INTELLECTUAL AND MORAL AUTONOMY:
OPERATIONAL IMPLICATIONS IN CHILD DEVELOPMENT

A DISCUSSION PAPER ON A PIAGETIAN THEORY

AIDS TO PROGRAMMING UNICEF ASSISTANCE TO EDUCATION

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June 1984

UNIT FOR CO-OPERATION WITH UNICEF & WFP

UNESCO PARIS
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ORIGINAL: English

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The views and opinions expressed in this paper are those of the author and do not necessarily reflect those of Unesco.
The two articles presented in this issue constitute an
analysis of the operational implications of the Piagetian
Theory of Autonomy by Professor Constance Kamii, formerly
of the University of Illinois at Chicago and now of the
University of Alabama in Birmingham, U.S.A. The points
raised in them relate to child development in general,
and the early education of and social interaction with
children, in particular.

PART I

AUTONOMY AS AN AIM OF EDUCATION: IMPLICATIONS OF
PIAGETIAN THEORY

I. INTRODUCTION

Piaget's theory is becoming recognized by an increasing number of
educators all over the world as being a scientific theory implying fundamental
reforms. Most educators have gone beyond the level of their first mistake,
which was to teach children to give correct answers in Piagetian tasks. Another
error to be avoided, however, is that of using this theory only to find better
methods of teaching in each traditional discipline (such as mathematics and
physics). This perspective seems too limited.

For Piaget (1948), Autonomy was the aim of education.
This aim goes counter to those of traditional schools.
In this article, I would like to discuss what Piaget
meant by 'autonomy' and the type of reform that flows out
of this new conception. Whatever subject matter we teach
- natural science, history, geography, etc. - we teach it
differently when our long-term goal is to foster the
development of autonomy in students.
This article is divided into three parts. The first is confined to the moral aspect of autonomy; the second seeks to clarify what is meant by intellectual autonomy; while the third deals more specifically with autonomy as an aim of education, with practical examples that flow out of this conception.

II. MORAL AUTONOMY

Autonomy means 'being governed by oneself'. It is the opposite of heteronomy, which means 'being governed by someone else'.

Piaget (1932) gave various examples of the morality of autonomy. In his research, he asked children between the ages of six and fourteen whether it was worse to tell a lie to an adult or to another child. Young children consistently replied that it was worse to tell a lie to an adult. When asked why, they explained that adults can tell when a statement is not true. Older children, in contrast, tended to answer that sometimes one almost has to lie to adults, but it is rotten to do it to friends. This is an example of the morality of autonomy. For autonomous people, lies are undesirable, independently of the reward system, adult authority, and the risks of being caught.

Piaget made up pairs of stories in an attempt to find hierarchical levels in children's reactions. Here is an example of such a pair:

A little boy (or a little girl) goes for a walk in the street and meets a big dog who frightens him very much. So then he goes home and tells his mother he has seen a dog that was as big as a cow.

A child comes home from school and tells his mother that the teacher had given him good marks, but it was not true; the teacher had given him no marks at all, either good or bad. Then his mother was very pleased and rewarded him.

(Piaget, 1932, p. 148).

Young children systematically manifested the morality of heteronomy by saying that it was worse to say "I saw a dog as big as a cow". When asked why this lie was the worse, they replied that dogs are never as big as cows and that adults do not believe such stories. Older, more autonomous children, on the other hand, tended to say that it was worse to say "The teacher gave me good marks" because this lie is more believable.

All babies are born helpless and heteronomous, but in ideal conditions, the child becomes increasingly autonomous. In other words, to the extent that he becomes able to govern himself, he is governed less by other people.
III. HOW SOME ADULTS BECOME AUTONOMOUS

Piaget (1948) said that it is a rare adult who is truly moral, an observation which can easily be confirmed in our daily life: newspapers are full of stories about corruption, theft, assault, and so on. The important question for educators and parents is how to raise children to become autonomous adults. Piaget's answer to this question was that adults stimulate the development of autonomy when they exchange points of view with children, and they reinforce children's natural heteronomy when they use reward and punishment.

Punishment, as will be illustrated with reference to lying in the second article (see p. 13), reinforces children's heteronomy and prevents them from developing autonomy. While rewards are more pleasant than punishment, they, too, reinforce children's natural heteronomy. Children who help parents only to get money, and those who study only to get good marks are governed by others, just like children who are 'good' only to avoid being punished.

