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ABSTRACT

Over the past two decades, theorists and researchers in cognitive structural developmental psychology have begun to investigate the social processes that impact upon individual cognitive growth. Studies have focused on how interactional processes lead to cognitive development but not on how the interactional processes are formed. This paper presents: (1) a history of the literature on sociomoral discussion analysis; (2) a review of the studies in this field, including results from a cross-sectional, cross-cultural study; and (3) a preliminary model for the development of sociomoral discussion. This document suggests that educational goals include giving teachers and parents information about developmental transformations in children's communicative competencies and supporting interventional training for children. Six tables and two figures are appended, followed by a 50-item bibliography.

The development of sociomoral discourse

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Over the past two decades, theorists and researchers in cognitive structural developmental psychology have begun to investigate the social processes that impact upon individual cognitive growth. While Piaget (1965a) has long argued that social relationships and interactions can facilitate or inhibit structural growth, it is only recently that serious empirical attention has been focused on this issue. Beginning with studies of children jointly attempting to solve conservation tasks (Miller & Brownell, 1975) and leading to similar studies in the sociomoral development domain (e.g., Berkowitz & Gibbs, 1983), such investigations have attempted to identify how social interactions can foment individual growth (cf. Berkowitz, 1985). These investigations have identified such variables as presentations of conflictual constructions (Miller & Brownell, 1975), reasoning about one's partner's constructions (Berkowitz & Gibbs, 1983), supportive styles of confrontation (Powers, 1982) and optimal stage disparity of sequential constructions (Taranto, 1984).

While these investigations have spanned early childhood (Damon & Killen, 1982; Miller & Brownell, 1975) to early adulthood (Berkowitz & Gibbs, 1983; Powers, 1982), there has been almost no consideration of the "second order" developmental question, i.e., how do the developmentally stimulating interactional processes themselves develop? In other words, we have focused on how the interactional processes lead to cognitive development, but not on how the interactional processes are formed. This question has both theoretical and practical significance. Theoretically, if developmentally-stimulating interactional processes are dependent upon a specific level of cognitive development, e.g., if certain social skills require a certain level of logical sophistication, then they should only be relevant for investigations of individuals in a limited developmental range. We therefore need to consider how the interactional processes may vary for individuals at different developmental levels. Practically, if such interactional processes are at

play in natural development and in common developmental institutions, e.g., the school and the family, then we need to know how to chart and facilitate their development in order to maximize the developmental richness of these milieux. Hence it becomes critical to study how the developmentally-relevant features of social interactions develop.

In this chapter, we will examine the development of moral discussion, thus representing what has previously been termed the Developmental perspective on sociomoral discussion (Berkowitz, 1986). In doing so, we will be focusing on the developmentally stimulating features of such discourse, but we will not focus exclusively on that aspect of the phenomenon. First we will present a brief history of the literature on sociomoral discussion analysis. Second, we will review the few existing studies of the development of sociomoral discussion, including results from a cross-sectional cross-cultural study of the development of sociomoral discussion behavior, while considering the developmental status of the subjects investigated. Finally, we will present a preliminary stage model for the development of sociomoral discussion.

The study of sociomoral discussion: An overview

Sociomoral discussion originally was of interest as an educational intervention technique (Blatt & Kohlberg, 1975; Colby, Kohlberg, Fenton, Speicher-Dubin & Lieberman, 1977). The use of peer discussion of sociomoral dilemmas was indirectly derived from the standard Kohlberg assessment technique (Colby, Kohlberg, Gibbs, Candee, Speicher-Dubin, Kauffman, Hewer & Power, in press) which has recently been reconceptualized as a sociomoral discussion (Keller & Reuss, 1985). As the use of sociomoral discussion education proliferated, attempts were made to conceptualize the effective features of the technique (see review by Berkowitz, 1981). Nonetheless, most of these attempts were post hoc reflections or simply theoretical conjectures. Little empirical evidence was collected and that little bit was poorly designed and therefore

less than illuminating.

The classic sociomoral discussion paradigm centers upon a trained expert's (teacher's, researcher's, etc.) (1) presentation of a sociomoral dilemma to a typically homogeneous group (usually school children or adolescents) and subsequently (2) the facilitation of a group discussion of the sociomoral implications of the problem under consideration, usually following at least loosely the guidelines of a class lesson plan or specific discussion procedure (e.g., Arbuthnot & Faust, 1981; Galbraith & Jones, 1976; Gomberg, Cameron, Fenton, Furtek & Hill, 1986; Reimer, Paolitto & Hersh, 1983). The results are typically for the sociomoral discussion group to gain, on the average, about one third of a stage in Kohlberg's (1984) stage scheme while comparison groups (typically, "no discussion" conditions) do not change appreciably in their stages of sociomoral thinking. Then the investigators suggest what aspect of their manipulation was the likely culprit in inducing this change, e.g., the discussion leader's style or the exposure to specific sociomoral arguments. Rarely have these features of sociomoral discussion been systematically controlled in a successful sociomoral discussion intervention program. Nonetheless, the use of "generic" sociomoral discussion has been successful in inducing sociomoral reasoning stage development and continues to be used extensively both in classrooms and in the laboratory as well as more recently in the family (Lickona, 1983) and the church (Caldwell & Berkowitz, in press). In order to better understand how sociomoral discussion leads to sociomoral reasoning development, Berkowitz and Gibbs (1983) began the study of transactive sociomoral discussion.

The theory of transactive discussion is predicated on the Piagetian assumption that discussion leads to development by means of the disequilibrating effects of the confrontation of incompatible constructions presented by two or more discussants (Piaget, 1965a). When one considers another's (Alter's)

construction in the context of one's own (Ego's) construction and subjectively discovers incompatability, one experiences disequilibrium, which is a necessary but not sufficient condition for stage growth. The more actively and fully one considers incompatible constructions, the more likely one is to experience disequilibrium. We have therefore defined transactive discussion as "reasoning about another's reasoning" (Berkowitz & Gibbs, 1983). We specifically were looking for features of moral discussions that we could empirically demonstrate led to the development of the sociomoral reasoning of the undergraduate same-sex dyadic discussants we studied, while at the same time fulfilling the above definition. In the process we identified eighteen categories of "transacts" grouped into lower order (Representational) types and higher order (Operational) types. The former are behaviors in which one simply re-presents Alter's construction as in a Paraphrase (see Table 1, Transact 2). The latter are behaviors in which one cognitively "operates" on or transforms Alter's construction

INSERT TABLE 1 HERE

as in a Reasoning Critique or Integration (Table 1, Transacts 14 and 17a). We have empirically demonstrated that the degree of transaction in a dialogue is related to the degree of sociomoral reasoning development of the lower stage discussant and that this relationship is a stronger and independent predictor of development when compared to the stage disparity between the discussants or the absolute stage of the discussants. Finally, Operational transaction seems to be more strongly related to development than is Representational transaction. Hence we have empirically supported the theory of transactive discussion from the Growth-Facilitative perspective on sociomoral discussion (Berkowitz, 1986), i.e., from the point of view of the developmentally stimulating aspects of sociomoral discussion. As noted earlier, in this chapter we are interested in the Developmental perspective on sociomoral

discussion, i.e., how transactive discussion and sociomoral discussion in general develops. Let us therefore examine some more recent research on transactive discussion from the Developmental perspective.

