This paper is a letter to Professor Hans G. Furth discussing his book "Piaget for Teachers" as related to the program of the Campus School at State University College in Plattsburgh, N.Y. The letter is from the three teachers who work with a classroom of 54 youngsters. There are approximately equal numbers of 4-, 5-, 6-, and 7-year olds in the group. The materials used in the classroom and the ways in which they are used by the children are discussed. Learning is encouraged through the investigation and observation of animals in the classroom, play-acting, social problem solving, and conflict resolution. (DB)
A Response to Furth's Piaget for Teachers

Avis Swart, Assistant Professor of Education
Kathleen Kennedy, Instructor of Education
Carol Vacher, Assistant Professor of Education

State University College of Arts and Science
Plattsburgh, New York
INTRODUCTORY REMARKS:

Within the past few years educators have begun to examine the work of Piaget with considerable interest. Many have made attempts to explore his writings and experimentations questioning the implication of Piaget's thought as it relates to educational practices. Notable among those is Hans Furth who has written a book called *Piaget for Teachers*.

Dr. Furth writes his book as if he were carrying on a running correspondence with a teacher. Each chapter is written in the form of a letter. We have chosen his form to respond to the thoughts in his book.

Although familiarity with his writing might enrich one's understanding of our "letter," we have tried to clarify our interpretation of Furth's thought within the context of our writing. We wish to stress that our letter is meant to communicate our understanding of Furth's ideas; that we do not wish to imply that our school is a model of Furth's ideal translated into a reality.

What we describe is our classroom and we are encouraged to find support for some of the things we are doing in the thoughts of another educator.
Dear Professor Furth,

For the past few weeks our teaching team has been reading and discussing your book *Piaget for Teachers*. The three of us have found all of your letters exciting and stimulating for several reasons, chief of which is that we are presently teaching in a school that we feel is developing into a living example of what you call a "school for thinking." Our school is the Campus School at State University College in Plattsburgh. It is experimentally oriented, drawing its enrollment from the city of Plattsburgh and surrounding townships. Pupil selection is based on a lottery system so our school population is composed of children from a wide range of socio-economic backgrounds.

In your final letter you answered, in skeleton form, the question you had posed in your first letter, that is, "What kind of school is psychologically and socially suitable for the children of today?" You suggested that the structure of such a school should grow from an understanding of the child, his intellectual development, and the manner in which he learns. On the basis of your earlier letters it also seemed implicit that an active physical involvement is imperative for children who have not yet reached the formal operational stage, which evolves at approximately ages 11-13. It would, therefore, seem crucial, if the goal is fostering intelligent behavior, that the school setting stimulate active exploration of the child's entire environment, especially up to the age of 11.

It was gratifying and encouraging to read your conclusion on the

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teaching of reading. When you proposed that reading be relegated to an elective activity, since before a child reaches the stage of formal operations it is "a specialize skill which...has very little to do with thinking," we nearly applauded. From our teaching experience with a multi-age group of 4-7 year olds, we've come to the same conclusion. However, your exploration of that particular facet has helped us to expand and clarify our own rationale for freeing the children to work on reading as a choice among other options.

Now let us briefly describe our setting so that we can share some of the ways we see our children living out many of the ideas described in your letters. Over a two and a half year period three of us have worked, taught, and learned together in a classroom with fifty-four youngsters. We have experimented, modified and changed various aspects of our program as we have watched the children respond and grow with us. We have approximately equal numbers of 4's, 5's, 6's, and 7's in our group and have made attempts, in the design of our program, to provide a wide enough range of choices to meet the needs of all the age levels. This has not been nearly the problem that it might seem at first.

Our setting includes all of the material one would expect to find in a well equipped kindergarten or nursery classroom. There are large and small blocks, dress-up clothes, play-house furniture, puzzles, games, books, musical instruments, a cooking corner, several varieties of live animals, work benches, tools, art supplies. We also have a room devoted to large muscle activity that all the children may use freely for approximately an hour and a half during the morning. We collect throw-away items from the parents and community which become the raw material for most of our art experiences.

2Ibid., p. 6
One of the most comforting truths for any individual seeking ways to develop an educational system that fosters intellectual development, is that children over a wide age range can make use of the same materials in increasingly complex ways. Thus the problem of providing for varying age levels is solved by the children themselves in the way they make use of the materials.