Adults exercise power over children by using rewards and punishment, and it is precisely these sanctions that keep them obedient and heteronomous.

If we want children to develop the morality of autonomy, we must reduce our adult power by refraining from using rewards and punishments, and encourage them to construct for themselves their own moral values. For example, the child has the possibility of thinking about the value of honesty only if he is not punished for telling lies and is, instead, confronted with the fact that other people cannot believe him.

The essence of autonomy is that children become able to make decisions for themselves. But autonomy is not the same thing as complete freedom. Autonomy means taking all the relevant factors into account in deciding what the best course of action might be for all concerned. There can be no morality when one considers only one's own point of view. If one takes other people's point of view into account, one is no longer free to tell lies, break promises, or be inconsiderate.

Piaget was realistic enough to say that in everyday life, it is impossible to avoid punishments completely, but he made an important distinction between punishment and sanctions by reciprocity. Depriving the child of dessert for telling a lie is an example of punishment, as the
relationship between a lie and dessert is completely arbitrary. Telling him that we cannot believe what he said is an example of a sanction by reciprocity. Sanctions by reciprocity are directly related to the act we want to sanction and to the adult's point of view. They tend to motivate the child to construct rules of conduct for himself, through the co-ordination of viewpoints.

Piaget (1932, Chapter III) gave six examples of sanctions by reciprocity. Here are four of them:

The first one is exclusion from the group. When a group is listening to a story and a child disrupts the group, for instance, the teacher can say, "You can either stay here without bothering the rest of us, or I must ask you to go to the book corner to quieten down". Whenever possible, the child must be given the possibility of deciding when he can behave well enough to return to the group. If, by contrast, the child is sentenced to 15 minutes of exclusion, this serves more as a punishment, and children often feel perfectly free to commit the same misdeed again after being punished.

The second type of sanction by reciprocity is appeal to the direct and material consequence of the act. An example of this type of sanction is mentioned above in connection with children's lies.

The third type of sanction by reciprocity is depriving the child of the thing he has misused. Sometime ago, I was in a classroom of four- and five-year-olds for three days in succession. The room was rather small for a class of about 25 children, and about a third of its surface was set aside for block constructions which stayed up throughout my visit. I was surprised by the fact that all the children were very careful not to disturb anybody else's work when they went to the block area from time to time to modify their products. When I asked the teacher how she got the children to be so careful, she explained that she was very strict at the beginning of the year and did not let children go in the block area if they knocked anything over. Later in the year, she said, she negotiated with individual children the right to go in that area when they had become more respectful of other children's work.

The fourth type of sanction by reciprocity is reparation. For example, if a young child spills paint on the floor, an appropriate reaction may be to say, "Would you like me to help you clean it up?" Later in the year, it may be enough to ask, "What do you have to do?" for the child to become more careful the next time.

Piaget emphasized that all the preceding examples can easily degenerate into punishments if there is no relationship of affection and mutual respect between the adult and the child. Mutual respect is, in fact, indispensable for the child's development of autonomy. The child who feels respected for the way he thinks and feels has the possibility of feeling respect for the way adults and other children think and feel.

For another example from life in the classroom, see the second article p. 15.
Piaget's theory about how children learn moral values is fundamentally different from the theories according to which the child is believed to acquire moral values by internalizing those that are given by the environment. According to Piaget, children acquire moral values not by internalizing or absorbing them from the environment but by constructing them from the inside, through interaction with the environment.

For example, no child is taught that it is worse to tell a lie to an adult than to another child. Yet young children construct this belief out of what they have heard. Likewise, no child is taught that it is worse to say "I saw a dog as big as a cow" than to say "The teacher gave me good marks". But young children make such judgements by putting into relationship everything they have been told. They then go on to construct other relationships, and many of them end up believing that it is worse to say "The teacher gave me good marks". It is safe to say that most of us have been punished when we were children. But to the extent that we also had the possibility of co-ordinating viewpoints with others, we had the possibility of becoming more autonomous.

IV. INTELLECTUAL AUTONOMY

In the intellectual realm, too, autonomy means 'being governed by oneself', while heteronomy means 'being governed by somebody else'.