The Development of Transactive Discussion: A Reconstructive Analysis

Six studies of transactive discussion are amenable to a Developmental interpretation. They were not necessarily designed from the Developmental point of view, but we can reconstructively interpret them in two ways that will help shed light on the Developmental question. First, we can reexamine the findings of each study to see if there is a Developmental question embedded in the design. Second, we can engage in a comparative meta-analysis by examining the behaviors of the different age subjects in the different studies. Let us begin by examining two studies that contain Developmental aspects.

Gibbs, Schnell, Berkowitz, and Goldstein (1983) tested the hypothesis that Operational transaction is a formal logical skill and requires the development of Piagetian formal operational thought for its manifestation in sociomoral discussion. They argued that (1) Operational transacts appeared to be logical reasoning acts and (2) Piaget (1972) had hypothesized that the advent of formal operations would herald in similar changes in dialogue. College students were paired on the bases of (1) their levels of formal operational thinking (assessed by the Test of Logical Thinking, "TOLT," Tobin & Capie, 1981) and (2) their disagreement on the action solution to a series of sociomoral dilemmas. Dyad members were in disagreement on the action solution to the dilemmas and homogeneously either non-formal, transitional or formal operational on the TOLT. While 76% of the formal operators used transactive sociomoral discussion, only 29% of the transitionals and 8% of the non-formal subjects used transactive discussion behaviors. These data strongly suggest that transactive discussion skills are based upon the prior

acquisition of logical thinking skills.

Powers (1982), as part of a larger study of adolescent ego development, analyzed mother/father/adolescent trialogues about a sociomoral dilemma for transactive discussion. Her main interest was not in the development of transactive skills per se, but her data analyses shed some light on this question. In examining the correlations between one's stage of sociomoral reasoning and one's usage of transaction in the family discussion, there is a significant positive relation for both mothers and fathers of non-psychiatric adolescents. Surprisingly there was no significant relation for their children. Thus there seems to be a relation between usage of transactive discussion behaviors and sociomoral development for adults but not for adolescents in this study.

We can now turn to the comparative analysis of evidence about subjects at different ages of the lifespan from six different studies. Four studies have examined the transactive discussion behaviors of adolescents and adults (Berkowitz & Gibbs, 1983; Gibbs, Schnell, Berkowitz & Goldstein, 1983; Leadbeater, 1986; Powers, 1982). Powers reports data only for the entire family discussion, comprised of two adults and one adolescent. From her Tables 7 and 9, we can calculate that 52% of the total speech acts coded were transactive. We can further calculate that 29% were Representational transacts and 23% were Operational transacts. Leadbeater found no significant difference in usage of transaction between twenty high school (ages 15 to 17) and twenty young adult (29-42) subjects, and therefore only reports the grand mean of 20% of total statements being transactive. No data are reported on Operational vs. Representational transaction. Berkowitz and Gibbs' subjects were college students. They reported a total of 23% transaction, with 16% Operational and 7% Representational. While Gibbs et al. also studied undergraduate dyads, they only coded Operational transacts. They also employed very stringent coding criteria and overrepresented low cognitive ability subjects in their

sample. They observed only 4% transaction. We can therefore see that as the mean age and the cognitive level of the subjects increases, so does the usage of transactive discussion behaviors (see Table 2).

INSERT TABLE 2 HERE

There have also been two studies of children that have reported data on transactive discussion (Damon & Killen, 1982; Kruger & Tomasello, in press). While Damon and Killen were successful in demonstrating a relation between use of transaction and sociomoral reasoning development in K-3 children, they only coded four transact categories (equivalent to categories 2, 9, 12 and 18 in Table 1) and did not report data on their degree of usage. Kruger and Tomasello observed 7 and 11 year old children in dialogues either with a same age peer or a parent. They did not report usage data for Representational vs. Operational transacts, but did report the following mean percentages of total transaction for the 7, 11 and adult groups, respectively: 13.3, 15.5, 10.7. Thus if we examine Table 2 we can see some suggestive patterns. There seems to be a trend for Operational transaction to increase with increasing age and cognitive development across the three studies that report such data. With the exception of the mothers in the Kruger and Tomasello (in press) study, there is also a clear trend for total transaction to increase with age. We can conjecture that the Kruger and Tomasello data are affected by the fact that the adults studied were observed in discussions with their young children. As researchers have demonstrated, adults alter their discourse behavior when communicating with children of different developmental levels (Newport, 1977; Phillips, 1973). Hence the mothers observed here may well have lowered the sophistication of their discourse behaviors to accomodate to the perceived communication limits of their co-discussants (children). These data are nonetheless only suggestive, due to the variability of the

data gathering and coding techniques used by the different researchers. Furthermore, while these data impact upon the question of the development of discussion skills, they only impact on the question of the development of transactive discussion skills, most of which (i.e., Operational transacts) have already been demonstrated to be related to the acquisition of formal operational thought (Gibbs et al., 1983). Therefore, the following cross-sectional study of the development of sociomoral discussion skills was designed. The first analyses we will report focused on the usage of transactive discussion throughout childhood and adolescence. Later in this chapter we will report a preliminary model of precursors to transactive discussion.

The Development of Transactive Discussion: A Cross-Sectional Study

Separate samples of subjects from two cultures were observed in same age, same gender dialogues about one sociomoral and one religious dilemma. The two groups represented matching samples from Switzerland and the United States. Two male and two female dyads were observed in each culture at each of the following age groups: 6-8, 9-11, 12-14, 15-17, 18-20. The dialogues were transcribed and coded. Due to the difficulty of coordinating data collection in two different cultures on different continents, a number of potentially significant methodological differences should be cited. First, the Swiss team had access to videotaping equipment whereas the American team had to rely solely on audiotaping equipment. Second, the experimenter in the US study was more intrusive in the data collection with the youngest age group. She served as a moderator and interviewer because the subjects did not interact sufficiently without her intervention. The Swiss experimenter did not employ such intrusive techniques. Third, the Swiss team used pictoral representations of the dilemmas along with the verbal accounts and the US team did not. Finally, the US study was done in English and the Swiss study was done in Swiss German.

