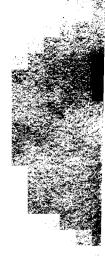
PROCEEDINGS AND ADDRESSES OF THE AMERICAN PHILOSOPHICAL ASSOCIATION

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I came to pose another for them that proved the key. I asked them which combination would they want for themselves? All but one wanted the best holdings. The other one wanted to own the mortgaged property since the richer players would then try to get them through negotiation and they would consequently become worth a lot.

Since everyone wanted the same lot in the game, it made sense to ask them how to decide which one of them would get it. We were able to discuss distributing it according to gender, skill level at Monopoly, skill level at solving logic puzzles, and according to a throw of the dice.

They did not like doing it according to gender, though this did provide an opportunity for a prolonged discussion of sex discrimination. They also rejected a distribution according to skill at logic puzzles, since they did not see the relevance that it had to Monopoly. In fact, they were not too sure that Monopoly involved any skill at all beyond mastering the rules. They seemed to see it as a matter of chance as to who would win, even though I assured them that I had secret information as to their relative ratings as Monopoly players. They wanted equal chances to get the best holdings, and so they decided to throw the dice. This, in turn, led to a discussion of what equality meant.

One thing that became clear in the course of the discussion is that they thought that people should be rewarded in life according to their accomplishments. Now we had a setting to raise the Rawlsean point about how to treat those whose accomplishments were not socially cherished. Most of the students felt that those without socially rewarded skills should get extra opportunities to develop new skills. This seemed to lead them into accepting Rawls's contention that a just society would provide some form of social insurance for those at its bottom. I pointed out that the students were shifting from their previously held position. They were not holding that society should not be fair, as the term was previously defined by them, since society should reward those without skills a little bit more than it rewards those with skills. The rules do this by providing extra opportunities to acquire skills to those who now lack them. We were also, at this point, able to discuss the difference between Monopoly and the countries that they were creating, by posing the question of how else to measure welfare than by looking at cash and property. This phase concluded our game.

I am by no means satisfied that I have approached the Rawlsean concept of the original position and of distributive justice in the best way, and I invite others to refine the game. But I definitely feel that the exercise that I have described is a major step in that direction.

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CRITICAL THINKING AND COGNITIVE DEVELOPMENT

At least one of the goals of philosophy education at all levels, but perhaps especially in elementary and secondary schools, ought to be the fostering of the

students development of analytical and critical thinking skills. This might come about in courses in general philosophy, in philosophy units that are parts of courses in other subjects, in ethics courses, or in courses explicitly devoted to critical logic. [1] In this brief note, I want to call attention to a theory of cognitive development that, while it is most approriate for college students, is also relevant to "pre-college" students; to discuss its implications for critical thinking programs; and to offer some suggestions for further reading for teachers concerned about these implications.

William G. Perry's scheme of cognitive development (Perry 1970, 1981) is a descriptive theory of stages that represent students' changing attitudes towards knowledge and values as they progress through their education. There are nine stages, which fall into four groups. (I shall discuss the first four positions in more detail than the others, for reasons that will become apparent.) [2]

I. Dualism

Position 1. Basic Duality: Students at this stage believe that there are right answers to all questions, that the teacher is the authority, and that their (the students') job is to learn the right answers.

Position 2. Dualism: Students move to this stage when faced with alternative opinions or disagreements among teachers. They see the purpose of education as learning to find the right answers.

Dualistic students prefer structured classes, which they see as giving the right answers, Conflict between teacher and text or between two teachers are seen threateningly as conflicts among authorities.

II. Multiplicity

Position 3. Early Multiplicity: Here, the student has moved from the narrow dualism of seeing all questions as having right and wrong answers to a wider dualism of classifying questions into two kinds: those where teachers know the right answers and those where they don't know the right answers yet. Concerning the latter, the teacher's role is seen as providing methods for finding the right answers, rather than as giving the right answers directly.