An extreme example of intellectual autonomy is the work of Copernicus. Copernicus invented the heliocentric theory when everybody else believed that the sun revolved around the earth. The scientists of his time made fun of him but he was autonomous enough to remain convinced of his own ideas. An intellectually heteronomous person, by contrast, unquestioningly believes everything he is told, including slogans and illogical conclusions.

A more commonplace example of intellectual autonomy can be found in my niece, who used to believe in Santa Claus. One day, when she was about six years old, she surprised her mother by asking, "Why does Santa Claus use the same wrapping paper as we do?" Her mother's 'explanation' satisfied her for a few minutes, but she soon came up with the next question: "Why does Santa Claus have the same handwriting as Daddy?" This child had her own way of thinking, which was different from what she had been taught.
precise way of discussing constructivism is to say that children construct knowledge by creating and co-ordinating relationships. When my niece put everything she knew into relationship, she began to feel that something was wrong somewhere.

Unfortunately, in school, children are not always encouraged to think autonomously. Teachers use sanctions to get children to recite 'right' answers.

An example of this practice is the use of workbooks in arithmetic or reading. In first grade, for example, if a child writes '4 + 2 = 5', most teachers mark it as being wrong. The consequence of this kind of teaching is that children become convinced that truth can come only out of the teacher's head. When I walk around a first grade classroom while children are working on arithmetic worksheets, and stop to ask individual children how they got particular answers, they typically react by grabbing their erasers and erasing like mad, even when their answer is perfectly correct.

Already in first grade, many children have learned to distrust their own ability to reason. Children who are thus discouraged from thinking autonomously will construct less knowledge than those who are mentally active and confident.

If a child says that 4 + 2 = 5, a better way to react is to ask him: "How did you get 5?" Children often correct themselves autonomously as they try to explain their reasoning to someone else: while trying to co-ordinate his point of view with another viewpoint, the child often realizes his own mistake. Situations in daily living and group games can also be used to teach arithmetic in first grade.

There is a card game, for example, in which the sum of two cards is compared with the sum of the opponent's two cards, and the player who has the greater total can take all four cards. In such a game, children have the possibility of exchanging points of view when one of them says that 4 + 2 = 5. This way of learning addition is by far better for the development of autonomy than filling out workbooks.

In my current research, I find that children remember the results of additions when they frequently play these games, and that it is therefore superfluous to teach addition to six-year-olds. These children are able to get correct answers by themselves to this kind of problem.

Having clarified what Piaget meant by moral and intellectual autonomy, I would now like to go on to autonomy as an aim of education.

V. AUTONOMY AS AN AIM OF EDUCATION

The explicit and implicit, intended and unintended heteronomous goals of traditional education made us memorize many things, only to pass one examination after another. Anybody who achieved this by memorizing an
enormous quantity of words, even without understanding them, can remember the relief of being at last free to forget the things memorized only to pass a test. We are willing to make these efforts because circumstances forced us to, and we were educated to be conformists.

The research of McKinnon and Renner (1971) and of Schwebel (1975) on first year university students' ability to reason logically at the formal level shows the result of this kind of education by memorization. The students who had been good pupils in primary and secondary schools had succeeded in entering university, but the proportion of these university students who were consistently able to reason at the formal level was only 25% in McKinnon and Renner's research and 20% in Schwebel's study. After presenting their findings, McKinnon and Renner asked what kind of education these university students received in secondary school. They concluded that secondary school students had not learnt to think logically, and that if a student cannot think logically at the formal-operational level, he can certainly not think critically or autonomously.

In the moral realm, too, schools may reinforce children's heteronomy and unwittingly prevent them from developing autonomy, by using grades and punishments to enforce adults' standards and rules. On the other hand, some things taught in schools have been useful for the development of autonomy, such as the ability to read and write, to do arithmetic, to read maps and charts, and to situate events in history.

WHAT KIND OF TEACHING DOES AUTONOMY IMPLY?

I would like to give an example of a 'lesson' in sixth grade grammar to illustrate the teaching of a content in the context of autonomy as the broader aim. I do not know enough about the teaching of grammar to judge the desirability of diagraming sentences, but will take this example to discuss the importance of thinking stimulated by social interaction.

