuss the problems of evaluation of the technique, and, finally, will make a few observations about the practicality of the model, and about ideals.

Honest questioning functions on several levels, in much the same way as good literature does. I chose to present it, initially, in its humblest function, as a way for the teacher to find out where the student is. It is surely credible that honest questioning is equal to that task. And it is no less credible that honest questioning is a fine tool for the teacher who wishes to use discussion in her classroom, since most people do like to talk about their beliefs. (1) Amongst the functions of honest questioning are these solutions to some immediate problems of the teacher. They, however,

would not be enough to justify it as a teaching technique. If honest questioning is to be justified as a teaching technique, then it has to be shown to promote the end of the practice of teaching, which is bringing the student to know, and since teaching is a practice which deals directly with persons, it must also promote the rationality of persons, that is, of students. Honest questioning does both. The honest questioner brings the student to know how to justify by asking him to justify, and brings him to rationality by treating him as if rational. (2) Bringing the student to knowledge and to rationality are the ultimate ends of honest questioning. I make the assumption that knowledge is for the sake of rationality, and in the interest of simplicity of style, I shall, in what remains, omit reference to knowing and refer only to rationality as the end of honest questioning.

Integrity of means and ends is characteristic of rational action. The technique of honest questioning fully exemplifies this characteristic. It is one with its end. It is rational behavior in its own right and its end is the rationality of the student. And it is as plausible to think that efforts to answer honest questions will lead to rationality as to think that trying to play a game will lead to one's being able to play the

game. (3) Having said this, it seems unnecessary to try to explain the effects of honest questioning, as if one were to try to explain how it is that trying to learn to ride a bicycle leads to learning how to ride a bicycle. But not everyone thinks such an explanation is unnecessary, perhaps because not everyone sees the identity of means and ends. This is why Piaget, as was noted, is criticized for not attending to the motivation for development. Why, the critics ask, does conflict lead to change? The question being asked, note, is not a question of why or how a person may be tempted to get on the bicycle in the first place, a question of no interest to the honest questioner, who does not attempt the often futile task of trying to arouse the students' interest in a subject in which they have none. Honest questions do provoke conflict. That they do, almost invariably, is simply a consequence of the fact that few persons are in possession of sets of beliefs which have been carefully formulated and examined for consistency. (4) The conflicts which result are <u>moving,</u> and that they do prompt change is explained as either a function of sheer cognitive conflict-- the recognition of inconsistency between two beliefs as Piaget might put it, or as a function of what might be called by Rogers affective conflict, that is a recognition of conflict

between my self-concept (that I am a reasonable person), and my perception that my beliefs are inconsistent so that, therefore, I cannot be so reasonable after all.

If I want to ride a bicycle and I try to correct my mistakes, I will probably learn to ride a bicycle. If I wish to be rational and I recognize and try to correct my mistakes, then I will probably move in the direction of greater rationality. The wish to be rational is the motive for rationality, and, logically, there can be no other motive for it. The teacher's promise of gold stars will not produce greater rationality, and will completely subvert it. If integrity of means and ends is to be preserved, as it must be for the sake of rationality, then this is the only motive to which she can appeal. A further point to be noted is that the answer to the question "why the student learns?" is also the answer to the question "what does the student learn?" that answer being, "to resolve conflict."

Aristotle wrote that in dialectical reasoning one must begin with what was familiar, with what is prior in experience, but that the teacher should begin teaching from the first principles of the subject. Piaget, like many others who advocate a learning by doing, rejects the second half of the claim in favor of the first half.

Do not, he says, axiomatize too quickly. Honest questioning observes this injunction, and it is, consequently, an informal way of teaching students. That is to say, the students are asked to think about what is familiar to them, and only gradually are they led to articulate principles implicit in their thinking. The students are learning skills, but always in context.