The large and small blocks in our room are used enthusiastically by all the children. For some of the younger four year olds the challenge of keeping a simple tower of blocks from toppling in the process of building is enough. However, as they experiment and grow, new possibilities are disclosed out of their own developing understandings and needs. At the age of seven many of the children's constructions exhibit advanced understandings of structural and mathematical principles. One needs only to carefully examine the block buildings of the children to be convinced of the truth of your statement that parents and educators do not have to search frantically for ways to make intelligence grow because it grows from within. For the teacher or parent who understands such a viewpoint "the task becomes one of furthering and nourishing this growth by providing suitable opportunities, not by explicit teaching of what to do or what to know."3

In our opinion blocks are a very rich source of intellectual stimulation for any age child, but are especially well suited to the 5 - 10 age group, since, as you stated, it is during this age span that the child is developing concepts of space, time, relations, classes and combinations. In building or even in putting blocks away, the children cannot avoid making use of their intellect. In order to build a square house one must understand how to go about constructing

3Ibid., p. 74.
sides of equal length. He must be able to choose combinations of different length blocks in such a manner that the two sides come out even. He certainly is experimenting with spatial relationships and he may even experience the unhappy truth that it is "time" to go home before he has completed his work.

In our classroom there are several sets of blocks. When we put things away at the end of the day the different sets are stored in different areas. All the unit blocks go together, the large hollow blocks are put in another place and the small geo-blocks are put in a box on a table. There are no strict rules about how the blocks are piled or put away, but frequently the children pile them in clearly discernable patterns, putting all the long ones together, placing the large cylinders in one space or stacking all the triangles together. It is obvious that even the "putting away" patterns of children become more complex and intricate with growth.

There are times when the children share discoveries they make in using the blocks. Just a few days ago while helping to clear the floor of the unit blocks, one of the youngsters laid two arches flat on the floor with the bases together. Then he demonstrated how the largest cylinder fit perfectly into the hole. Another time a child noted that two right triangles made a square and still another that the inclines could be placed together to form a perfect rectangularly shaped block. "However," he stated, "if you get the wrong sides together the ends won't come out even." Children make constant use of number and number combinations in block building activities. A child completing a building may be heard telling his partner to bring four half-size or two long blocks, or if none are available to bring eight quarters.

The rich intellectual stimulation which can be found in block building
is also evident in other creative experiences. In letter 4 you suggested that most primary age children have not developed the concept of axial rotation. One of us had an experience with a five-year old, who was involved in a woodworking project, that illustrates your point beautifully. He was building a car and had found some bottle caps which he was trying to attach to the side of his vehicle with "U" shaped staples. Because he was experiencing some difficulty in piercing the metal caps with the staple, he asked for assistance in attaching the wheels. When it became obvious what he was trying, the teacher asked, "Do you want the wheels to turn?" He told her that he did, so she tried to show him that he needed a nail rather than a staple to make it work. The teacher took another piece of wood and attached the cap to it with the staples. When she showed how it would not turn and asked him why, he said, "The staple is too tight." She loosened it but he gave the same explanation. Finally, she took two long nails, drove them through the cap and into the board, but left the heads projecting at least an inch above the bottle cap. When the cap would not turn the child gave the same explanation for the failure, so she pulled out one nail and as he watched the cap rotate, he indicated that it was now loose. The teacher gave up and helped him fasten his wheels with single nails. The experience demonstrated, once again, that the most careful instruction has no power to bring about an understanding unless the learning organism is developed to the extent that it is able to respond. We are not concerned about that five-year old eventually reaching a clear understanding of axial rotation. It may be that he will grasp the concept at the work bench. For him and for us that seems to be a very appropriate and exciting place to learn it.

At the beginning of letter 10 you made the comment that you would "like
to see less stress during the early grades on specific subject matter and more emphasis on the general development of the inquiring mind. You went on to state that it should be enough that an activity is intellectually challenging for it to be welcomed in education. We were almost amazed at the statement since just a few weeks prior to reading your letters, we had written a similar idea in an attempt to clarify some assumptions underlying our program. The statement went something like this, "we assume that any subject matter which is meaningful to children is worthy of inclusion in the curriculum."

