ABSTRACT

This paper deals with some of the social and educational implications of Piaget's concept of "stages", (as formulated in structural-developmental psychology) and focuses on a basic aspect of interpersonal cognition—social perspective-taking ability. The analysis emphasizes the structure of social understanding rather than the content, the ability to conceive of subjective perspectives rather than the accuracy of person perception. From a longitudinal study of children, aged four years through young adulthood, four levels of interpersonal perspective-taking in children prior to adolescence are identified:

1. egocentric perspective-taking,
2. subjective perspective-taking,
3. self-reflective perspective-taking, and
4. mutual perspective-taking.

In a second study, subjects responded to filmed, socio-moral dilemmas. On the basis of the responses, the levels of interpersonal perspective-taking were related to moral conceptions in children. The last half of the paper concentrates on the educational implications of the sequence of perspective-taking levels, particularly social-conceptual conflict and exposure to reasoning slightly above the child's own level. A peer-oriented developmental program for social education is presented, along with a description of the teacher's role in social education and some pilot research which evaluates the author's procedures. (CS)
A developmental approach to interpersonal and moral awareness in young children: some theoretical and educational perspectives

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Introduction

Although it is a commonly held belief that children see the world in ways which are different from the way adults view it, it is less obvious that children are not simply ignorant or unaware of certain facts about the world, but that they have their own theories and interpretations of the social and physical events in their lives. Children structure or organize their experience; each general restructuring or reorganization of experience is called a "cognitive stage."

About fifteen years ago the impact of these ideas of the Swiss psychologist and philosopher, Jean Piaget, began to be felt in the circles of academic psychology in this country. Structural-developmental psychology, as this approach is sometimes called, has since become accepted as a respectable if controversial scientific approach to the study of cognition and knowledge. The basic principle of this theory is that it is useful to think of children's reasoning as developing through a sequence of stages. Insofar as these stages are invariant in the order of their construction, they are seen as universal.

The flurry of intellectual excitement and discovery which marked the emergence of a new approach has recently subsided. And now within the academic community, Piagetians have dug in to debate with Skinnerians and occasionally with Freudians while the eclectics piously take the best from each. However, in certain areas the battle still generates new and controversial ideas. One such area is the social aspects of development. Another is the educational implications or lack thereof of structural
developmental theory. With regard to the first area, the debate concerns itself with whether or not the Piagetian or structural developmental approach is applicable to the whole child; not just to the intellectual, but also to the social, emotional, affective, or moral aspects of human behavior. With regard to the second area, the debate focusses on whether the very nature of Piagetian-type stages make them unamenable to "outside" change or stimulation, and hence to education.

It is toward these issues, the social and educational implications, that my comments are addressed today. My comments should not be interpreted to mean that this particular psychological approach can explain all behavior, but that the structural-developmental approach can help those people who work with children to better understand and better educate children.
I. A structural approach to understanding social and moral thought in the young child

Rather than focussing only on the intellectual aspects of the child's mental life to the exclusion of the social or emotional aspects, structural theory considers the dichotomization of these two aspects false to begin with. Recent research indicates that children's social understanding develops according to systematic sequences of stages in ways which parallel awareness of logical and physical concepts. For example, my friend and colleague Lawrence Kohlberg's research in the area of moral development indicates that moral judgment develops through a sequence of universal stages. Although it has been commonly assumed that moral values and beliefs are acquired through some process of cultural transmission, or identification with the beliefs and values of parents and members of adult society, the research of Kohlberg and his associates indicates that children pass through an invariant sequence of stages of reasoning about values and beliefs, and that the mode or way of moral reasoning is as important in understanding moral behavior as the content of the beliefs themselves.

My own research falls within this structural-developmental framework and is in part related to research in moral development. My colleagues and I have been studying stages in the development of a basic aspect of interpersonal cognition—social perspective-taking ability. Stages of social-perspective taking refer to the developing awareness of a uniquely human property and characteristic—subjectivity. People as objects are different from other objects of experience for the child because 1) people can think, and 2) people can think about each other and each other's thoughts.
In other words, people are the only class of objects with subjectivity. How the child comes to know about these uniquely human abilities, how knowledge of these abilities manifest itself in the child's interpersonal conceptions, and how this new knowledge relates to his conception of fairness and justice are the foci of our research.

Just as Piaget's stages describe the ways in which the child reasons about physical objects and logical relations, levels of social perspective taking describe the way the child at a given level understands human subjects and social relations. My analysis emphasizes the structure of social understanding rather than the content, the ability to conceive of subjective perspectives rather than the accuracy of person perception. Let me try to clarify the distinction, as it is basic to all research within the Piagetian framework.