The class was divided into six subgroups of four or five pupils each. When I arrived in this class, the teacher put a rather complicated sentence on the board and gave the groups 20 minutes to agree on how to diagram it. A representative of each group went to the board when the time was up and put a diagram on it. Two of the six were immediately erased, as they duplicated two other groups'. Individual students then offered well-reasoned arguments in favour of one diagram, or to show that one was inadequate. The author of the version under attack would then defend it vigorously. The arguments thus continued with intensity until it was time for recess. By that time, everybody had agreed that two of the four versions could not be defended and had to be erased.

When the children returned from recess, the teacher asked if the class wanted the answer. Some said "Yes" but others answered "No, because you'll give us the wrong answer just to see if you can trick us!" The teacher admitted that he indeed intended to do that. The arguments and counter-arguments continued, and the class finally agreed on the superiority of one diagram.
The class spent an entire afternoon on one sentence. But I was left with the impression that the children thought so hard about each well-articulated idea that they were thoroughly convinced of the superiority of the final diagram. Many pupils offered wrong ideas along the way, but they were encouraged to defend their opinion until they were convinced that they were wrong.

This approach aims at teaching a content in the context of intellectual and moral autonomy as the broader goal. I say 'intellectual autonomy' because children have the possibility of changing their minds in an autonomous way only when all the ideas, even wrong ones, are respected. I say 'moral autonomy' because the possibility of expressing each idea freely is an indispensable condition for making decisions that take into account all the suggestions. Furthermore, children mobilize their intelligence and the totality of their knowledge when they have to take a stand and confront other opinions rather than simply repeating 'right' answers.

Perret-Clermont’s research (1980) confirms the importance Piaget attributed to social interaction. After showing that the exchange of points of view is indispensable for the child’s moral development, Piaget (1932) went on to say that these exchanges are equally necessary for children’s development of logic (Piaget, 1947). Taking this statement as a hypothesis, and basing her work also on the work of Inhelder, Sinclair, and Bovet (1974), Perret-Clermont studied the effects of social interaction on children’s cognitive development. She concluded that the confrontation of ideas among children often results in more advanced levels of logical reasoning, even in areas not dealt with in the experiment.

There is a common factor between Perret-Clermont’s experiments and the examples given earlier of the teaching of first grade arithmetic and sixth grade grammar: the stimulation of thinking through the confrontation of points of view among peers. Social life in the classroom can thus not be considered apart from its intellectual side.
I would like to give a few more examples to make my ideas more precise about the teaching of content.

In history, for example, we could suggest biographies to enable children to approach historical facts from the perspective of individuals. It is easier to construct history by approaching facts through subjective viewpoints than by being given dates and ready-made, 'objective' interpretations. A question that is always interesting is "What do you think of...?"

But at school, such a question is seldom posed to children. By asking children what they think of one interpretation or position, we can stimulate their thinking. These discussions lead to a better understanding of content, due to the active and personal creation of relationships.

In literature, we can ask for different interpretations of a poem or personal reactions to a novel.

The important thing, again, is the comparison and mutual evaluation of different reactions.

In science, we can suggest projects aimed at producing certain effects. In making model racing cars, for example, children have to understand the relevance of certain factors such as friction, the centre of gravity, and the size of the wheels, and also to talk with other children about how to produce a greater speed.

The important criterion of an instructive activity is that it should intrigue children and motivate them to approach questions in an intelligent way. I am convinced that human beings have a natural desire to understand phenomena and would want to become increasingly knowledgeable if they were not deformed by the coercive system of traditional education. The proof of this human desire is the history of science. Science will continue to grow as long as human beings continue to search for ever more adequate explanations of the phenomena around them.

VI. CONCLUSION

In conclusion, I would like to emphasize once again that Piaget's theory does not imply the search for new methods aimed at attaining the same goals as those of traditional education.

Autonomy as an aim of education implies an education very different from conformist education. It is therefore, an error to want to use this theory only to find new methods of teaching traditional disciplines.

When traditional subjects are conceived within a larger framework of autonomy, we succeed in hierarchically conceptualizing objectives and principles of teaching in each domain.
In science education, for example, we can conceptualize the objective of teaching physical laws within the broader objective of developing a scientific attitude.

Autonomy as an aim of education is not a goal arbitrarily chosen by personal taste: it is based on CONSTRUCTIVISM, which is a scientific theory. Rather than specifying any particular quality, it helps the individual to choose or reject these specific qualities.