In order to more directly examine whether transactive discussion increases with age, data were analyzed for the usage of transactive discussion at each of the different age groups studied. Both the religious dilemma discussion and the sociomoral dilemma discussion were coded for transactive statements and total statements. The transactive statements were also identified as either Operational or Representational. The dependent measures used for subsequent analyses are the percentage of total statements in a discussion that are (1) transactive, (2) specifically Operational, or (3)specifically Representational.

One 2 x 5 ANOVA was calculated on Culture (Swiss, American) and Age (6-8, 9-11, 12-14, 15-17, 18-20) for each of three dependent variables: percentage of total statements that were transactive (PT), percentage of total statements that were Operational transacts (PO) and percentage of total statements that were Representational transacts (PR).

For total transaction, there was a significant Age effect, $F(2,28) = 13.2$, $p < .001$. The means for the five age groups, in increasing age order, were 2.2, 6.8, 13.5, 20.4 and 22.2. A Newman-Keuls analysis revealed that both of the two oldest age groups used significantly more transaction than each of the three youngest age groups. The same was true in comparisons of the middle group with the two youngest groups. There was no effect of Culture, but there was a significant Age by Culture interaction effect, $F(4,28) = 3.0$, $p < .04$.

In order to further examine this interaction effect, one way ANOVAs and Newman-Keuls comparisons were calculated on the Age variable for each culture separately. Age was significant for the American subjects, $F(4,13) = 6.15$, $p < .005$. The youngest group (Mean = 4.2) used significantly less transaction than each of the other groups with means of 11.9, 17.1, 16.5 and 19.4. Age was also significant for the Swiss subjects, $F(4,15) = 11.7$, $p < .001$. Each of the two oldest groups (15-17 Mean = 23.4, 18-20 Mean = 24.4)

used significantly more transaction than each of the three youngest groups (Means of 0.1, 1.8 and 9.9 in increasing age order). T-tests were also performed between cultures at each age level. Only the 9-11 comparison was significant with the American children (11.9) scoring significantly higher than the Swiss children (1.8), $t(6) = 9.45$, $p < .001$ (see Table 3).

INSERT TABLE 3 HERE

To understand these results we must inspect the cross-sectional age trends for Operational and Representational transaction separately. The effect of Age on Operational transaction was also significant, $F(4,28) = 12.1$, $p < .001$. The respective means in increasing age order were 1.0, 4.5, 8.0, 15.4, and 15.1. Newman-Keuls comparisons revealed that the two oldest groups used significantly more Operational transaction than the three youngest groups and that the middle group used significantly more than the youngest group (see Table 4). The effect of Culture was not significant and the Age by Culture interaction effect only approached significance, $F(4,28) = 2.3$, $p = .085$.

INSERT TABLE 4 HERE

Finally, analyses of Representational transaction reveal two significant effects. The main effect for Age was significant, $F(4,28) = 6.1$, $p < .001$. Group means in increasing age order were 1.2, 2.4, 5.5, 5.1 and 7.1. Newman-Keuls comparisons revealed that the youngest group used significantly less Representational transaction than each of the three oldest groups and that the oldest group also used significantly more than the 9-11 year olds. The main effect for Culture was also significant, $F(1,28) = 7.0$, $p < .02$, American subjects used significantly more Representational transaction (mean = 5.3) than Swiss subjects

(3.1) did (see Table 5).

INSERT TABLE 5 HERE

It appears that the use of transactive discussion increases with age, at least from 6 to 20 years of age. Furthermore, this trend is found for both lower level (Representational) and higher level (Operational) forms of transactive discussion. Finally, these results are found in both an American sample and a Swiss sample. It appears, however, that American children use more overall transaction at age 9-11 and generally more Representational transaction across the entire sample.

These findings support our assumption that transactive discussion is a mature form of argumentative logic. It is a form that nonetheless is present in childhood, but one that becomes significantly more prominent in adolescence. Finally, transactive discussion is found in two cultures and has been coded in two languages. These data support the comparative data reported earlier and lead us to conclude that transactive discussion is relatively infrequent before adolescence. This raises the question of what forms of sociomoral discourse are present in the discussions of children.

Stages of sociomoral discussion

In his early work, Piaget (1932) discovered that children do not interact logically. He labeled the inability to logically coordinate judgments in an interaction "parataxical thinking." He also noted that children construct only a vague and distorted overview of a discussion, a type of holistic intuitive thinking which he has called "syncretic thinking." Furthermore, he pointed out that children's justifications for a position tend to be less logical and more "psycho-logical." Despite these communicative limitations and distortions children appear remarkably confident in concluding that they

have accurately understood what another has said.

Piaget's conception of interactional logic rests on two principles. (1) The principle of identity states that a person must securely assert and maintain his position in the context of the claims of another. (2) The principle of contradiction states that a person has to support or reject the truth of another person's claims. The principle of identity implies maintenance and defense of Ego's position while the principle of contradiction implies consideration of Alter's position. In order to construct an equilibrium between these two potentially opposing principles, an individual must reduce intellectual egocentrism in favor of a more mature social decentration. To construct this decentration, Piaget suggests three necessary conditions: (1) the shared possession of significant a priori knowledge and assumptions about the content and form of the interaction; (2) an a priori equality orientation to the interaction so that all discussants are respected as equals; (3) the acceptance of the ever-present possibility of bringing the typically implicit shared assumptions, knowledge and values under explicit discussion.

Piaget contrasts this ideal interactional equilibrium with the more typical undisciplined or unstructured interaction, which he calls "free exchange." The disciplined activity of these three ideal conditions is necessary to overcome the distortive inertness of intellectual limitations and egocentrism.

Piaget has also distinguished between the logic of an individual's personal thought and the logic of an interaction. Piagetian genetic epistemology demonstrates that the development of intellectual logic precedes the development of argumentative logic. The development of individual thinking shapes the logic of argumentation (Piaget, 1965b, p. 68). In other words, the general level of intelligence of the child precedes the formative interaction between individual thought and interpersonal action that generates the construction of the logic of argumentation.

Piaget's concept of interactional decentration is interesting, but it

is largely limited to cooperation in the domain of logical and physical problems. For him, such cooperation means generating operations in common, such as the analysis of qualities or the construction of topographical schemes (cf., Forman & Kraker, 1985); that is, the coordination of partners' operations in an operational system. Each partner's coordinating actions are called "integrative operations." The limits of Piaget's analysis are threefold. First, Piaget does not extensively study moral, political, social or religious matters because he considers them to be byproducts of real actions and to be in opposition to the real sciences. Second, Piaget has done very little actual analyses of child interactions. Third, even the little early work he did, resulting in his identification of parataxical and syncretic thought, did not produce a clear hierarchy of developmental structures. Piaget probably did not have a clear and complete conception of the nature of mature discussion. Whereas Berkowitz and Gibbs' (1983) theory of transactive discussion clearly analyzes the logic of interaction not simply in terms of the operational system of each partner but in terms of their integrative operations, their model of transactive discussion is based almost exclusively upon research with adolescents and young adults.