This teaching in context approach was defended as sound pedagogy. But there is another reason why skills should not be taught in isolated fashion. The proper end of reasoning is rationality, but to teach reasoning skills in isolation is to teach them as means which can be put to any end, and is to encourage sophistry. (5) The skills of the surgeon are not taught outside of the context of their proper use, which is healing. The skills of the lawyer are not taught within the context of their proper use, which might conceivably be that of justice. To teach reasoning skills in isolation is to teach them as the skills of the lawyer are taught, rather than as the skills of the surgeon are taught.

Although I claim much for honest questioning, I am not claiming that it is sufficient for either the acquisition of knowledge or the development of rationality. There are limitations to what it can do, and these limitations come from several sources. There are,

first of all, those quite arbitrary learnings which are simply associative and to be remembered. The alphabet and the digits are prime examples, and the category as a whole is the category of names. Whatever is the most efficient way to learn these conventions which make knowledge possible, honest questioning has little or no contribution to make. Nor can motor skills be learned in a dialectical way. If names are to be learned, if typing or throwing a ball are to be learned, then the learner must have a reason to learn them. And this cannot be given by the teacher. A teacher may state a reason why the student should learn, but unless the learner sees that reason as a reason, he doesn't have a reason. (Obviously, from what was said earlier, the best reason to learn is that he wants to.)

Honest questioning is, furthermore, not the way to transmit quantities of information to the student. I do not deny that having information is one condition of effective rationality: the ignorant person cannot be rational. But, as stated in the introduction and in the chapter on Piaget, the teacher is not the most efficient transmitter of information, and other means, which are readily available, should be put to that end. (6) Nor is honest questioning to be considered in any way a substitute for experience, whatever one may mean by

that. It is not a substitute for experience in the sense of that which yields information. And it is not a substitute for experience which is productive. The point I wish to make is not that honest questioning is all there is to teaching. It is rather that whether the students are doing something else, and whether the teacher is working with the whole group or the individual, if language is being used, then more often than is now the case, and more often indeed than not, honest questioning is the form that language should take.

Which brings me to the consideration of the ways the effects of honest questioning are limited by the skills of the teacher. A teacher may wish to ask honest questions but be unable to do so, or be able to do so, but badly. A teacher cannot expect to get far if her only response to whatever the student says is, "can you tell me what you mean by that?" no matter how honestly she asks the question. Nor will it do to ask a student who has never heard of them if he thinks he has stated necessary and sufficient conditions. Within the category of questions that may be called honest, there will be good questions and bad ones. Good ones will be skillfully phrased in words students can comprehend, will reflect the structure of the subject matter, and

will not be all-purpose questions but will be specifically tailored to fit what the student has said.

If the honest questioner is to be skillful, she be capable of treating others as ends in themselves. She will be open, honest, nondefensive, which is to say she will possess the characteristics of mental health and the skills of a good inquirer. She will also be knowledgeable about her field, having a feeling for its structure, and will be able to recognize coherence or the lack of it. Few teachers or teachers-to-be could satisfy these conditions. However, a teacher who is concerned enough about her students to make a serious effort to find out where they are, already satisfies at least some of the conditions in incipient form and will do her students some good. She will undoubtedly prompt them to do some thinking. Furthermore, if she has a good intelligence, her efforts will yield fruits in terms of her own understanding of her own discipline. (7) The claim so often made by teachers that they learned more from their students than their students learned from them sounds fatuous. Nonetheless it is true that honest questioning will yield benefits to the teacher as well as to the student. By inquiring, the teacher will learn how to be an inquirer, and she will learn something about reasoning by reflecting on the

student's reasons. The only means to the end of learning to ask good honest questions is asking honest questions. The teacher as well as the student learns what she is doing by doing it.

Given the perfectly rational teacher, the student perfectly capable of achieving rationality, and endless time, honest questioning would produce rationality in the student. That is the ideal account, but not the account of honest questioning as it occurs. In practice, honest questioning is not sufficient to produce rationality. The capacity for rationality of both teachers and students, never perfect to begin with, has been affected by the circumstances of their lives, and their time together is short. The teacher will not be perfectly rational, and the student will not be perfectly capable of achieving rationality.