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* Intellectual and moral autonomy is thus the direction *
** toward which the individual tends inevitably if co-
** ordination of points of view takes place. 
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PART II

OBEDIENCE IS NOT ENOUGH*

I. INTRODUCTION

Some adults are responsible and have initiative. They have the initiative not only to notice what needs to be done, but also to go ahead and do it. Others have to be told everything and often forget what they promised to do. Some adults have integrity. They would refuse to lie even when they were ordered to by a superior. Others would not refuse and obediently do what they know to be wrong. Why do such differences exist among adults?

One answer can be found in the theory of Jean Piaget. This theory helps us understand why children can be expected to become responsible and have integrity if adults interact with them in certain ways.

Let us look at a few examples of interactions.

II. DIFFERENT WAYS OF INTERACTING WITH CHILDREN

When a child spills milk or paint, an adult can scold him by saying, "I told you to be careful!" An adult can also say, "Would you like me to help you clean it up?" or "What do you have to do?" The important thing in this situation is that the child becomes more careful in the future.

Being asked to restore the original condition is far more conducive to being careful the next time than a scolding. The child who spilled something already feels bad about what he has done. Being scolded makes him resentful rather than more thoughtful.

When the child breaks, damages, or takes something that belongs to somebody else, likewise, asking him to repair, replace, or return the object is much more conducive to thoughtfulness in the long run than a scolding or punishment.

* I would like to express appreciation to Maureen Ellis for critically reading a draft of this article and for making many helpful suggestions.
One day, in a kindergarten class, for example, a child came up to the teacher crying because his art project had been damaged. The teacher turned to the class and said that she wanted the person who broke the object to tell her privately so that she could help him repair the object.

The child responsible for the breakage was helped to see the point of view of the victim, and was encouraged to make for himself the rule of reparation.

The teacher helped him repair the broken object and told him that next time something similar happens, she wanted him to tell her so that she could help him fix the object again.

III. REWARD AND PUNISHMENT

Many parents and teachers believe that the way to raise children to be moral is by punishing 'bad' behaviours and rewarding 'good' ones. Reward and punishment may be effective in the short run, but not in the long run.

Punishment leads to three possible outcomes:

The most common one is CALCULATION OF RISKS. The child who is punished will repeat the same act but try to avoid being caught the next time. Sometimes, the child stoically decides ahead of time that even if he is caught, the price will be worth paying for the pleasure he will have.

The second possible outcome of punishment is the opposite of the first one, BLIND CONFORMITY. Some compliant children become perfect conformists because conformity assures them of security and respectability. When they become complete conformists, children do not have to make decisions any more, as all they have to do is obey.

The third possible outcome is REVOLT. Some children are 'good' angels for years but decide at a certain point that they are tired of pleasing their parents and teachers all the time, and that the time has come for them to begin living for themselves. They may thus even begin to engage in various acts of delinquency.

While rewards are more pleasant than punishments, they, too, discourage children from judging for themselves what is right or wrong. Children who help parents only to get money, and those who keep a promise only to get candy are governed by others, just like children who
are 'good' only to avoid being punished. Adults exercise power over children by using rewards and punishments, and it is these that keep them obedient and dependent on others to know what to do.

IV. TWO KINDS OF MORALITY

There is a very significant difference between two kinds of morality distinguished by Piaget:
- the morality of autonomy; and
- the morality of obedience.

Autonomy means being governed by oneself. A person governed by the morality of autonomy, acting on his independent conviction, would refuse to obey his superior's command to lie and resign from his position. Those who would rather obey the superior are examples of the morality of obedience.

When a child tells a lie, the adult can punish him by saying, "You will not have any dessert tonight" or "You will have to write 'I will not lie' 50 times".

The adult can also refrain from punishing him and, instead, look him straight in the eye with great skepticism and affection and say, "I really can't believe what you are saying because... (and give him the facts that render his statement hard to believe)". The adult can also say that a relationship of trust is broken when a person says something that is not true.

This is an example of an exchange of points of view that contributes to the development of autonomy in children. The child who can see that the adult cannot believe or trust him can be motivated to think about the necessity of telling the truth. The child who is raised with many similar opportunities can, over time, come to the conclusion for himself that it is best in the long run for people to deal honestly with each other. As an adult, this person, in the face of trying circumstances such as the pressures of a superior to tell a lie, is likely to insist on being honest because he has built for himself a personal conviction about the value of honesty.

