Games, Logic and Philosophy for Children

There is at this point no shortage of testimonials regarding the practice of philosophy for children. In addition, there have been a number of studies which give further support to the claim that philosophy for children is a valuable classroom practice. The idea that pre-college instruction in philosophy is beneficial is no longer in doubt, nor is there a significant lack of materials for use in philosophy for children programs. From Lewis Carroll to Matthew Lipman authors constructed texts that go far in engaging children's philosophical inclinations. If there is any weakness in the practice of philosophy for children it is usually found in the individual classroom.

There are several reasons why students may fail to perform or learn well in a philosophy for children situation. The first and most obvious factor is poor preparation of the instructor. Few adults are so philosophically sensitive that they can pick up a copy of *Harry Stottlemeier's Discovery* and cause children to experience significant improvements in reading, writing, arithmetic and reasoning. Apparently, even teachers who lack sufficient philosophical preparation can positively affect a child's response on certain creativity scales, but in general the key to success in making a philosophy for children program work lies in providing teachers with adequate preparation in formal philosophy as well as in curricular techniques for releasing in children their natural tendency to philosophize. As a result of personal experience and conversation with other successful practitioners of the craft, we have concluded that a philosophical preparation for pre-college instructors of philosophy should include instruction in philosophy of mathematics and science, contemporary ethical theory and the traditional studies of metaphysics, epistemology, axiology and logic.

A second reason for poor performance in a philosophy for children setting is a simple lack of talent on the part of the teacher. This lack of talent can manifest itself in many ways and can result from many causes. In some cases, the instructor's lack of talent and the cause thereof can be identified and irradicated by receiving training from specialists in philosophy for children or relevant areas in psychology, sociology and instructional technique. In other cases there seem to be occasions in which a particular individual may suffer from such an intense or extensive psychological or cognitive deficiency that efforts to remake the instructor into a competent practitioner of the craft become impractical.

A third reason for a failure of a philosophy for children program is the teacher's reluctance to teach the less interesting aspects that make up the foundation of competent philosophizing. For example, a teacher may be sufficiently prepared to teach philosophy but because he thinks the students will not get as excited about constructing Euler diagrams or formal syllogisms as they will about discussing the mind-body problem, he may ignore the subtler fundamentals of sound reasoning and do no more than promote enthusiastic chatter among the students. In such cases the students will generally not learn much but they will have fun. There is nothing wrong with students having fun, but then again there is nothing wrong with students having fun *and* learning specific reasoning skills at the same time. Too often the teacher who opts for such pointless chatter does so because in the end he knows he will be judged by his superiors solely on the basis of whether or not the children enjoyed themselves and refrained from behaving in a rowdy and uncontrollable manner. In such cases the children's opportunity for learning is quickly overshadowed by the teacher's desire to please an administrator.

Fourth, instructors in philosophy for children classes must adjust their teaching strategies according to the age, philosophical background, and cognitive abilities of the students. For example, there is no reason to assume that philosophy for children need be restricted to the so-called gifted classes. With prudent curricular adjustment, we have found that all students can benefit from and transfer skills learned in a philosophy for children program to their studies in other areas of the academic curriculum. The curricular adjustments referred to above include philosophizing about experiences occuring in the child's life as a basis for analyzing or examining broader issues studied in content courses. For example, one group of second graders had been studying dinosaurs with their teacher. One of the authors of this paper subsequently engaged the students in a discussion of "time" by using dinosaurs and man as reference points and having the instructor translate student notions into a self-consistent system. Even at the tender age of seven, the students excelled in thinking about time, as evidenced by their analyses which were most perceptive and consistent. There is something of a walk-before-you-run assumption underlying this example. Students, it seems, are capable of working with sophisticated ideas like time but on their own terms and at their rate. The teacher, therefore must adjust to the student's ability by adopting the additional role of a tour guide, moving students toward greater clarity when forming ideas about their immediate world.

In short, there are at least four factors that inhibit the potential of a philosophy for children program: first, lack of teacher training in philosophy and secondarily lack of teacher training in appropriate instructional techniques; second, lack of teacher talent; third, overemphasis of the discussion-fun aspect of philosophy for children to the exclusion of training in reasoning skills; and fourth, inability to adjust the program to meet student proficiency.

One of the authors, a philosopher, began teaching philosophy for children in the elementary schools in Columbia, Missouri in 1976. Now, after nearly eight years of work with elementary school age philosophers, his teaching experience and formal research have resulted in his acquiring some procedures for avoiding some of the pitfalls mentioned above. Several years ago the second au-



thor, a linguist and reading curriculum specialist, became interested in the practice of philosophy for children and since that time the two have been working in concert to develop some procedures for enhancing the practice of philosophy for children. In particular the two have worked on procedures that mitigate to some extent the pitfalls resulting from deficiencies mentioned in two and three above. One procedure the two have constructed involves introducing second and third grade students to a programmed text in some of the rudimentary notions of formal logic procedures for increasing student reading and reasoning abilities. The second procedure, and one which can be employed at all grade levels involves using games of formal reasoning to augment instruction in philosophy for children. Specifically, the games employed for these purposes include the following: *On Sets*, *WFF n Proof*, *Queries and Theories* and *Mastermind*. The first three games can be purchased through the Academic Games Corporation in California or through any specialized game store. *Mastermind* has long been available in most toy, discount and department stores. The skills students learn through supervised play of *Mastermind* have been outlined elsewhere.[1] Suffice it to say that most of what is said below in favor of the other games can be said about playing *Mastermind* as well.