The student may have emotional difficulties of one sort or another, of one degree or another, which the honest questioner in a classroom setting may or may not be equal to dealing with. There are the emotional difficulties experienced by students who are enrolled in classes against their will, and the honest questioner may not be able to make much headway with them, particularly when there may be no good reason why <u>that</u> student should take <u>that</u> course. Even if there is a reason for

the student to take the course, it may be too much to expect that he accept it as a reason, in which case, requiring him to take the course is requiring him to act without reason. (8) These sorts of problems are the result of the way schooling has been organized, and they are not problems the honest questioner can resolve. Other sources of emotional difficulties are mistrust, shallow or deep, which may or may not be quickly let go. Honest questioning, like a knife, can be perceived to have the characteristics of a tool and a weapon. It can be seen differently by different students. A student who has had much experience being "put down," may see the honest questioner as an attacker. Sometimes honest questioning will be ineffective in the face of the anxiety or hostility of students who simply do not like a non-authoritarian teaching style. There are students who would rather the teacher lecture, but student preference does not itself justify lecturing. The student may dislike school and find it is a lot less trouble if the teacher just says what she wants. The student who prefers to be passive is a student only in name, and the passivity should be considered to be a symptom of a problem. (9) Emotional difficulties are present and make their presence felt in any classroom, whatever techniques the teacher employs. Honest

questioning bears more than an accidental resemblance to certain techniques of psychotherapy, and as is the case with psychotherapy, its success cannot be guaranteed.

The effectiveness of honest questioning will also be limited by the innate capacity for rationality of the student. It is not clear to me what it means to speak of innate capacity for rationality, yet I believe there are differences in such capacities, differences which can be accounted for by genetic makeup or physiological accidents. What is clear to me, however, is that the presumption should always be on the side of potential rationality. All persons, no matter what their innate capacity, must be given a chance to speak for themselves. Regardless of what their innate capacity is, honest questioning is a way to develop that capacity.

Although much of my argument for honest questionin is an argument based on the nature of rationality and on ethical principles, and does not, therefore, include claims which could be submitted to empirical test, other portions of the argument do include such claims. No claim is being made that students in courses in which the teacher uses honest questioning will acquire more information than students in more traditional settings, but the claim is made that as a result of honest questioning, students will learn

to reason better and will learn how to justify beliefs. How could this claim be evaluated? It would not be appropriate to compare the reasoning skills and the inquiry skills of students taught logic, for example, in traditional ways with the reasoning and inquiry skills of students taught using honest questioning. If such a comparison were to be made, critics could reasonably object that what was taught in the two courses was not the same. The student who learned in the traditional way would, presumably, have been taught some of the formal principles of reasoning, while the student who has been exposed to honest questioning will probably not be explicitly familiar with these principles or with the vocabulary of logic, although explicit knowledge of this sort may be an <u>eventual</u> outcome of honest questioning. The student taught in the traditional way will not have had much chance to construct arguments to support his own beliefs, and if he has, then he has been exposed to something similar to honest questioning. If a test is valid, it has to test what has been taught. On the assumption that what is taught is in part a function of method, it follows that the test format has to resemble the teaching format, and it follows again that it is not possible to construct one test to evaluate different teaching techniques. Certainly an objective test would

not be a suitable test of the effects of honest questioning. What one would want to know is the student's reasons for his answers and these could not, in principle, be anticipated as a series of choices, "a" through "e". One could ask students from a traditionally taught group to give reasons for their answers, but since they would not have had practice doing so, the test would be unfair to them. The problems of evaluating the effects of honest questioning are the same as the problems of evaluating what a person knows, in the strong sense of know. One cannot evaluate what a person knows unless one learns his reasons. As he provides these, his beliefs are likely to change. These problems provide a further illustration of a point made throughout this conclusion: that means and ends not only ought not be separated, but in some sense cannot be separated. (10)