It is common to note people who are particularly insightful into the psychological nature of others, or people who are particularly empathetic. These abilities, however, are not the direct focus of my research. My research is more directly concerned with when and how the child realizes that another person can consider his point of view, not what that other person thinks his specific thoughts or feelings are. What is in other's mind is the content. That other is conceived of as having a perspective, and what the nature of the perspectives of self and other is conceptualized to be is the structure of social thought. These two aspects of social thought, content and structure, are obviously related, but for theoretical purposes, we focus on the structure. Table 1 briefly summarizes the nature of the child's conceptions at each level.
Very young children, even as they begin to clearly distinguish the self from other, and the self's visual perspective from others, still lack a conception of persons as having subjective viewpoints, as having "minds," or as having "reasons" behind their actions. Thus "why questions" which demand an understanding of psychological causation, such as, "why did you do that" are often meaningless to two year olds. For example, when my eldest boy was about 2 1/2, we began to have verbal exchanges of which the following is an example:

Son: I want to go down the hill.
Father: You can't go down. No one will be able to watch you. Stay here.
Son: I don't want to stay here. I want to go down.
Father: No son, you can't.
Son: Don't say no, daddy, say yes.
Father: But I don't want you to go.
Son: (emphatically) Say yes, daddy.

My interpretation of this interchange may help to clarify what I mean when I say that young children do not conceive of others as "subjects," as having covert psychological existence. My son's command to change my response (no to yes) implies an unawareness that even if my words were changed, that my mind would not be changed. At a slightly older age children begin to become aware that by "saying no" I would "mean (intend) no." My son was at level 0 social perspective taking.

My evidence for level 0 rests mainly on anecdotes such as the above. However, we have begun some systematic research on children as young as four and this research has led to definitions of higher levels of perspective-taking ability. These studies of children from four years of age through young
adulthood show that each perspective-taking stage stems from the preceding stage and paves the way for the next one. Children may go through the stages at different rates, but always in the same order.

The stages that I am about to describe are best viewed as idealizations. Very rarely does one find a child whose responses fall only within the framework of one particular stage. In fact, insofar as stages really represent new levels of conceptual development each stage should probably be seen as representative of the final consolidation or clarification of a concept, not its emergence. This may help to explain why certain aspects of the stages I will describe seem to appear earlier in natural situations than on the measures we use. However, although accurate normative age data for each stage is of practical importance, it is the qualitative nature of the order of changes in social reasoning which I wish to stress.

Our research has made use of a program of audio-visual filmstrips to study perspective-taking within the context of both interpersonal and moral dilemmas. To exemplify levels of social perspective-taking, I will draw upon responses of children to the following interpersonal dilemma:

Two boys are trying to figure out what to get a friend for his birthday. Greg has already bought some checkers for Mike, but Tom can't decide whether to get Mike a football or a little toy truck. The boys see Mike across the street and decide to hint around to see what he'd like for his birthday.

Greg and Tom ask Mike about trucks and football, but nothing seems to interest him. He's very sad because his dog, Pepper, has been lost for two weeks. When Greg suggests that Mike could get a new dog, Mike says he doesn't even like to look at other dogs because they make him miss Pepper so much. He runs off home, nearly crying.

Greg and Tom are left with the dilemma of what to get Mike. On their way to the toy store, they pass a store with a sign in the window -- "Puppies For Sale." There are only two dogs left. Tom has to make up his mind whether to get Mike a puppy before the last two are sold.
After the child views a sound filmstrip depicting the above dilemma, we present the child with questions concerning his conception of persons (e.g., motivation, personality) and his conception of relationships between persons (e.g., friendship, trust). From our analysis of children's responses we have derived the following descriptions of perspective-taking levels.

**Level 1. Ego-centric perspective taking**

Social perspective taking at level 1, though primitive, has its positive aspects. At this level, the child separates the attitude or viewpoint of self and other. For example, the child may realize that another may be sad even if he, himself, is happy. But even though the child separates viewpoints, he assumes that in similar situations, others will feel or act as he would in that situation. Prior to level 1, there is no differentiation of perspectives. At level 1, although the child recognizes there are more than one perspectives on a situation, they are assumed to be identical. A beginning conception of subjectivity emerges, but it is contaminated by a confusion of the self's subjectivity with the subjectivity of other. Social perspective taking at level 1 was predominantly found in our data in the reasoning of children from ages four to six. Here is an example.

Abby (5, 1): Do you think Tom will get Mike a new puppy?
Yes. He'll be happy. He's sad now but he'll be happy.
But Mike says he never wants to see another puppy.
Dogs are fun. I like puppies. And so why will Tom get him a puppy? Puppies are fun. I like puppies.