Others have attempted to study the development of sociomoral discussion. While a number of theorists have recently considered various aspects of sociomoral discussion (Bearison, 1985, in press; Bell, Grossen & Perret-Clermont, 1985; Berkowitz & Gibbs, 1985; Berndt, 1984; Forman & Kraker, 1985; Leadbeater, 1986; Shantz & Shantz, 1985), only four empirical studies of the development of children's sociomoral disussion skills are available (Keller & Reuss, 1985; Lyman & Selman, 1985; Miller, 1981; Oser, 1981).

The first research concerning the development of sociomoral argumentation appeared in the late 1970s with a paper by Miller and Klein (1979) followed shortly by a more thorough treatment by Miller (1980, 1981). Miller has been concerned with the development of sociomoral argumentation in children

and has focused upon the problem of moving toward a higher perspective in sociomoral argumentation by confronting opposing perspectives. His research has attempted to identify the means by which children transcend differences in sociomoral argumentation and move to dialectically more synthesizing positions. In investigating such discussion processes, Miller has studied young children (5-10 years of age) in discussion groups of four. Each discussion concerned Kohlberg's Heinz dilemma (see Colby et al., 1983, pp. 77-78).

The stages he has tentatively identified are defined by problems of argumentation ("coordination failures") that limit the adequacy of the sociomoral discussion at each stage. These problems are, in increasing developmental order, problems of:

--Justification: the ability to provide an argument for one's position

--Coherence: the ability to agree on the relative weights or places of accepted propositions in the argument

--Circularity: the ability to differentiate between criteria for relevance in a given problem and the criteria for validity of a proposition

--Language: the ability to apply ethical theory to explicate the meaning of terms central to solving a moral argumentation.

Even the 5-year-olds studied were able to solve the problem of justification. They were, however, unable to solve the problem of coherence. The 7- and 8-year-olds, while able to solve the problem of coherence, could not adequately solve the problem of circularity. Finally, the 10-year-olds were able to solve the problem of circularity, but were unable to solve the problem of language. Two shortcomings of this study that should be noted are: (1) the small sample size (only three groups of four children each), and (2) the limited range of ages (5-10 years; no children could solve the last problem and all could solve the first one). Nonetheless, Miller's work is an important pioneering investigation of the development of sociomoral argumentation.

Shortly after Miller first presented his case study, Oser published his large-scale investigation of the development of sociomoral argumentation, Moralisches Urteil in Gruppen (1981). He suggested that the traditional psychological perspectives on sociomoral argumentation ignore the interactional processes that govern their form and outcome. His goal therefore is to identify the developing capacity to solve sociomoral problems through discussion.

Oser studied the discussion of three sociomoral problems by 120 groups of 15-year-old adolescents. These discussions were found to vary along two relevant dimensions, the first of which was termed "levels of interaction." They are summarized, in increasing developmental order, as follows:

--Level 1: Functional perspective. Solutions to the problem are proposed.

--Level2: Analytic perspective. Proposed solutions are analyzed on the basis of relevant facts and conditions.

--Level 3: Normative perspective. Proposed solutions and their grounding facts and circumstances are evaluated on the basis of moral norms, rules and principles.

--Level 4: Philosophical perspective. The moral evaluation of proposed solutions, facts, and norms is grounded in moral philosophy from a critical perspective.

Oser's second dimension is termed "communication compactness." The three levels, again in increasing developmental order, are:

--Level 1: Little or no coordination of perspectives

--Level 2: Intermittent coordination of perspectives

--Level 3: Units of communication are coordinated and clarified.

Oser's specific hypotheses concerned the differential impacts of three types of experimental/educational treatments on the sociomoral argumentations as assessed across the two dimensions. Supplying rules of justice to discussants increased their use of the normative perspective. Providing discussion strategy training affected communication compactness but not levels of interaction.

There were also differences across the three dilemmas discussed.

Oser was thus able to describe the course of development, augmented by training, of sociomoral argumentation. However, his design was tailored more closely to identifying intervention effects rather than developmental trends. For example, he studied only one age group. He therefore was not able to observe all of his hypothesized stages of discussion behavior. While Miller's design allowed the study of only a limited age range, he was at least able to demonstrate a cross-sectional age trend. In fact, Miller has collected data from a much larger age range, although he only reports the results of a limited part of that sample. Subsequent analyses may lead to a refinement of his developmental scheme.

The third example of Developmental sociomoral argumentation research is a study by Keller and Reuss (1985). They are interested in the development of forms of sociomoral discussion in children's responses to sociomoral dilemmas. Relying upon the traditional methods of cognitive-structural psychology (especially the work of Kohlberg and Selman), they begin with the sociomoral interview which such theorists use for assessment purposes, and redefine it as a sociomoral communication situation. Then, in charting the development of such communication, they turn to discourse ethics (and most directly, to Habermas). They begin their analysis by describing the philosophical components of ideal sociomoral communication. Then they apply these principles to the developmental analysis of sociomoral argumentation. Finally, they apply such analyses to the problem of moral education. Keller and Reuss interviewed 7, 9, 12 and 14 year old children about a friendship dilemmas (Selman, 1980). They derived three levels of (1) interpersonal-moral reasoning and (2) principles and strategies of justification from these interviews, as follows:

Level A (7-9 year olds): No consideration of a discourse principle, i.e., a need to obtain the consent of all involved. Neither is there a recognition of the need to provide others with a justification

for one's decisions. One's own needs and interests predominate and may serve as explanations which are not differentiated from justifications.

Level B (12 year olds): Own obligations are derived from strongly felt obligations to others whom one feels a relationship with. Must consult others in discourse before acting or deciding. Violations of this discourse principle lead to guilt from offending the relationship or the norm of truthfulness. Concrete self-interests are legitimate facts but not legitimate justifications. Cannot balance own claims with those of others because no procedure or rules to implement recognized need for reciprocity.

Level C (begins at 14 years): Can now balance mutually-accepted relationship norms and the need for autonomous moral decision-making. Understand discursive standards and recognize legitimacy of situational-specific conditions for norm applicability. Recognize that in conflicts one is obligated to enter discourse with goal of coming to a shared justified agreement.