There are two principle reasons for using the above mentioned game as a means of augmenting a philosophy for children program. The first reason is that by engaging some students in the play of an intellectually challenging game you can "do" philosophy with a small group of students.[2] There are many studies, for example, Musgrove, 1975 and Cartwright and Zander, 1968, that show that large groups, say twenty or more, inhibit the benefits discussion participants can derive from the activity. Since so much can be potentially derived from a philosophic discussion, it is extremely important that everything be done to minimize any factor which naturally tends to delimit the benefits of a discussion activity. In a class of twenty or more students, much can be gained by assigning two to seven students to various game activities and instituting a philosophic discussion with seven to twelve other students. By minimizing the number of students participating in a philosophic discussion, each participant is more likely to have his wits fully engaged by the activity. Thus when actually "doing philosophy" with the students, the small group format insures that each student has an optimal opportunity to benefit by the experience.

The second reason for using the games mentioned above to augment a program in philosophy for children is that the games contribute to the development of many of the same skills in reasoning as those addressed by philosophizing. For example, the game of *WFF n Proof* teaches symbolic logic using Polish notation. Research studies in the past have indicated that by playing *WFF n Proof* children experience significant benefits in terms of reasoning ability.[3] Through demonstration sessions instituted as part of a university graduate class entitled "Games, Logic and Giftedness" offered here at the University of Houston — Clear Lake, it has repeatedly been shown that students from the third grade on can enjoy and benefit from playing one of the twenty plus levels of *WFF n Proof*. As in philosophy for children, a primary function of *WFF n Proof* is to draw students' attention to the function and nature of systematic reasoning. Similarly, students who play *On Sets* routinely become very systematic in their understanding of the same-different notion which is so central to Matthew Lipman's first text in elementary school philosophy, *Harry Stottlemeier's Discovery*. The makers of *On Sets* claim that *On Sets* teaches the fundamentals of set theory. And, the same-difference discussion which occurs in *Harry Stottlemeier's Discovery* is typically employed to draw students' attention to the way in which we organize our thoughts about all things occurring in our world. In each case, the objective is roughly the same, namely, teach children to be conscious of and conscientious about organizing their world in the most efficient manner possible.

Finally, the game *Queries and Theories*, draws students' attention to the organization of language. Again, a primary function of participation in a philosophic discussion is to focus student attention on the organization of language in order that students may learn about its nature and function as a medium of our thoughts. Typically, one finds that students who are oblivious to the nature and

function of language are casual and even careless in their attempts to think in a formal and systematic way. By participating in responsible philosophizing or by playing a game that directly focuses student attention on the structure of language, the results obtained are relevantly similar. Students tend to become aware of how important effective language use is for effective thinking and not just how effective thinking is important for effective language use — a conclusion routinely reached by students of all ages.

In each of the examples above, we discussed how a game designed to draw attention to effective thinking can augment a philosophy for children program. Presumably, effective reasoning is a central objective of any program in philosophy for children. And, since various aspects of effective reasoning serve as objectives for each of the games mentioned above, it is easy to see how philosophy for children and logic games can be effectively used to address children in the fourth "R", namely reasoning.

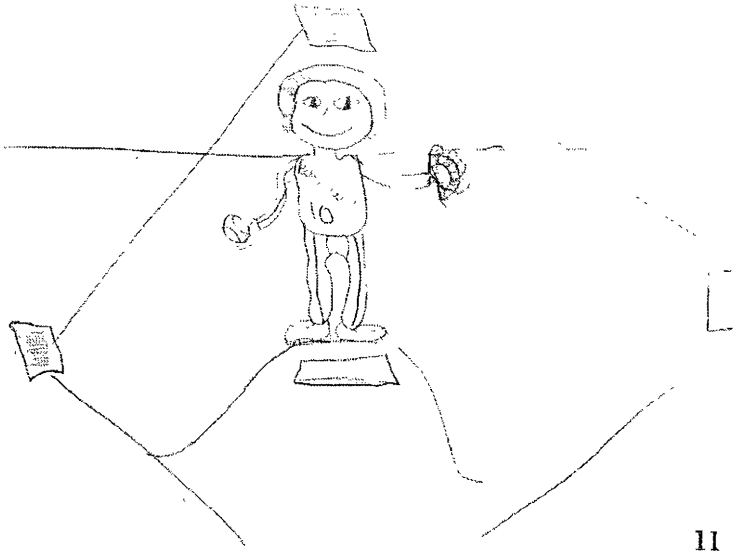
Our experiences and readings have led us to draw some conclusions about how teachers might best introduce games into the classroom without disruptions, mayhem, and possible trivialization of the game-playing process by students. Working games in the classroom routine may take weeks to complete if the students' only contact with games in the past has been for frivolous ends. Initially, one should begin by having most of the students discuss philosophical issues while allowing only a few to play a game. After students learn to accommodate this routine, the teacher can introduce a new game and then have two groups playing, while proportionately fewer students remain in the larger discussion group. This process of phasing students out of the discussion group and into a game session also allows for students to teach other students the games, thereby reducing the number of disruptions resulting from a need for teacher clarification of some point. Of course, the process of introducing new games should continue at a pace appropriate for the individual teacher.