The same comments would have to be made of course, if the teacher wished to evaluate, not the program, but the student. Whether she wished to find out what he knew, or how well he could reason, she would have to evaluate by essay exams or oral exams. Since there are standards of reasoning, an examiner who was in possession of these standards, could <u>approach</u> an objective judgment of the student's reasoning ability. I say

"approach" only, since it is well to bear in mind, as an honest questioner, that there will be times when it is not possible to say with certainty of a given answer that the student does or does not hold it for good reason. (11) But this lack of certainty does not mean we cannot make good judgments, only that we must recognize that judgments are, at least sometimes, provisional.

Clearly, if the effects of honest questioning on student learning can only be evaluated by honest questioning, honest questioning will be expensive to evaluate. That fact will likely cause people to wonder if it can be considered a practical technique. Other considerations will cause some to question the practicality of honest questioning. For example, there are those, teachers and parents alike, who will say they value discussion, but that, given all the information students have to acquire, there can be no time for it. Honest questioning, like all discussion, is time consuming. But I have already argued that the teacher is not efficient as a transmitter of information, so that it is not practical for her to lecture students. Furthermore, if one interprets "practical" to mean practicable in the real world, then honest questioning seems to provide a kind of training far more practical

than that provided by lecturing and objective tests, for one rarely has to listen to lectures or take objective tests in the real world. In many occupations, one does have to participate in discussions, and the more effectively one can make one's point and grasp another's the better. It is difficult to think what could be more practical than learning how to use the language skillfully.

In another sense of practical, this proposal on behalf of honest questioning is not intended to be practical. It is not proposed in the expectation that it will change educational practice, but is offered, frankly, as an ideal. Honest questioning is an ideal, derived, as any ideal is, from a model. Up until now, the relationship of the authoritarian father to his child has served, more often than not, as the model for the teacher/student relationship. Ideally, the father or teacher has been able to exert extensive control over the compliant child or student. (12) The model is still acceptable to many, and the schoolroom is the scene of a daily struggle for control. Obviously, the model is not acceptable to me, for reasons implicit in what has been said. The model from which honest questioning is derived is the model of good conversation between equals. It is an adaptation of that model which takes

into account the ways the participants, teacher and student, are not equals. In the ideal conversation there is a turn-taking, and only to the degree that people share a background of training and information and have assured themselves that the other participants know what they are talking about, do they permit themselves to make extended statements. In an ideal conversation, participants are sensitive to the possibilities of misunderstanding. Ideally, the less well conversants know each other, the more careful they are to corroborate interpretations and the more their interaction approaches honest questioning. (13)

To say that honest questioning is an ideal towards which teaching might be directed, is to acknowledge again what has been already acknowledged, that it cannot be achieved. The schools will never be filled with ideal honest questioners, and in fact there will never be one ideal honest questioner. An ideal honest questioner would be perfectly rational. Honest questioning is an impractical ideal in the way any ideal is impractical. Just as it does not count against a religious ideal that it is unattainable, it does not count against this account of honest questioning that it describes an unattainable ideal. Nor does it count against honest questioning that it is not a foolproof

method for bringing another person to knowledge or to rationality.

I have shown that honest questioning is not sufficient to produce rationality or knowledge in another, and now admit that it is not absolutely necessary either. That honest questioning is not absolutely necessary if a person is to acquire knowledge or become rational is attested to by the fact that many human beings have acquired some knowledge and many have developed some of their capacity for rationality even though few have been exposed to honest questioning. However, few come to know as much as they could or develop their capacity for rationality to the fullest extent. It is reasonable to suppose that the amount of knowledge we acquire and the degree to which we become rational depend to a great extent on the kinds of encounters we have with other persons. More particularly, it is reasonable to suppose that, other things being equal, rationality is likely to develop better when one is exposed to models of rationality and when one is treated as if one possessed the capacity for rationality than when one is not so exposed or so treated.