Position 4. Late Multiplicity: As the student moves along, chronologically or cognitively, he or she begins to see the second kind of question as being the more common one. Since, it is felt, most questions are such that teachers don't have the right answers for them, "everyone has a right to his own opinion; no one is wrong!" (Perry 1981:79). The teacher's task, then, is seen either as teaching how to think or, worse, as irrelevant.

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III. Contextual Relativism

Position 5. Here, students have begun to see that teachers aren't always asking for right answers but, rather, for supported answers. The second category of questions has become the only kind of question (except, "of course," in mathematics and science!), but while there can be many answers for each question, some are better (more adequate, more appropriate, etc.) than others.

IV. Commitment Within Relativism

Positions 6-9. These stages characterize students as they begin to see the need for making their own decision (making commitments, affirming values), as they balance their differing commitments, and as they realize the neverending nature of this process.

Finally, there is evidence that a student at Position x will not understand-will literally not be able to make any sense out of-instruction aimed at Position x+2 (or beyond); conversely, students at higher levels are bored by instruction aimed at lower levels.

Perry's theory is far, far richer than I have portrayed it here, and the interested reader is urged to follow up the suggested readings. [3]

Before I draw the promised implications for teaching critical thinking, let me offer a useful anecdote (adapted from Perry) for illustrating the scheme. Suppose a teacher presents three theories for explaining some economic phenomenon. The Daulistic student will wonder which is the right one (and why the teacher bothered to talk about the wrong ones); the Multiplistic student will think, "Only 37 Heck, I can come up with 6!"; the Contextual Relativist will wonder what advantages each theory has; and the Commitment-oriented student will be wondering about how to decide which is most appropriate.

Data from several studies across the country indicate that most entering college freshmen are at Positions 2 or 3 (cf. Perry 1970, 1981; Copes 1980). It seems to follow that most high school juniors and seniors would be at Positions 1 or 2 [4]

Courses designed to teach critical thinking skills that are aimed at students from the last two years of higher school (or earlier!) through the first two years of college are thus dealing with Dualists and (early) Multiplists, and this can result in several problems that the teacher must be aware of in order to foster the students' development along the Perry scheme.

First, Dualists want to be told the right answers. But critical thinking courses are largely involved with criticism (especially those stressing the fallacies approach). Accordingly, the entire activity may appear to them as incomprehensible at worst and pointless at best, or may simply result in the students learning the "sport" of "dumping" on "bad" or "wrong" arguments. Hence, such courses must be more than mere criticism courses—they must make a serious attempt to teach ways of constructing arguments, solving problems, or making decisions. In this way, they can offer an appropriate challenge to Dualistic students, especially if couched in a

context of adequate "support". (For details and specific advice, see Sanford 1967, Ch. 6, esp. pp. 51-52; and Cornfeld and Knefelkamp 1979.)

Second, as Goldberger (1980: 7) observes, "The highly logical argument that, 'since everybody has a right to their own opinion, there is no basis for rational choice' is very typical of Multiplistic students. Now, another goal of many critical thinking courses is precisely to provide bases for rational choice-logical validity, inductive strength, etc. Accordingly, Multiplistic students either will not comprehend this goal or will view it as pointless. Again, such a course can be appropriately challenging to the students, but the instructor must be aware of how the students are likely to perceive it--to "hear" students' negative comments not as marks of pseudo-sophistication or worse, but as marks of viewing the world Multiplistically.

Finally, consider the concept of logical validity. As Larry Copes has urged, [5] it is a "relativistic" concept: A "valid" conclusion is one that is true relative to certain premises. Dualistic students searching for absolutes and Multiplistic students feeling that "anything goes" may not accept, like, or understand validity. This may explain why so many students believe that arguments with true conclusions are valid or that valid arguments require true premises—even after having dutifully memorized the definition!

How can a teacher simultaneously challenge students in order to help them move to a higher-numbered stage, yet not threaten them, especially when a given class might have students at widely varying stages? One suggestion, based on work by Knefelkamp, is to create assignments that can appeal to students at several levels. Consider the following writing assignment given to a class that had just read Turing's article on what is now known as the Turing test.