We have also found that groups working with games should have some responsibility for their actions. Our suggestion is to ask group members to record and report those actions which led toward achievement of group goals as well as those actions which inhibited group progress. This procedure establishes a businesslike attitude among group participants and is an attitude which should extend to the teacher's behaviors as well. Introductory questions for discussions and for games should be clear and reasonable. Expectations for participation should be high as should expectations for academic rigor. Again, within the framework of doing philosophy, students will enjoy the activities of the feel of success, see growth, and receive encouragement.

Just a few other helpful hints, learned the hard way: have materials available before groups are formed; have students of similar abilities work together in small groups, but keep the large groups heterogeneous; set time and noise level allowable prior to each lesson; and keep records of the accomplishments of students in a way that students can see results of their philosophizing efforts.

Because philosophy for children and the logic games share many of the same objectives, one might suppose that a school could opt for either procedure. In fact, since a class of twenty-five or so can be easily engaged in playing games and since philosophy is best done with a group less than half that size, it may at first seem that schools ought to opt for the economic efficiency of using logic games. Unfortunately, the logic games, even taken as a group, do not teach all aspects of effective reasoning, nor do they provide students with the opportunity of using a wide variety of intellectual procedures for solving problems and of course they provide no opportunity for students to take specific skills of reasoning learned in isolation and apply them to the "real" world. (By the term "real" world we mean the experience children face beyond the contrived arrangements of an academic classroom.) Thus, if the intent is to teach children skills of effective reasoning in general, along with the ability to apply such skills in real-world contexts, logic games are distinctly limited. On the other hand, philosophy does engage students in the use of the full range of reasoning skills *and* affords them sufficient opportunity to employ such skills in various arrangements to solve real world problems. Consequently, a school could address the problem of teaching reasoning by using philosophy alone and no logic games. Even so, given the nature of public school classrooms in America today — indeed in Texas, or more specifically Houston — it seems that schools have much to gain by augmenting a philosophy for children program with logic games. In short, not only does the use of logic games allow the teacher to philosophize with an optimally manageable size group of children, but the reasoning skills developed in the play of each game can be later referred to by an astute teacher of pre-college philosophy in the context of addressing a philosophic concern of immediate importance.

Philosophy can not be done well at all without due consideration given to the fundamentals of sound reasoning. In programs employing such texts as Matthew Lipman's *Harry Stottlemeier's Discovery*, this is done by drawing explicit attention to such things as the practice of





semantic analysis, the use of syllogistic reasoning, Euler diagrams, and the analysis of propositions. In each case the student learns how to use a technique of philosophic thinking to address an easily imagined problem in the daily life of actual children. There is more to recommend philosophy for than its propensity for teaching students skills of effective reasoning, but there is no objective that is more important. When a philosophy for children program fails to succeed because either the teacher lacks the necessary talent or is unwilling to spend the time necessary for teaching children the subtleties of philosophic thinking, then adding logic games to the philosophy for children curriculum can go a long way to remedying the deficiencies noted immediately above. Even teachers who lack talent or motivation will find that the opportunity for philosophizing with a small group of children will do much to improve the teacher's skill and interest in philosophic discourse with children. In addition, such teachers as well as those who are demonstrably competent will also recognize that student familiarity with the intellective principles central to the play of logic games will make the teacher's job in teaching those principles much easier, and will allow the teacher to spend more time philosophizing with children about such existing issues as the meaning of justice, the nature of thought, and the mind-body distinction.

There is at present no program more effective in teaching reasoning than philosophy for children. But even a program as exemplary as philosophy for children can be improved when augmented by further instruction in logic using either, or both, appropriate programmed texts in logic or by having some children play logic games while others enjoy the pleasure of doing philosophy.

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References

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[2] Musgrove, G. R., *Individualized Instruction*, (Boston: Allyn and Bacon, 1975); see also, Cartwright, D. and A. Zander, *Group Dynamics*, 3rd ed., (New York: Harper and Row, 1968)

[3] Allen, L. et.al., "Programmed Games and the Learning of Problem-Solving Skills; The *WFF n Proof* example," *Journal of Educational Research* Vol. 60, Summer, 1966, pp. 22-26.