These analyses represent an impressive step in conceptual study of the development of sociomoral discourse. They do not, however, focus directly on moral discussion. Rather they use interpersonal-moral reasoning abilities and hypothetical prescriptions about discussion to infer actual discourse skills. They need, therefore, to be applied to the actual discussion behaviors of children.

A fourth example of developmental study of sociomoral discussion is provided by Selman and his associates (Brion-Meisels & Selman, 1985; Lyman & Selman, 1985; Selman, 1980; Selman & Demorest, 1984; Selman & Yeates, this volume). In their theory and research, they have described a series of developmental steps in the acquisition of interpersonal negotiations strategies, both on cognitive and behavioral levels. Because Selman's work is explicated

elsewhere in this volume, I will only briefly note its nature. The strategies children use in negotiating interpersonal conflicts are analyzed and placed into a developmental hierarchy of four stages:

Stage 0 - Physical dominance or submission (3-6 years)

Stage 1 - Verbal control hierarchy (5-9 years)

Stage 2 - Reciprocally-mediated exchange (7-12 years)

Stage 3 - Collaboratively-oriented coordination (10-15 years)

We can note that Selman and his colleagues have focused largely upon the clinical aspects of the scheme and have applied it largely to emotionally troubled subjects. Clearly, however, the applicability to "normal" children is not limited. It is also important to point out that Selman often works with real conflicts rather than solely the more common hypothetical dilemmas used in most other studies. As noted by Selman, this leads to somewhat different findings.

A final insight to the issue of development of moral discussion can be derived from the two studies of transactive discussion that included transaction among other measures of moral discussion (Damon & Killen, 1982; Powers, 1982). Other than the transacts noted earlier, Damon and Killen report the following additional interactional behaviors in the K-3 children they observed:

1. Direct agreement
2. Direct disagreement
3. Other contradictory statement
4. Ridicule
5. New solution not in agreement with previous statement
6. Misrepresentation or distortion of others' ideas.

Unfortunately, no frequency of usage data are provided and no developmental analyses are suggested for the different age subjects. Nevertheless, these categories may be used to supplement further developmental analyses of young children's discussion skills.

Powers (1982) also offers non-transactive codes for sociomoral discussions, in her case of adolescents and their parents. They are as follows:

1. Intent for closure
2. Competitive opinion statement
3. Request for change
4. Simple disagreement
5. Distracting
6. Opinion statement
7. Simple agreement
8. Refusal to do request or task
9. Quit/devalue task
10. Distortion
11. Encouragement
12. Non-competitive humor
13. Actively resist or threaten
14. Devalue/hostility
15. Listening responses
16. Interrupted/incomplete statements.

As can be observed from this list, Powers included many non-constructive codes in her scheme. Again, no attempt was made to suggest a developmental hierarchy for these behaviors.

At this point, having sufficiently muddied the waters, we will return to the cross-cultural study we described earlier in our discussion of the development of transactive discussion. We have generated a preliminary stage scheme for the development of sociomoral discussion based upon the data from that study. The stages are based not only upon those data, but were generated in part a priori from the work of others, such as those just described in the preceding section.

Stage 0

Preargumentation

The discussant does not recognize a need for discourse. Justifications are only offered when requested and then they are idiosyncratic and irrelevant. The function of justifications are not understood because discussants have not developed the capacity for perspective-taking. Actual conflicts are resolved by power manipulations, either physical or verbal, but without recourse to collaborative justified discourse. The strength of an argument rests upon:

1. one's desire to hold a specific position;
2. varied personal or idiosyncratic justifications, only when justification is demanded by Alter;
3. the degree of repetition, extension, or variation of the argument or of counterarguments to the discussion partner's position, but without justifications.

Three other characteristics of this stage are:

4. the tendency to abruptly change the topic or specific argument;
5. the tendency for justifications to be illogical;
6. the tendency to simply agree, disagree, or repeat one's position without justification, but for disagreements, with personal attacks.

One "wins" an argument at this stage by sheer endurance, i.e., by holding on to one's position longer than the other, or by "bullying" the other into submission either by physical or verbal attack.

The following excerpt from a discussion between two 7-year-old American boys, with an adult facilitator, about whether Paul's car accident was divine punishment for breaking a promise to God is an example of Stage 0 argumentation.

A: "Did this accident have anything to do with Paul not keeping his promise to God?"

B: Come on....what is your answer?

A: OK. UM. Oh boy...I don't know what to say.

B: I already have an answer.

A: OK, then say it.

B: Um...I think...No, what was the question again? Oh yeah, I think it does 'cause maybe he was out in a bar and maybe he was drinking champagne all night and then when he came home he got in an accident.

A: I think he had some whiskey.

B: Whiskey?

A: Yeah. Now "Do you think God punished Paul for not keeping his promise? Why or why not?". I think "why" is an answer, OK? Your turn.

B: I think he didn't.

A: I think he did.

B: I don't know why.

A: OK, I think he did.

(ADULT: Why do you think God punished Paul?)

A: 'Cause he didn't keep his promise.

B: I don't think he punished him at all.

A: He had punished him. He ran into a semi.

(ADULT: No it doesn't say he ran into a semi; it says he was in a car accident. You said you think God punished Paul because he didn't keep his promise.)

A: Yeah, because he ran into that semi.

(ADULT: Peter, do you think God punished Paul?).

B: No.

(ADULT: Why not?)

B: I can't think of it.

(ADULT: Do you think God punishes people when we don't do what he wants?)

B: No, not all the time.

A: Not all the time. Sometimes because he probably cheated in driving school so he made him crash. Or they had a drunk teacher.

(ADULT: OK Peter, why do you think God doesn't punish us?)

B: I told you I can't think of it.

A: What's the television in here for?

Stage 1

Single Reason Argumentation

The discussant's central position is characterized by isolated justifications, each repetitively bolstered by unconnected or loosely related arguments.

This results in an apparently a priori endorsed solution that is only justified post hoc by a number of arguments. These arguments themselves are only used pragmatically to serve the maintenance of the chosen position. The strength of the argumentation depends upon three variables:

1. the a priori conviction that one's solution is correct;
2. isolated justifications which often are varied personal or idiosyncratic, such as the claim of personal experience with the dilemma, some part of the dilemma, or its solution;
3. the degree of repetition, extension, or variation of the argument or of counterarguments to the discussion partner's position.

Two other characteristics of this stage are:

4. the tendency to abruptly change the topic or specific argument;
5. the lack of differentiation between descriptive and normative aspects of the argumentation.

The argumentation must be "externally" powerful; i.e., solutions and supportive arguments depend upon the ability to convince one's partner(s) by repetition, emphasis, etc. One may recognize the need for Alter to be "convinced" by a justification, but cannot generate effective justifications, due to an inability to adequately consider Alter's perspective and a centration on one's own interests and point of view. Truth and rightness do not rely on abstract rules or principles but on concrete probabilities, personal experience, capricious tastes, etc.