ASSIGNMENT: Write a 1-2 page description of the Turing test, plus

- either (a) a description of one of the essays about the Turing test in The Mind's I
- or (b) your reply to the following objection: "According to Turing, a computer can think if you think it can think; but you may be mistaken",
- or (c) your objections to the Turing test, together with your guess at how Turing would have responded.

Option (a) is reasonably "objective" and should appeal to Dualistic students, at the same time forcing them to do a bit more than merely summarize the original article. Option (b) is more challenging, and should appeal to Multiplistic students. Option (c) calls for more creativity, and should appeal to students who range from Late Multiplicity to early Contextual Relativism. If left to their own choices, students will choose the least challenging assignment commensurate with their current stage. Thus, students need not be threatened by an assignment that they perceive as being too difficult or even unintelligible. But each student could then turn in as a second assignment, or as a revision of the first, the next "higher" option. Alternatively, the set of options for the next assignment could start out at a slightly

"higher" level. In this way, the student is encouraged to strive for a bit more, thus, hopefully, beginning the move to the next stage of cognitive development.

We who teach such courses must learn how to challenge our students appropriately in order to foster their intellectual "growth"; we must learn to "hear" how our students inevitably make their own meaning out of what we say to them; and we must be ready to support them in the ego-threatening process of development.

Notes

- [1] Such courses, incidently, are best handled *contextually*; see Rapaport 1979 and Paul 1982.
- [2] My descriptions are culled from Perry 1981, Cornfeld and Knefelkamp 1979, and Goldberger 1979. These are three essential readings for anyone concerned with implications and applications of Perry theory in the classroom.
- [3] A useful survey of *criticisms*, together with a discussion of the relevance of the theory to mathematics education, is Copes 1980. On a grander scale, the relevance of the theory to the history of mathematics and to philosophy is discussed in Copes 1980 and in Rapaport 1982.
- [4] Cf. Clinchy et al. 1977. Possibly, college freshmen are at Position 2 because high school teaching is Dualistic. If high school education were more challenging—as philosophy courses, ideally, should be—perhaps more students would enter college at higher Perry Positions and get more out of their education.
- [5] In conversation.

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NOTE: Further bibliographic material on the Perry scheme is available from the Institute for Studies in Educational Mathematics, 10429 Barnes Way, St. Paul, MN 55075. The *Informal Logic Newsletter* and its successor, the *Journal of Informal Logic*, are invaluable resources for teachers of critical thinking courses at all levels; they are available from the Department of Philosophy, University of Windsor, Windsor, Ontario, N9B 3P4, Canada.

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SPECIAL ANNOUNCEMENT CONCERNING APA COMMITTEES

The Board of Officers invites members of the Association to recommend persons for consideration as nominees to national APA Committees. At its meeting in October 1979 the Board established a Committee on Committees charged with preparing lists of nominees for Committee vacancies. These lists will be drawn from names suggested by members, names proposed by Committee Chairs, and names obtained from other sources. Each year the Board will review the lists and make final decisions at its annual meeting in October. To assist the Committee on Committees, members are encouraged to suggest themselves or other members for consideration. The suggestions, which should include a description of the person's qualifications, are to be sent to the Executive Secretary who will forward them to the members of the Committee on Committees.

The following information may be of interest:

- There are thirteen committees of the Board. Five are standing committees; the chairs of these committees sit on the Board of Officers.
- The Board committees do not include Divisional executive committees, program committees, or nominating committees.
- 3) Committee chairs serve five-year terms; other members of committees normally serve three-year terms. Committee terms begin July 1. Nominations to fill vacancies are made by the Board at its meeting in October of the preceeding year.

Thus this invitation to members is designed to obtain recommendations that the Committee on Committees may use to help prepare slates for presentation to the Board at its meeting in October 1984. At that meeting the Board will nominate members for terms beginning July 1, 1985.