Abby does not seem aware of the possibility that Tom might possibly not share her attitude toward a new puppy but she does seem aware that he has a perspective.
Level 2. Subjective perspective-taking

At level 2 social perspective taking comes clear recognition that the self's perspective is separate from other's, and thus is unique. At this level the child realizes that self and other may view the same social situation in very different ways, and that similar actions might reflect disparate reasons. The child focusses on the uniqueness of the covert, psychological or subjective nature of others, rather than on other's overt actions. Social perspective taking discovery involves a new awareness of the thoughts, feelings and intentions of others as distinct from the self's.

Brenda (6, 2): Do you think Tom will get him a dog? No. If he says he doesn't want a dog, that means he doesn't want a dog. Just because Tom thinks he wants a dog doesn't mean Mike wants one. Will Mike and Tom be friends if Tom gives Mike a puppy? Well, Mike will be kind of angry; he doesn't want a dog.

Brenda is able to differentiate the subjective perspectives of the two boys, to focus on the viewpoints underlying their actions. However, her belief that Mike will be angry at Tom implies that she is unable to realize that Mike might understand that Tom was thinking about Mike when he bought the puppy. This marks the limiting characteristic of level 2 reasoning.

Level 3. Self-reflective perspective taking

The major advance of level 3 social perspective taking is the child's ability to see the viewpoints of persons (who may, of course, be self and other) in relation to one another. The perspectives are now seen to exist in a state of reciprocal influence, rather than as independent assessments of objective information in the world. For the first time the child recognizes that his judgments and actions are open to the scrutiny and evaluation of others, and his view of other is influenced by the realization that
others (or the self as other) can view the self as a subject just as the self can view others as a subject (hence self-reflective role taking). Level 3 perspective taking usually emerges after age eight.

Carl (8, 3): Mike doesn't know what he's talking about. He just says he doesn't want the puppy, but he doesn't mean it. How do you know that? Well if I were Mike, I would feel bad too, but later I'd realize that I really want the new puppy.

There is a big conceptual leap between the "I like dogs; (therefore) he likes dogs" logic at level 1, and "If I were he, I would want a dog" at level 3. This latter statement implies that the self can consider the self's subjective viewpoint from a separate other's point of view. When Carl says, "If I were Mike I would feel sad too," we infer that Carl can view his own subjective reaction from outside of himself, hence, self-reflection.

Level 4. Mutual perspective-taking

At level 4, the child is newly aware of the infinite regress (I know that you know that I know that you know, etc.) characteristic of dyadic relations; that each person is simultaneously aware of his own and other's subjective abilities. At this point (about ages 10 to 12), the child leaps to a new level of awareness; he begins to view his own interactions with others from a third person perspective. He begins to see interpersonal relationships in terms of abstract mutuality, rather than concrete exchange.

Alex (11, 2): Will they still be friends if Tom gets Mike the puppy? Well if Tom gets Mike a puppy and Mike doesn't like it, Tom still knows that Mike will understand that he was only trying to make Mike happy. They are good friends and good friends understand each other.

At this level the child begins to understand that each subject can be simultaneously and mutually aware of the other person's subjectivity, his thoughts, feelings, and motivation. As we noted before, more complex levels of awareness emerge in adolescence.
So far we have discussed levels of perspective-taking ability, in an interpersonal context. But how do these levels relate to moral conceptions in children? To study this question we have developed socio-moral dilemmas which pose the subject with a problem concerning either punitive or positive justice. Punitive justice measures test for conceptions of transgression, rules, obligations, and punishment; positive justice measures test for concepts of how rewards and resources may be distributed fairly. In each case, the child is asked for his judgment of what constitutes a good solution to the dilemma. This response is then extensively probed in order to obtain a full sample of his moral reasoning. A typical moral dilemma follows:

Holly is an eight-year-old girl who likes to climb trees. She is the best tree-climber in the neighborhood. One day while climbing down from a tall tree, she falls off the bottom branch but doesn't hurt herself. Her father sees her fall. He is upset and asks her to promise not to climb trees any more. Holly promises.

Later that day, Holly meets Shawn. Shawn's kitten is caught up a tree and can't get down. Something has to be done right away or the kitten may fall. Holly is the only one who climbs trees well enough to reach the kitten, but she remembers her promise to her father.

These dilemmas are also presented through audio-visual filmstrips.