That is one of the reasons why we have many animals in our classroom, including a dearly loved baby lamb, a pair of bantam chickens, gerbils, rabbits and a hamster. The children have watched chicks hatch and grow to pullet size, have experienced the first-hand thrill of gathering a freshly laid egg still warm from the nest, have cradled, carried and fondled the rabbits from the time they were no larger than new born kittens. The children have personal knowledge of birth, growth and change in their classroom pets and have even faced and dealt with the death of a few. The animals have served as a stimulus for many questions. One day a youngster asked why the chickens had their eyes on the sides of their heads instead of in the front like we do. The teacher who was with him confessed that she could only guess at the answer, but that she would try to gather some studied data. When she came back with some facts about bird's eyes, explaining that probably some of the ideas would apply since the chicken was a relative of the bird, the discussion turned to the meaning of the word "relative", and finally to other interesting information in the same book that had been the source. There certainly seems no limit to the experiences and subject matter which will stimulate investigation and intellectual behavior on the part of

\[4\] Ibid., p. 116
children. We concur with you on your view of drama as a thinking experience. In presenting a play there are indeed many problems to be solved. Again, it is exciting to note the increased sophistication with which the children approach the problems as they grow older. At a group circle time a few days ago one of our five-year olds was preparing to present a play. It was to be a superman production and he wanted to select his players from the circle. He asked for volunteers and got several responses. As he began explaining something of the action to his audience he asked two actors to step forward so he could demonstrate how superman knocks the villains heads together. A tiny four-year old and a seven-year old advanced. It was not until the five-year old director-actor placed his hands on the two heads that he understood his problem and asked for two children about the same size. This incident seemed to be a clear example of the direct manner in which the young child takes in and makes use of his experience. Of course, the problem of equal sized villains was only a beginning and you did a beautiful job describing the demands that play production places upon the intellect of the child.

As you discussed drama in letter 10, you pointed out the difference between spontaneous play and play acting--play requiring no consideration on the part of the child to anyone outside himself. On the other hand, play-acting demands a constant awareness of and attention to the audience--a consciousness on the part of the actor that his purpose is to communicate an idea to the spectator. He must subordinate his actions to the plot, theme or idea. The problems are complex and numerous and, as you point out, demand a high degree of intelligent behavior. There is a subtle interaction between the child's
understanding of the character being portrayed and the demand placed upon him to communicate clearly through his movements, expressions, and speech, that understanding.

We were impressed in letter 10, with the role the teacher played in stimulating the children to improve their acting skill. The teacher, whom you described, made ample use of audience reaction to help the players determine how clearly their ideas had come across. While we feel it is possible for an adult to encourage and support children in the process of perfecting their skills of dramatic communication it seems to us that there are some considerations for the teacher to keep in mind. If the teacher is focusing on the "Ideal or Good" play and not the thinking process of the child, he may encounter difficulties.

In our classroom, where play acting is a big part of the children's learning experience, the younger children, even in presenting a play for the group, may slip back and forth between play-acting and spontaneous play. We feel, in these early stages of development, having an adult judge the performance on the basis of how well the ideas are communicated would do the youngsters a disservice. If Piaget's ideas of intellectual development are applied, one would not expect four or five year olds to be at a level where they have developed a clear distinction between symbolic play and play acting. From our observations it appears that these understandings are just beginning to develop at four and five. So, for the young child we would plead for a critic no more severe than spontaneous audience reaction and plenty of opportunity to watch the performance of older children. Anything more direct, we believe, might intimidate, discourage or reduce the entire activity to a non-thinking response to adult standards. We always run the risk, in incorporating any new activity into the
curriculum of treating it as a subject to be taught rather than as an experience which stimulates learning. We would not like to see this happen to drama or any other subject matter.

Sometimes parents ask us how we teach history or social studies in our class. We usually tell them that living, growing, learning and solving problems of personal and group interaction is the most stimulating way we can think of to learn "social studies". Perhaps, for young children it is the only significant way. Therefore, it was exciting for us to hear you say, in letter 11, that education needs to train "individuals who are constantly encouraged to think and to apply this thinking...quite consciously to social and moral life, to the relation of man to his fellow men and his society and to relations among societies."5

The children in our classroom are constantly encountering social problems which require them to utilize their intelligence in finding a solution. Sometimes the problem may involve only two youngsters, but quite often it encompasses the entire group.

At the beginning of the year, the children decided they wanted to form groups which might go on field trips together or work on some long range projects. Their plan was to have a group for each teacher so we asked them how they thought the groups should be formed. One youngster said she felt all the children should tell the teachers some people they would like to be with and on the basis of that information, the groups should be formed and the teachers could then pick the group they wanted. We were pleased with this youngster's thinking and felt her solution was very reasonable. However, another child suggested that the

5Ibid., p. 129
three teachers draw names out of a hat and the group voted to use the second idea.