V. THE IMPORTANCE OF EXCHANGING VIEWPOINTS WITH CHILDREN AND LETTING THEM MAKE DECISIONS

The most important elements for children's development of autonomy are:

1. opportunities to exchange viewpoints with other people; and
2. the possibility of making decisions.
The morality of autonomy is based on an individual's personal values, rather than the reward system. This means that children need many opportunities to construct personal values for themselves, and this is why the above two elements are essential.

As we saw in the example of children's lies, they can feel the value of being honest only if they have had many opportunities to see for themselves that people could not believe or trust them when they told lies.

Children learn to make wise decisions not by being obedient, but by making choices and decisions for themselves. The decisions they make are often unwise, and this is the hardest part for parents and teachers to watch.

Making decisions is important for children for TWO reasons:

First, children cannot find out about the wisdom of one decision if they do not have opportunities to compare its consequence with the consequence of a bad decision. By deciding to wear new patent-leather shoes to school, for example, they can learn the wisdom of wearing tennis shoes that allow them to run freely and to climb on the jungle-gym.

Second, children can become responsible only when they are really responsible for the decisions THEY make. As long as decisions are made by somebody else, children are not responsible for them because all they have to do is obey.

Young children can make only small decisions at first, and gradually become able to make bigger ones.

For example, making a schedule for the entire day in school is out of the question for young children, but choosing an activity during freeplay time and voting on a rule at clean-up time are perfectly manageable decisions already at four years of age.

Certain decisions are not open to discussion. Naptime and bedtime are examples of decisions that are made by adults.

The important thing is that children be allowed as much as possible to make decisions for themselves.

Even bedtime can be made more acceptable to children by letting them know well in advance that after dinner, a TV programme, and a story, it will be time for bed.
VI. WHY START SO EARLY?

By age five, children already vary a great deal in their ability to make decisions for themselves. Some five-year-olds run to adults to say, "Johnny hit me", and expect adults to solve every problem of this kind. Others tell their teachers and parents to stay out of their conflicts because "it is up to us to settle things between the two of us".

When the teacher leaves the room, some groups immediately explode in chaos. Others go on as if the teacher had never left the room. If children are used to making decisions for the good of the entire group, they can govern themselves without being controlled by an adult.

Some five-year-olds even have the initiative to say to the entire class, "There is a problem here that we have to discuss". A teacher who believes in fostering the development of autonomy reacts by saying, "What do you think we should do?" and "Does everybody agree that that is a good idea?"

The autonomy of five-year-olds does not happen by chance. It is the result of exchanging viewpoints with other children and adults day in and day out, and of being allowed to make decisions. The more autonomous children become, the greater the possibility for them to become even more autonomous. This is why it is important to start fostering autonomy early in life. The five-year-old who can already govern himself with respect to small decisions is more likely to become more autonomous in dealing with bigger issues.

VII. INTELLECTUAL DEVELOPMENT

Exchange of viewpoints and negotiations are important not only for children's moral development but also for their intellectual development.

For example, being told that another person cannot believe his lie motivates the child to reconsider the situation from the adult's perspective.

This kind of co-ordination of viewpoints is essential for children's development of logic. I still remember wondering, with all the intellectual power I had as a child, how my mother could possibly know that I was lying!
Adults often repeatedly tell children to be quiet at the dinner table and in waiting rooms. This command is good neither for their moral development nor for their intellectual development. It is much better to negotiate a solution with them by asking what they think they can do to occupy themselves and leave the adults in peace. They may think of going to another room, looking at a book, or drawing a picture. This negotiation requires inventiveness, IF-THEN relationships, and the co-ordination of points of view.

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* Children who thus negotiate mutually acceptable sol-
* utions day after day develop their ability to think
* logically because they have to make sense to others
* if they are to be convincing. This ability to think
* logically is an important foundation for learning to
* read, to do arithmetic, and to organize every other
* kind of knowledge in and out of school.
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VIII. CONCLUSION

The principles discussed above may require more patience than you think you have. But if we want children to become able to act with personal conviction about what is right, independently of the reward system, we must reduce our adult power and avoid the use of rewards and punishments as much as possible. We must, instead, exchange points of view with children, negotiate solutions, and let them make decisions for themselves. Only then can they build for themselves their own personal feelings of necessity about what is fair and right for everybody concerned.