To clarify the distinction between the two types of social-cognitive tasks, social and moral, the puppy dilemma focusses on the child's perspective-taking ability as it influences his prediction as to what the characters in the situation will do and think (hence social), whereas the kitten dilemma elicits from the child a prescription as to what the character in the situation ought to do (hence moral).\(^1\)

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\(^1\)Any given social dilemma may be viewed prescriptively, i.e., from an obligatory or moral perspective. (For example, "Is it morally right for Tom to give Mike the puppy?") However, probe questions for the socio-interpersonal dilemmas asked specifically for reasoning of a non-moral nature.
Our research and conceptualization of the relation of social perspective taking to moral reasoning indicates that each new level of moral reasoning requires a new form of social perspective-taking ability. One can have a level of perspective-taking higher than one's level of moral judgment, but level of moral judgment cannot exceed the parallel level of perspective-taking ability. Let me try to clarify this relation with a brief description of the moral reasoning of young children at the earliest moral stages.¹

The premoral child, before the development of level 1 perspective-taking does not differentiate his judgments from his desires, nor does he see the need to justify his judgment by reference to any criteria beyond those desires.

Dana (4, 10): Say you were the father. How much would you punish Holly? Six spankings. You'd give her six spankings? Yeah. Why would you do that? Because I just want to. Suppose you decided to spank her 100 times, would that be O.K.? No. Why not? 'Cause I don't want it to be O.K.

At this stage, the child's reasons for his moral choices are merely reassessments of his desire for the choice to occur, rather than justifications of that choice. The judgments are made as if there was only one way of viewing a social situation, and as if that way was held by all viewers. It follows that the child implicitly (without reflection) assumes that his judgments will be acceptable to all parties concerned. Since the child does not recognize the possibility of different viewpoint, neither does he recognize the possibility that a solution which serves the self's desires may be in conflict with the desires of others. This reasoning is egocentric and time bound; it does not incorporate issues beyond the immediate wishes of the self. Most characteris-

¹The stage descriptions and examples of moral reasoning are taken from a paper by R. Selman and W. Damon, The necessity (but insufficiency) of social perspective taking for conceptions of justice at three early levels. In D. DeFalma (Ed.) Loyola symposium on recent research in moral development. Baltimore, Md., L. Erlbaum, in press.
tically, these judgments confuse moral choices and moral justifications with statements of egocentric desire.

The child whose moral reasoning is based on level 1 perspective taking sees the necessity of justifying his judgments on the basis of criteria more universal than his own desires. By his reference to external, observable physical characteristics--criteria which are outside himself, and thus not purely subjective--the child introduces an element of objectivity into his justifications. Such reference to objective justification implies the awareness of separate social perspectives--an awareness available to the child at social perspective-taking level 1.

Brian (4, 10): Who should get the most cake for dessert in your family? Me. Why is that? Because I'm the fastest runner.

In fact, this child has probably misrepresented the truth in order to justify this judgment; for it is doubtful that he is the fastest runner in his family and equally dubious that he receives the largest share of the cake. Nonetheless, he has perceived the need to justify his judgments on the basis of a seemingly objective criterion--i.e. that the fastest should get the most. His attempt here is to employ reasons which might be shared by others, whereas at an earlier stage there was no such attempt. The toddler's "Because I want it" is no longer seen as reason enough; there is now a sense that such reasoning would be futile in convincing another of his position. In other words, now there is a beginning awareness on the part of the child that to be morally right his wishes need to be shared by others in some sense, and that therefore he must refer to some external criteria in order to convince another
that he is right. But this awareness is both made possible and at the same time limited by the constraints of level 1 social perspective taking. For, though the child at level 1 is aware of the perspective of another, he cannot accurately construct it, nor appreciate its differences from the perspective of the self. The basic operating assumption of these children is that although persons have separate viewpoints what is right for the child will be right for all others.

The new discovery of level 2 (subjective) perspective taking is that other has a covert or subjective existence unique and separate from the child's. From the new realization comes an understanding in the moral realm that the similar social acts of different actors can stem from different subjective intentions. It follows that some of these intentions may be considered "good", others "bad." The child now realizes that the intention behind an act cannot be inferred directly from the act itself: He sees that two persons might intend something very different by the same act. The child can now reason that acts are not right or wrong in themselves, but rather that acts intending good are right, and those intending bad are wrong. In this light, the child begins to distinguish between what persons have the right to do and what they have the power to do—and thus to distinguish moral prescriptions from social predictions. He is able for the first time to evaluate the judgments of adults and authorities, and to consider their judgments wrong when he disagrees.

Tom (6, 8): Should the father punish her for climbing the tree? He could, but it wouldn't be right. Why not? Because she wasn't doing anything wrong. She was trying to save the kitty.

Sarah (7, 4): Do you think Holly's father would understand if she told him why she climbed the tree? Yes. Because she not the kitten down instead of just climbing up on trees, just climbing it for...
The major discovery at level 3 social perspective taking is that the self is aware that other can consider the self's point of view, and that this, in turn, influences the self's perspective on other.