The following excerpt from a dialogue between two 8-year-old Swiss children about whether a father should steal a drug to save his son's (Roland's) life is an example of Stage 1 argumentation:

A: ...Look, Roland doesn't want to die, he wants to stay alive, doesn't he?

B: Uh, yes! B-but otherwise the father would have to go into jail, and when nobody...

A: Not for so long!

B: No, eight years of prison at least. If you only cause a car accident, you already get ten years of prison.

A: Mmh, but me, look! But it would be great when you could...

B: But the kid, hey...

A: What the kid? The boy?

B: Yeah

A: He could stay alive and be at home.

B: Yes!!! But how could he stay alive?

A: Visit, visit

B: But then all of a sudden a hoodlum comes, and everything is gone, and Roland is dead.

A: Yes, no - surely not. No, that's not certain. Well no, a hoodlum certainly wouldn't come.

B: Anyhow. It isn't good!

A: Still, it is fairly good. After all...

B: No, indeed, it isn't.

A: Yes.

B: N O [giggling]

A: But look, many do want to buy it [the medicine], too. It really is expensive!

B: He could have asked. He could have.

A: [reproachful] He did ask before!

B: He could have gone to other people, not only relatives. He will have lots of friends or something.

A: But look. He already asked everybody.

B: No, they are not related to him, these friends...Friends are not relatives. It doesn't necessarily say, that friends are relatives.

A: Yeah, but [the story] doesn't say, they have to be relatives. He also asked friends.

B: But first it says, he asked friends, no, relatives. He could ask friends, additionally or something.

A: Yes, he has friends, too.

B: You see, he could have asked even more people: please give me a tiny 100-francs-bill. Yes, actually he could go and ask.

A: Yes, he could, but...

B: [screams] Then he would have!!!

A: [despairing] He did ask all of them, but he only had half of what he needed.

B: Yeah, then...

A: That's how it is!!

Stage 2

Maintaining Connections

The discussants attempt to exchange multiple justifications with some logical coherency in (a) an effort to identify a central thesis and (b) to enhance their mutual understanding by searching for a shared solution. The strength of one's contribution rests upon its value for a common enterprise. Stage 2 argumentation is characterized by:

1. the ability to produce second order justifications for one's position; i.e., the ability to create a hierarchy of arguments by producing a first order justification for one's position, and then second order justifications for the first order justification;
2. the tendency (and ability) to anticipate counterarguments by identifying weaknesses in one's position before one's partner does;
3. the ability to identify similarities between one's own and one's partner's position (but without using

these similarities to produce a shared solution);

4. the tendency and ability to avoid direct confrontation with one's partner.

An additional characteristic of this stage is:

5. the introduction of personal affective responses to the dilemma problem (e.g., "if I were in this situation I would feel terrible").

At this stage, justice is not generalized and tends to be situationally determined. Truth and rightness are still not adequately differentiated. The goal or "bottom line" of Stage 2 argumentation is not so much to win the discussion (as for Stages 0 and 1), but rather to establish a common ground of opinion in problem-solving.

The following excerpt from a dialogue between two 14-year-old Swiss girls about Kohlberg's Heinz dilemma (stealing an exorbitantly priced drug to save a wife's life) is an example of Stage 2 argumentation:

...

B: I guess, if he gets caught by the police, first thing he'll have a criminal record, and sure as fate: he'll be in trouble for the rest of his life, and afterwards...

A: Yes, sure...

B: ...and then figure, there still hasn't been help for the wife and when she comes to know that her husband has stolen, she'll think: Christ! And then she'll be even sicker.

A: Certainly, that's how it is.

B: And I think, when he steals, the druggist won't give him anything all the more. As I see it.

...

A: I simply mean...Well, I feel he would get sort of mentally sick, he would...He'll always think: had I broken in, had I stolen this, had I - well, then she wouldn't be dead, then she wouldn't have died, you know. And this is something depressing.

B: Yeah, maybe, but...I don't know...Actually it only says the drug might help.

[rereading the dilemma and subjects' initial answers]

...

B: Of course I do also think the druggist is acting in a mean way.

A: Yes.

B: But if he, say, brings about a lot of the remedy...There are so many people suffering from cancer, he could need more of it, he would become well-known.

A: Certainly he would. In any case it is...[incomprehensible], when they invent something.

B: Yeah.

A: And he can make such a lot of money.

B: Exactly, and that's why he should give this to the man. And, say, she would be saved, do you know what a reputation he would obtain! You must imagine this.

A: Yes and, well, then he could...still sell it for half the price, and later the man could pay it off.

B: Yeah.

A: I think it's simply...I deem it stupid what this druggist does.

B: Yes, me too, I really find it mean.

...

Stage 3

Counterevidence

This stage is characterized by the use of counterevidence, attempts at falsification, and defenses against such strategies when used by one's partner. A major new acquisition of this stage is the ability to identify logical contradictions both within an individual's position and between discussants' positions. Note the focus on "negative" strageties. The strength of one's position is determined by six characteristics:

1. the ability to survive a counterargument and maintian one's position through both truth analyses and normative or rightness analyses;

2. the ability to identify the similarities and differences in the discussants' arguments, but with a tendency to focus on the latter;
3. the ability to differentiate facts from normative "truths" (e.g., she does this but she ought to do that);
4. the ability to reason about another's reasoning (i.e., transactive discourse) and to use this capacity to differentiate the positions of the discussants, again limited by the focus on conflictual strategies such as producing counterevidence;
5. the ability to dispense with weak or irrelevant arguments;
6. the tendency to still think in terms of individual's positions and to therefore be concerned with the adversarial task of being right or correct.

This stage is marked by a bias toward conflictual modes of argumentation and a relative neglect of affirmational strategies. Affective assertions are often invoked as legitimate justifications. Much of Stage 3 argument seems oriented to a conflict between <u>discussants</u> rather than a conflict between <u>positions</u>.

The following excerpt from a dialogue between two 16-year-old Swiss girls about the role of relationship in solving the Heinz dilemma is an example of Stage 3 argumentation:

B: I only wouldn't do it [steal the remedy] in case of someone [sick person] who took another's life already.

A: So, a murderer?

B: If he cannot bear him.

A: So you don't act because of the deed he's done, not because of the man?

B: No because I don't like him.

A: Ah, that's the way you see it.

B: But this...whether he deserves it...

A: No, I have a different point of view. If you fundamentally detest him, I don't know - I have no reason to detest anyone. I can imagine this may happen that you really don't like a person. Then I would act like the druggist - cold-blooded. What I find wrong with the druggist...I would act same way, admittedly...