What has been said here about honest questioning and rationality may be summarized in an analogy.

Becoming rational may be compared to learning to run well. One learns to run well, if at all, by running. One becomes rational, if at all, by trying to be rational. But the image of the person learning to run is not the one that best represents the idea of the person becoming more rational, for running is, essentially, a solitary activity, while rationality is, essentially, the skill of a social being. Perhaps a better image for the person in process of becoming more rational is the image of the person learning to dance with partners, an image which brings the function of the honest questioner into clearer focus. Conceivably, one could learn how-to-dance-with-partners, even if one had no partner, by following directions shouted at one by a teacher standing on the sidelines, but how much better one would learn from the teacher who joined one on the floor, who taught one to dance with a partner by being a dancing partner.

1. Quite naturally teachers assume a discussion will be about the reading students have been asked to do. But too often what students have read is or pretends to be nothing but a compilation of information (as in textbooks), and as such, it is not discussible. Or, if the students have read what is discussible, it is too remote from their experience for them to be able to discuss it: they don't really know what it is about yet and may be able to do little more than disagree or agree with isolated points. A teacher who insists on trying to get students to talk about the book is, in many cases, going to be disappointed at the results. Few people can discuss what is very unfamiliar to them. Few have much of a feeling for the purposes of a discussion. In particular, few think of a discussion as an occasion to try out one's ideas so that their shortcomings might become visible, or as an occasion on which ideas new to all participants might be germinated. If one seriously wishes to engage in discussion, it is sensible to try to find out what participants are prepared to talk about, in both senses of prepared. If participants do not <u>have</u> a problem, there is little to talk about.

2. It may be that integrity of means and ends exists even though the teacher might not wish it. That is to say, a teacher who assigns a workbook to her students might not think of herself as teaching students how to do a workbook: that is not the end she has in view, but it may be exactly the end she achieves. To put it a bit enigmatically, the teacher is teaching exactly what she is teaching. There is indeed transfer of learning, and part of what gets transfered is a way of looking at the subject that was embedded in the medium in which it was presented. If the teacher wants to teach students to reason as well as how to reason, it will not do to have them memorize principles of reasoning.

3. Questions along the lines of "why do you think that is so?" are ambiguous as they stand. They can be interpreted to be questions about the world or questions about the thinking process. I would like to propose, as a hypothesis to be tested, that students exposed throughout schooling to honest questioning might move from understanding questions of this sort as questions about the world to understanding them as questions about the thinking process, and would be more likely to do so than students not exposed to honest questioning. The students exposed to honest questioning would have

learned to be more reflective and aware of their own mental processes. Cf. Piaget's idea that we project our mental constructs, as of causality, for example, onto the world and think they exist out there.

4. An individual mind may be thought of as a more or less organized world view. As a result of cognitive conflict this mind is brought into greater congruence with the 'public mind', that is, with the better organized world view which is what we call public knowledge.

5. See John Wild's interesting paper, "Plato's Theory of Techne a Phenomenological Interpretation." "Rhetoric may use cultural knowledge and command of language not for its proper end, the instruction of an audience, but rather for mere pleasure. Finally sophistry may devote considerable logical skill and information to produce the pleasing appearance of knowledge, a mere byproduct rather than knowledge itself, the real product. Such distortions find an apology in the doctrine of 'the relativity of ends,'" which doctrine, says Wild, is false. Philosophy and Phenomenological Research I (March, 1949). Reprinted in Readings in the Philosophy of Education, ed. Malcolm Carron and Alfred D. Cavanaugh (Detroit: University of Detroit, 1963), p. 134.