The reasoning about justice of children who apply their level 3 perspective taking to the moral domain is distinguished by the child's ability to coordinate the perspectives of two persons (his own and another's, or those of two others), and to view those perspectives in their relation to one another. The child now begins to see that his judgment is in part a function of his own subjective attitudes and that it will be evaluated by another. Thus it is necessary for him to anticipate potential conflicts and to resolve them by making judgments which take the other's perspective into account. Justice reasoning is now based on a new level of interpersonal reciprocity. When the self is considered both as self and as other, fairness can become an agreement between two parties as to what constitutes a fair arrangement between them. Justice is now defined as the process by which opposing views of right and wrong were reconciled and coordinated. This process has its roots in the child's recognition that his judgments and actions are open to the scrutiny and evaluation of others. When level 3 perspective taking is applied in the moral domain there exists an imperative for the self to take the perspective of other in addition to his own in making a moral judgment.

Tom (10, 0): You should take the other person's opinion. Like say you're about to step on an ant, and you eat in the ant's shoes and you wouldn't want to be killed or something; so I wouldn't really step on the ant.

In this example, the child changes places with the other (the ant) and looking back on himself as he would view himself if he were the ant recognizes that his decision to kill the ant would be unacceptable from
the ant's point of view. And so he decides that it would be wrong to step on the ant.

Behind this imperative to take another's perspective lies the recognition that if self and other are truly to be viewed as subjects, each with his own perspective, then their judgments and evaluations of the same social situation may conflict; hence the necessity for some coordination of their perspectives.

Still missing is the ability to see the reciprocal relations between two individuals from outside the dyad, from a third party position. The perspectives reciprocally taken are still concretely those of self and other. The claims of each are not seen as analyzable by a third party who can orient to the two claims mutually and simultaneously. Thus, if an adult gets a child to agree to trade the child's five dollars for the adult's candy bar, this is seen as "fair" as long as the two parties (child and adult) agree to the fairness of the arrangement.

It is not until social perspective taking level 4 that the subject is potentially able to step outside of the concrete dyad and view the interaction from a third person point of view. At this point a judgment can be made concerning the unfairness of the two-party arrangement. The five-dollar-candy bar trade is unfair because an impartial observer would judge the adult to be "taking advantage" of the child even if the child thinks it is a fair deal. But this is the skill of mutual perspective taking, and is rarely found in children younger than ten.

Our present research focus is on how perspective taking levels
Our present research focus is on how perspective taking levels influence interpersonal conceptions, conceptions such as personality, motivation, friendship, peer and sibling relations, and parental and authority relations. However, we have also dealt with educational implications of a sequence of perspective-taking levels. It is this work and its implications for social and moral education in the elementary grades to which I will now turn.
II. Educational implications of perspective-taking levels

Ironically the educators who deny that Piagetian theory has any direct or meaningful implications for education focus only on Piaget's theoretical assertion that there are universal, lawful, consistent, and invariant stages in the development of reasoning. Often these educators ask, why teach something which will develop whether I teach it or not? In fact, they ask whether one can teach developmental concepts or abilities at all. Overlooked, however, is the role of variability in the theory. First, universality of sequence does not imply biological invariance such as a biological theory of intelligence might. Experience plays a critical part in conceptual stage development. One way to understand educational implications within a theory of universal stage development is to understand that in theory, certain intellectual and social experiences are also universal, such as the observation that a dropped ball falls or that people get angry. Each child needs to "experience" these experiences if he is to develop through the entire sequence. The number and kind of experiences have a more or less facilitating effect on development. Second, there is a wide range of individual differences in the rate of development through the hypothesized invariant sequence of stages. For example, much research, including Inhelder's monograph, The diagnosis of reasoning in the mentally retarded, supports both the hypothesis of universality of the sequence of logical thought and the hypothesis of fixation or retardation of rate of stage development in some children. Third, even within the individual there is variability of level of reasoning depending upon the concept or domain reasoned about. These aspects of structural developmental theory bear directly on education.
My own educational interest within the Piagetian framework has been social development and has been guided by the conceptualization of social perspective taking levels I discussed in the first part of this paper. For the past several years my colleagues and I have worked to develop paradigmatic methods of social education based upon a structural-developmental approach to understanding and stimulating children's perspective taking ability. The cornerstone of our approach is guided peer group discussion. We have developed audio-visual filmstrips which portray open-ended social dilemmas typical of the lives of children of elementary-grade age. Each filmstrip leaves the ending to the dilemma open. Arriving at a solution is up to each child. Development occurs through the exercise of the child's reasoning and the exposure to the reasoning of peers. Children at different levels of social reasoning may decide on the same alternative, but the reasons they use to justify their choice may differ. Although final choices are important, the emphasis is on considering reasons.