B: Thus you would be a murderer too, indirectly?

A: Yes, but I wouldn't commit this because of profit, because of money, and surely I would regret it subsequently...I can well imagine I would do it in the heat of acting.

B: Then you do have a relationship to him?

A: Yes, I would have a relationship, but I would detest this guy. But let's get back to the issue of divorce. You would steal in any case?

B: When I compare human life and relationship, life is well in the fore.

A: It is in the fore for you. This is okay so far, but it's kind of paltry. No, then I wouldn't...I would be much more reasonable. Perhaps she'll die, perhaps she won't, you never can tell. It would be unreasonable for me to go straight away and steal the drug. For me, reason is ...

B: But I stated a premise, however: Only then when there is no other way.

A: "Only then" - this is more reasonable than mine. You have this prerequisite: only when he would not give [the remedy]. And as to me, it was just - when he says no, the case is done and I go straight on and steal...

Stage 4

Shared Analysis

Stage four marks the onset of mutuality in discourse. The logic of shared analysis appears as if it almost could be generated "without" a partner because each argument is critically examined and understood to be subject to counterargumentation. Indeed this describes the individual mental process of reasoning about the argumentation. The goal of discourse is the identification of shared meaning, truth and rightness. The strength of the shared position

is determined by five characteristics:

1. the ability to either surrender a position or to maintain it only for the purpose of testing another's position ("playing devil's advocate");
2. the ability to generate supportive justifications for the partner's position;
3. the ability to effectively reason about the partner's reasoning in order to generate a common position;
4. the ability to accurately differentiate between normative and descriptive arguments;
5. the ability to calculate the various possibilities and consequences in a situation and to test each with moral principles.

Furthermore this stage is characterized by generalized rules. Either generalized rules are applied to the specific problem or solutions to the specific problem are subsequently generalized. In either case, the perspective is one of reflecting on solutions in the context of the principle of generalizability. Additionally premises and conclusions are now differentiated. Affective justifications are accepted as limited by metareflective recognition of their inadequacy unless justified by generalized normative rules. Often the general moral context of a problem is explicitly discussed.

The following two short excerpts from the same 20-year-old Swiss male dyad are examples of Stage 4 argumentation. The first excerpt concerns the Heinz dilemma. The second excerpt concerns whether a nurse should keep a promise to God made before miraculously surviving a plane crash.

I. ...

B: ...Stealing is the easy thing to do. Surely there'll be problems in that, but the other way is more difficult - not to break in is more difficult. To make a lawful attempt is much more difficult.

A: But I thought you're one who's opposing exaggerated law-making, I'm sure you violated laws yourself, and I think you get to forget [neglect] the law if you can save somebody's life.

B: Sure you've got to forget the law. But somehow I think about the time following.

A: You are thinking, but you think of yourself, not of your wife.

B: Suppose the woman will die then I'll stay here with the kids. When I broke in, I'll have my sentence to serve, as the case may be. I'm obliged to the children, too.

A: Okay, let's assume the man has children. The children do live on, but the wife doesn't. You can save her. You must not think from the perspective of her death, but you rather think while she is alive. You mustn't break in and say: when I get caught, then she'll die and the kids will stay alone. You must think: now I'll break in to save my wife and finished it is.

...

II. ...

A: ...this is a critical situation, and I assume that she'll have a guilty conscience for the whole of her life if she does not keep her promise.

B: You talked of sin in the beginning [of the conversation], but now you express this old attitude: if she does not keep her promise, then, then, then her life won't be bright anymore - this is the ancient church.

A: I don't want to be misunderstood. I don't say she'd land in purgatory, when she doesn't go. She would have a bad conscience over and over again, but she wouldn't have this as a punishment for her. Whenever she'd hear something about the Third World, she would say: I should be there and help now.

B: This should have come to her mind before the plane crash, in my view, I feel she must have had a bad conscience before, not only now.

A: I think that's true, my impression is that she couldn't have such an idea from one moment to the other...

Stage 5

Ideal Discourse

This stage describes ideal discourse and essentially follows the model of ideal discourse identified by Habermas (1984). Discussants recognize that everyone in a discussion must strive towards the most just or best solution

to the problem under discussion. The strength of the ideal shared discourse is characterized by:

1. the testing of validity claims in rational argumentation;
2. the maintenance of objectivity of perspective;
3. the perspective of generalizability;
4. the maintenance of consistency of arguments;
5. the recognition of the potential fallability of each discussant's (including one's own) insights and arguments.

Structure of Argumentation and Mode of Interpersonal Orientation

The development of argumentative logic has been described by studying forms of peer conflictual discourse. We have shown that Berkowitz and Gibbs' (1983) model of transactive discussion represents a mature form of argumentative logic that develops with increasing age in American and Swiss children and adolescents. An attempt to identify less mature forms of argumentative competencies has led to the preliminary description of six stages of argumentative logic. Future research will help to refine these stage descriptions.

Nevertheless, the full complexity of sociomoral argumentation cannot be adequately captured simply in the logic of such discourse behavior. As a number of theorists and researchers have argued recently, the style of such interactions is also a significant variable in the nature of argumentation and its outcomes. For instance, Powers (1982) has demonstrated that a supportive style of family sociomoral argumentation is related to more positive sociomoral developmental outcomes. Noam (1985) has presented a tri-dimensional model of ego development that includes a dimension of style of interpersonal orientation. Much effort has been expended in recent years in attempts to explicate Gilligan's (1982) contention that there are two discrepant "voices" or styles in sociomoral reasoning. When we look more closely at these models,

we can note that a common theme exists. Indeed this theme in some sense represents a traditional dichotomy in psychology. The styles may be characterized as either individuating or integrating. In early work on transactive discussion, Berkowitz and gibbs (1979) referred to these dimensions as "non-competitive" and "competitive" modes of transaction. Recently, Leadbeater (1986) has demonstrated that sociomoral discussions can be categorized in style either as Alter-focused non-competitive, as competitive, or as Alter-focused mixed. Furthermore, in her small sample, the first group was composed only of females, the second of only males and the third equally divided by gender.

Precisely how such stylistic dimensions will interact with the structural model we have already proposed is still open for empirical investigation. At this point, we wish to offer two possible models of the interplay of structures of argumentation and modes of interpersonal orientation. We consider these models to be alternatives but do not preclude the possibility that they will turn out to be complementary or that some as of yet unforeseen variation on one or both of them will be discovered. Both of these models are intended to account for the differences in discussion "styles" or dyadic climate that have been obvious to us in our research on sociomoral discussion.