After a few weeks it became evident to the children that their plan was not adequate. Many of the youngsters were expressing a desire to change groups, so the matter was discussed again in the large group. It was decided that those who wanted to change groups should go to a teacher and tell that teacher some other children with whom they would like to be grouped. Then the groups would be formed on the basis of their expressed desires. For several weeks the children seemed happy with their decision, but recently the matter of grouping was brought up once again in the class meeting. New and closer friendships had been formed, and in some cases, best friends were in different groups. In other cases, children were feeling left out when some group chose to take a field trip that their own group had not decided to take. Still other children were expressing a desire to be with another teacher.

The problem seemed so complex that the children had to struggle for some time before making a decision. Realizing that everyone could not be satisfied they chose a solution designed to meet the needs of the greatest number of people. The groups would remain intact but each teacher would eventually have the chance to take each group on the trip originally planned by her own group. But, as one child so aptly expressed it, "That doesn't solve Christine's problem, because she wants to go when and where Jo goes."

We are continually pleased and often amazed at the skill with which the children approach problems that arise from the natural complexity of living together. There is certainly no need for teachers to "contrive" situations that demand the use of such skills. When children are free to interact, plan,
work, experience conflict and cooperate together the dynamic relationships. Producc more material than one can handle!

I the end of letter 11 you said that if school is to be for real, the intellectual experience must be for real too. "This implies, particularly at the age level of early operational intelligence (ages six to nine) active intellectual exploration and evaluation of the social envirnoment." That is one goal we are striving very hard to reach. To us, it has been translated to mean direct experience of the community through class excursions but more important has been our emphasis upon helping the child in social situations to examine his own feelings and the feelings of others.

In our classroom, as in any real situation, there is conflict. Frequently, children may express their anger by striking out physically against one another. When we are doing our best job as teachers we sit down with the youngsters so that they will discuss the conflict and hopefully gain a clearer understanding of their own feelings and the nature of the problem. The discussions are frequently as heated as the physical battles and we, as teachers, try to do no more than get the feelings out and help the youngsters discover their own workable solution. There have been times when one child has taken the role of negotiator, arbitrator or therapist for other children in conflict. For us, this would be the ideal situation, but it is not always possible.

A strong advantage we have found in helping children to approach social or moral issues as problems to be solved rather than rules to be followed is that peer influence is far more effective than adult authority to encourage the individual to examine and modify his behavior.

Ibid., p. 137.
Two boys from our classroom had spent most of an afternoon baking pies in the Home Economics Room. They brought them into the class just before final clean-up proudly displaying their finished products. While they helped the others put things away, they placed the pies on a table. Another child walked past and stuck his finger in each one, to sample it. As soon as the two bakers discovered what had happened they began to reprimand the other child severally and soon had several classmates supporting them in their campaign. By the time we finished clean-up and met for our final group circle all the children in the class were aware of the difficulty and were quickly becoming more involved in the conflict.

Our entire circle time was spent discussing the situation. Nearly every child had some opinion to express, emotions were running high, and it appeared that the two pie-bakers, Tom and Joe, were gathering increasing support. There seemed to be unanimity within the group that the two youngsters had been wronged, but when the discussion turned to ways of dealing with the problem there were several different suggestions. Some felt Bill, the youngster who had taken the sample, should miss snack on the following day. Others felt that he should be punished in some way and Joe said that Bill should have to bake three pies for each one that had been "ruined". At this, one of the strong group leaders said, "Oh Joe, he didn't ruin your pie, there is only one little corner that he tasted and you can hardly see that he even touched it!" The entire group feeling shifted, as many of the children began to view the problem in a new perspective. Several said that they too had been tempted to touch the pies and recalled other experiences where temptation had been too great for them and they had snitched frosting or picked at a piece of cake. Tom and Joe became less indignant, were
even able to listen to the discussion. Finally, someone suggested that the pies might have been put in a safer place and that any future baked goods could be stored in the office. Everyone agreed that the suggestion made sense. As the discussion concluded Joe looked down at his pie, dipped his forefinger into the filling and licked off his own sample.

A thinking school is not without problems, and conflicts and stress and struggle. However, it is a challenging and exciting place to be. Come and visit sometime and try out your mind on us.

References