The filmstrips we use to promote and stimulate the exercise of social reasoning and judgment are basically the same as the dilemmas we have used in our research to study the social reasoning of each child individually. However, while interviews with individual children are essential to the psychological description of stages of interpersonal and moral reasoning, according to structural theory the discussion of these dilemmas by peers within a group is the basis for meeting the educational criteria of developmental change. This is because optimal movement to more adequate social reasoning is seen to occur through two basic developmental principles: (a) social-conceptual conflict and (b) exposure to reasoning slightly above the

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social-conceptual conflict refers to the rethinking of one's own theory of the nature of the social world and social relations. In this respect, Flavell writes:

"In the course of his contacts (and especially, his conflicts and arguments) with other children, the child increasingly finds himself forced to reexamine his own precepts and concepts in the light of those of others and by so doing gradually rids himself of cognitive egocentrism." 2

Furthermore, peer group discussion is also the most natural vehicle for exposing the child to reasoning slightly higher in the developmental sequence than his own. Here are two excerpts from typical discussions of the lost puppy dilemma among third graders which exemplify these principles:

1. Conceptual conflict

   Bill: Get him a dog to replace Pepper.

   Bob: But remember, Mike said he didn't want to see anybody else's dog.

   Bill: Yeah, but that would be his dog.

   Bob: Yeah, but it wouldn't be Pepper (1 up)

   Bill: Name him Pepper.

   Bob: Still not the same thing.

   In this exchange, Bob challenges Bill to reflect on his own reasoning. What does Bob mean when he says, "Still not the same thing"? If Bill thinks about this idea in juxtaposition to his own concepts of social relationships, it may provide the mechanism for social concept development.

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2 John Flavell, The development of role-taking and communication skills in children, New York: John Wiley & Sons, 1968
2. **Dialogue between children at two different levels**

**Alex** (level 2)

I think it's important because like um, if you buy something ah, something for the other person, that he doesn't like, he might get mad at you or something and not be your friend or something and then you'd just be down one friend and if you had to have very many friends besides the ones in school. So if I did that I'd be in trouble.

**Jane** (level 2)

Yeh, but that's not gonna make them not friends. His friend will understand. Besides, I think that um, he should buy the puppy because in a month or two he's going to be wanting one. He just said that because he lost his dog and he's sad. I think he should buy it and he'll start to like the dog and after a few days he'll stop thinking about Pepper once he gets another thing he loves a lot.

In this second example, Alex has a very concrete and moment-to-moment conception of friendship. Jane rejects Alex's reasoning based on her awareness that friendship is based on expectations of each person toward one another, not on specific acts such as the gifts that one person gives the other. Her reasoning represents a stage one above Alex's and provides stimulation for him, as well as for herself. This discussion exemplifies another aspect of stages of reasoning: children at higher levels usually reject lower level reasoning as immature or inadequate.

Our aim has not been to accelerate development through social perspective-taking levels. Rather it has been to devise a peer oriented developmental program whose aims are (a) the stimulation and exercise of the child's social perspective-taking ability across a range of social judgment and behavior, and (b) the prevention of retardation of social understanding.

We stress stimulation and prevention of retardation rather than acceleration for the following reasons. First, research indicates that movement
from stage to stage is a long term process. Findings indicate that complete
transition from one level to the next may take several years or more. Teachers
therefore, should not expect to see great leaps from level to level in the
space of a few months. Stages refer to the qualitatively new ways of thinking,
not to overnight change. Furthermore, the ages given for our research are
only averages. A child may move into a level earlier or later than the guid-
lines suggest. And sometimes a child can be in transition between two levels.
Second, only when the child has a firm command of one level of reasoning does
the next level begin to be accessible to him. In other words, over the long
haul, rapid development may not be optimal development.

Just as children need to exercise their reading and math skills, they
must also exercise their social and logical abilities across a wide range
of situations. Perhaps the most important point to make with regard to
educational practice, is that the application of social perspective-taking
ability to the child’s performance across a range of social behaviors is not
an automatic process. For example, in the application of perspective-taking
to moral development, our research points to the fact that each perspective-
taking level is necessary but not sufficient for a parallel moral level.
This means that a high level of perspective taking ability does not guarantee
equivalently mature moral thought. As a case in point, recent research in-
dicates that although delinquents have quite adequate perspective taking
ability compared to their peers, they do not apply this ability to their
moral judgment. Our basic educational goal is to help children apply the
perspective taking they have to various areas of social behavior. We
speculate that in the long run, such applications will eventually facilitate
forward stage movement.