6. There is a further point to be made about information, one far too complex to be explored in detail here and that is the question of what counts as information to a given person. Is any proposition, the truth or falsity of which may be ascertained, to be considered information? In an objective sense that may be so. But one may also ask whether it makes more sense to think of information as a proposition which can be understood in the light of what a person already knows. Must a person be in a state of ignorance rather than a state of nescience with regard to a given proposition if it is to count as information for him? D. W. Hamlyn makes a related point about information, although with a different end in mind, when he asks: "how can what is 'given' constitute information if it does not already presuppose concepts? "Epistemology and Cognitive Development," in Cognitive Development and Epistemology, ed. Theodore Mischel (New York: Academic Press, 1971), p. 14.

7. Mary I. Yeazell studied a group of teachers

who were trying to teach philosophy to grade school students. She wished to learn whether teachers improved their own critical thinking abilities while trying to foster them in students. She concluded that "the data indicate that no significant change occurred in critical thinking skills, . . ." "What Happens to Teachers Who Teach Philosophy to Children?" Thinking, The Journal of Philosophy for Children 2 (1981):88.

8. It is precisely because the young cannot always be expected to see the reason or to accept the reason as their reason that it is so important that the young learn that adults are trustworthy. The young person who has learned to trust adults can trust that it is in his best interest to take a course, that it will help him to achieve his goals. He will trust that the demand that he take a given course is not an arbitrary obstacle in his path even if he cannot see how it fits.

9. "Not only is the dogmatic person unable to learn effectively in conditions of novelty, he is also swayed in his judgments by the contradictory judgments of high-status persons . . . The implications of conformity on the part of dogmatic persons were authenticated by Zagona and Zurcher (1964) in observational evidence, gleaned over four months of contact, to the effect that in small groups, dogmatic persons are leader oriented, unspontaneous, and prefer lectures to class discussion." Salvatore Maddi, Personality Theories . . . p. 475.

10. For discussions of the literature on the effects of teaching methods on student achievement see David C. Berliner and N. L. Gage "The Psychology of "Teaching Methods," The Psychology of Teaching Methods. Seventy-fifth Yearbook of the National Society for the Study of Education, pt. 1, ed. N. L. Gage (Chicago: University of Chicago, 1976), pp. 1-20.

11. Compare Martin Buber, who tells us "all objective knowledge about a human being is knowledge about his past, of what he has been rather than of what he is. . . . Genuine listening does not know ahead of time what it will hear; in the full uniqueness of the present it listens to the speech of the other without filtering what it hears through the screen of its own prejudgments." Encyclopedia of Philosophy, s.v. "Martin Buber," by Michael Wyschogrod.

12. James McClellan writes that efforts to reform education have never had much effect and that this fact "validates the contention that in most times and places schools exist to perpetuate a given social order rather than to educate men and women to the status of rationality." "Dewey and the Concept of Method . . ." p. 218.

13. Different writers come to mind, making points related to the one I make although in different ways. Brian Crittenden has this (and more) to say about the inequality of the teacher student relationship: "It is suggested by S. I. Benn that 'the distinctive feature of rational persuasion is that it invites and responds to criticism'; it is 'therefore essentially a dialogue between equals'. If this account is taken literally, we must rule out the practical possibility of rational persuasion in education (at least a considerable part of it). For students are usually not equal to teachers, assuming that the latter are competent in relation to the subject matter and methods of argument. However, I think that Benn's description of optimal conditions for rational persuasion can, and should, be applied with some modification to the role of teacher." Education and Social Ideals, p. 117.

Michael Oakeshott refers to the "conversation of mankind," which takes place in various modes, i.e. the various disciplines. He speaks of education as initiation into that conversation. What one is learning in school is a set of different languages so that one may join in that conversation. Honest questioning is a way of conversing and a way of initiating persons into the ways of conversation.

See also "The Psychology of Social Consciousness," George Herbert Mead, originally published in Science 31 (1910):688-693, and reprinted as "Language as Thinking" in Thinking, The Journal of Philosophy for Children 1 (May, 1979):23-26. "Education. . .is conversation--belongs to a universe of discourse," Mead claims, in arguing for disciplined dialogue in the classroom.

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The final copies have been examined by the director of the issertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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