In addition to moral and interpersonal contexts, two other overlapping
areas of social development are dealt with in our work:
Solving social problems—When two people get separated in a busy store without having planned where to meet, each person must think about what the other is thinking. If a person plans to meet someone else at the park but forgets to specify which park, both people must do some perspective taking. Many games of strategy also depend on a player’s ability to figure out his opponent’s potential behavior. In social problems of cooperation, coordination, and competition, an essential element for success is the ability to take another’s perspective.

Communication and persuasive skills—Parents are familiar with the problem of trying to understand what a young child means when he refers to "this" or "that" while on the other end of the phone or in another room. The child has not taken into account the fact that the listener cannot see what is meant by "this" or "that". The ability to communicate one’s point of view is important in a child’s attempt to persuade others when he believes he has a good idea, or when it is necessary for him to clarify his ideas in a social situation that he become confused. To communicate or persuade effectively, the child must be able to take into account the needs and wishes of his listener.

While these distinctions among areas may be conceptually useful in pointing out the need for the application of perspective-taking ability, in the "real world" each social area is inextricably intertwined with the others. For example, in one of our educational perspective-taking dilemmas, a young girl, Jane, truthfully tells her friend Brian that she cannot go to the rodeo with him because her aunt is coming to town. Brian takes the rejection personally, and claims Jane does not really want to go with him. When Jane finds out she can go after all, she calls Brian but he has already
left. Jane goes with another friend and, of course, runs into Brian. What will Jane do, what will she tell Brian? To think maturely about the problem demands sensitivity in many social areas. It demands application of perspective-taking ability to interpersonal problems (awareness of Brian's feelings and attitudes towards Jane—he thinks she does not like him). It demands persuasive and communication abilities (Jane must consider Brian's perspective as she explains her presence at the rodeo). And it demands value judgment. (It may be easier to lie rather than present a truthful but unlikely story, but is that really being fair to everyone involved?)

Our educational assertions are in keeping with the evidence of structural developmental theory. Direct short term vertical training of higher stages is relatively unsuccessful. But the horizontal application of a structure of thought to a wide range of content areas lays the groundwork for subsequent vertical development.

Furthermore, education based on social-developmental stages should not be viewed as a Band Aid approach, i.e., that stimulation of a stage of social or moral reasoning will repair specific classroom management problems is a theoretical misinterpretation. Rather, structural theory has implications for a general educational approach to be built into the fabric of the daily class activity. Let me clarify this point with reference to two final topics; first, the developmental conception of the teacher's role, and second, some pilot research evaluating our educational procedures.

The teacher within our framework has two major functions: a) to arrange the optimal conditions for open discussion, and b) to help keep the discussions relevant and stimulating. The most challenging problem
for teachers, particularly in the elementary grades, is to help children to focus on reasons and reasoning rather than on just right answers. The teacher must encourage the child to give reasons for their opinions and to demand them of others in the group.

Although we emphasize peer discussion, occasionally the teacher must intervene in the discussion to keep it focused. Children, like adults, can wander from the main issues designed in the original dilemma. The teacher must use his judgment in guiding the discussion back to the main issue. For example, in the puppy story a discussion of the types of dogs that the children in the class have would be considered somewhat off the track. However, some digressions may be very valuable in that they explore important areas of social reasoning and may relate to the underlying social concerns of the dilemma. Here is an example:

Andy: My dog was killed by a car and we got another one later on.
Karen: How'd you feel?
Andy: Well, um, I when I got it for a Christmas present and everybody was all excited about it and um, so I, so and there was a lot of pictures being...so I didn't have any time to feel happy or sad or mad or glad.

The teacher can use such a situation to encourage further probing into social reasoning and to bring the child's relevant personal experience into the realm of discussion. Furthermore, by conceiving of the filmstrips as a model, the teacher can begin to take natural classroom experiences as the basis for peer group discussion.

Although elementary grade children readily discuss hypothetical dilemmas when presented audio-visually, with practice, children are just as capable of using the methods I have described to discuss the real-life events of their own parental, peer, and authority relations. In fact, in one pilot
study which we have undertaken to evaluate the effectiveness of our peer-
discussion approach on the moral reasoning of second graders, there was
evidence that the greatest advance in reasoning occurred when teachers
used our curriculum as a paradigm for "natural" moral discussions to re-
solve classroom conflicts the rest of the school year. (Selman and
Lieberman, 1974)

In this study we compared three groups--two experimental and one
comparison group. The two experimental groups participated over five
weeks, in hour long, twice-a-week structural-developmental discussion
of the filmed moral dilemmas of our social-development program. One
experimental group was led by trained developmental discussion group
leaders, the other by the classroom teachers. All children's moral
reasoning was assessed prior to the experimental intervention, just sub-
sequent to the intervention, and 5 months later, at the end of the school
year. From a statistical perspective, the pre-post test upward change in
level of reasoning across the three groups was significantly greater for
the experimental groups than for the control. Interestingly, differences
between teacher-led and developmental leader-led groups were insignificant.
However, the most interesting result from an educational viewpoint was the
change of level of reasoning for both types of experimental groups from
pre- to follow-up testing at the end of the school year. The mean amount
of change was about one-half a stage of reasoning for both experimental
groups over the control group.

The explanation of these results probably lies in the fact that the
teachers whose classes participated in the experimental intervention con-
tinued to use the methods of small group discussion to resolve the inter-
personal and moral conflict which arose in their classroom throughout the
school year.

The most compelling evidence so far for the effectiveness of the developmental discussion group model is not statistical levels of significance but the protocols themselves, the actual reasoning of the children in response to our assessment procedures. Below are excerpts of the responses of a second grade boy, Peter, age 8 who participated in the experimental group of the intervention study.

**Pre-test (October)**

What would you do if you were Holly?
- **Well, I would keep my promise I guess.**

Why would you keep your promise?
- **It would be better.**

Why would it be better?
- **Because my daddy said not to climb trees and I might get hurt and it's not a good idea.**

It is not a good idea to break your promise?
- **No.**

Why isn't that a good idea?
- **Because her daddy doesn't want her to. It is nicer to do what your parents say.**

If she climbs the tree, should she tell her father?
- **No. He might yell at her.**
Do you think Holly should help Sean by climbing the tree to get the kitten down?
- I guess so.

Why?
- Well, the cat is a living thing and I am sure Holly's mother wouldn't mind or Holly's father.

Sean says he will keep it a secret if Holly climbs the tree, is that a good idea?
- No.

Why not?
- It is better to tell your father what you did because he might get worried anyway, I think it is much better to tell what you promised your father, then he won't get so upset maybe.

Would you help Sean get the kitten down?
- I suppose so.

Why?
- Because as I said, the cat is a living thing and Sean must like it.

What about the promise to your father?
- The promise to my father I think, well, I would wait until my father came home to tell him what had happened and then if he said yes I could climb the tree I could climb it.

The kitten might fall before your father gets home and he is away on a business trip and won't be home for several days.
- Then I would get the kitten and when my father came home I would tell him what I did.
On the pretest, Peter chose not to climb the tree. His choice is based on an orientation to authority ("it is nicer to do what your parents say") and to consequences ("I might get hurt"). However, this orientation to consequences also effects his belief that it is a good idea to keep the wrongdoing a secret to avoid the consequences of her father's anger.

There is a major change in both content and structure on Peter's post-post-test. Here he thinks Holly should help Sean (content) because the parent will consider Holly's reason ("Holly's father or mother wouldn't mind") (structure) and although he would climb the tree, he would not keep it a secret (content) from Holly's father because the act of keeping a secret is worse than the promise breaking itself in the father's viewpoint ("Then he won't get so upset") (structure).

It is not so much that Peter changed the content of his choices from one time to the next which is educationally salient here, but that the basis upon which he justifies his choices have changed. On the pretest, Peter did not consider intentions. None of his responses indicated an awareness that the father would consider the motives of Holly. On the post-test this awareness is clearly evident. That Peter now considers that one person can base his actions on the awareness of the intentions (subjectivity) of another rather than only on the actions of another, is an example of educational development from a structural point of view.

In sum, I have spoken today from the perspective of a developmental psychologist interested in psychological interventions and assessment methods for young children's social reasoning which also are relevant to educational psychology. The task of educators is to coordinate this.
approach with their own theories and practical experience. Do not expect one approach to explain all there is to know about the behavior or education of children. However, in seeking to define basic characteristics of each level of social, interpersonal, and moral thought, and in seeking to understand the mechanism of change from one level to the next, developmental psychology has great potential for a meaningful contribution to education.
References

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<th>Level</th>
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| 1 | **Egocentric perspective taking**  
   Although the child can identify superficial emotions in other people, he often confuses other's perspective with his own. He does not realize other may see a social situation differently from the way he does. |
| 2 | **Subjective perspective taking**  
   Child begins to understand that other people's thoughts and feelings may be the same or different from his. He realizes that people feel differently or think differently because they are in different situations or have different information. |
| 3 | **Self-reflective perspective taking**  
   The child is able to reflect on his own thoughts and feelings. He can anticipate other's perspective on his own thoughts and feelings and realize that this influences his perspective on other. |
| 4 | **Mutual perspective taking**  
   The child can assume a third-person point of view. He realizes that in a two-person interaction each can put himself in the other's place and view himself from that vantage point before deciding how to react. |