Model 1 - Oscillating Styles

Model 1 presumes that interpersonal orientation is a factor in defining the logic of argumentation. Changes in styles are directly related in changes in argumentation stages. Systematic changes in styles, in addition to growing complexity and differentiation of argumentative competencies, define the changing pragmatic character of problem-oriented sociomoral communication.

The two major styles resemble Selman's (Brion-Meisels & Selman, 1985), Kegan's (1982) and Noam's (1985) descriptions of orientations in social cognition and interpersonal negotiation. As noted above, the focus is either

on separation and autonomy or on integration and connection. Styles shift alternately as one moves through the stages of argumentative logic, with the first style (separation or individuation) being characteristic of stages 1 and 3 and the second style (integration) being characteristic of stages 2 and 4. Stage 0 is preargumentative and therefore cannot appropriately be characterized by these styles and stage 5 represents an integration of the two styles in ideal discourse. Table 6 presents the two orientations in more detail.

Our data suggest that changes in styles may be necessary phases for experiencing the range of processes of understanding, confrontation and negotiation. Furthermore, lower stages differ from higher stages in that they are primarily oriented to the relationship constituted by or involved in the discourse. At stages 0, 1 and 2, arguments serve interpersonal ends in the dyad itself (either Ego's, Alter's or the dyad's ends) or cannot be separated from the concerns of the particular dyad. At stages 3, 4 and 5, personal relations are subordinated to a focus on truth and truthfulness (i.e., a "prior-to-personal-relationships-perspective"). Stage 3 is transitional in the sense of elaborating rational integrity in argumentation. Figure 1 represents the proposed form of Model 1.

Model 2 - Alternate Styles

Model 2 rests on the assumption that the structure of argumentation and the style of interaction are fully independent dimensions. This would imply that at each of the stages of argumentation, both types of interpersonal orientation would be found. This is analogous to Selman's descriptions of interpersonal negotiation strategies. Brion-Meisels and Selman (1985) describe stages of differing complexity of perspective coordinations, but suggest that at each stage one can adopt either of two different styles of resolving interpersonal conflicts, which they label self-transforming and other-transforming modes.

In Model 2, each level can be constructed and passed through using one of these orientations primarily. However, differences in style are relevant for structural change. Characteristics of the respective orientation may facilitate or complicate transitions. For example, the transition from stage 3 (counterevidence) to stage 4 (shared analysis) will likely be easier for subjects with a marked mutuality or integration orientation. Figure 2 represents the likely form of Model 2.

Conclusions

Sociomoral discourse has attracted increased interest from psychologists, philosophers and educators in the past decade. While its role as a developmental stimulant, educational technique and philosophical construct has begun to be explored extensively, the path through which sociomoral discourse develops itself has received only limited attention. We have attempted here to raise some conceptual issues in the study of the development of sociomoral discourse and to review the sparse empirical literature on its development.

In first exploring the development of transactive discussion, we have seen that a comparative analysis of diverse studies and the data generated in the cross-sectional investigation introduced here support the increased usage of transaction with increased age. This has led us to raise the question of what forms of sociomoral discourse are modal at earlier ages if transaction is not. Our review of the few existing studies and the data from our cross-sectional study has led to a preliminary stage scheme.

Knowledge about interacitonal stages refers to knowing about psychological conditions of communicative possibilities at different developmental levels. Our results suggest that beyond the techniques of transactional dialogue there must evolve a substantial structure of propositional understanding. Differences in interpersonal orientations certainly are of significance for a person's ability to take the other into consideration - as a person with

feelings, intentions, specific ways of understanding. Yet at the time being we still do not know whether intraindividual (phase like) differences or interindividual differences in style are of greater importance for flux and process in interactional development. Both images should be taken into account by further research.

Investigations of the validity and usefulness of the stage scheme are necessary. One step in this direction would be a longitudinal investigation of the development of sociomoral discourse. Another useful study would be a conceptual integration of the model with parallel models in other fields, e.g., linguistics. If the stages are validated, then research into their developmentally-stimulating characteristics, parallel to the transaction research, would be necessary as would attempts to train and facilitate their growth in applied settings such as the school or home.

We would like to suggest two lines of educational consequences. Educational aims should be (a) to give teachers and parents information about developmental transformations in children's communicative competences. We should (b) conduct or support interventional training for children controlling for structural growth. Observations of egocentric behavior in classrooms should be related to general structural competences of understanding in interaction. Lack of interactional decentration is not merely a matter of socialization effects but also an outcome of qualitative characteristics in the organization of children's interactional thinking.

Ultimately the Developmental study of sociomoral discourse must be coupled with the other three perspectives on sociomoral discourse described by Berkowitz (1986), i.e., Growth-facilitative, Ethical and Instrumental. The study of the developmental stimulation potential at each stage responds to the first of these three perspectives, but analyses of the Ethical bases of each stage and their instrumental value or potential need also be explored and integrated with the other perspectives for there to be a complete understanding

of the pheonomenon. Sociomoral discourse is central to the human enterprise in a variety of ways. It therefore behooves theorists and researchers to explore its nature. The study of its development is hopefully one step in that direction.

Table 1

Table of Transacts

A. REPRESENTATIONAL TRANSACTS

1. *Feedback Request* (R): Do you understand or agree with my position?
2. *Paraphrase* (R):
   (a) I can understand and paraphrase your position or reasoning.
   (b) Is my paraphrase of your reasoning accurate?
3. *Justification Request* (R): Why do you say that?
4. *Juxtaposition* (R): Your position is X and my position is Y.
5. *Dyad Paraphrase* (R): Here is a paraphrase of a shared position.
6. *Competitive Juxtaposition* (R): I will make a concession to your position, but also reaffirm part of my position.

B. HYBRID TRANSACTS

7. *Completion* (R/O): I can complete or continue your unfinished reasoning.
8. *Competitive Paraphrase* (R/O): Here is a paraphrase of your reasoning that highlights its weakness.

C. OPERATIONAL TRANSACTS

9. *Clarification* (O):
   (a) No, what I am trying to say is the following.
   (b) Here is a clarification of my position to aid in your understanding.
10. *Competitive Clarification* (O): My position is not necessarily what you take it to be.
11. *Refinement* (O):
   (a) I must refine my position or point as a concession to your position or point (Subordinative mode).
   (b) I can elaborate or qualify my position to defend against your critique (Superordinative mode).
12. *Extension* (O):
   (a) Here is a further thought or an elaboration offered in the spirit of your position.
   (b) Are you implying the following by your reasoning?
13. *Contradiction* (O): There is a logical inconsistency in your reasoning.
14. *Reasoning Critique* (O):
   (a) Your reasoning misses an important distinction, or involves a superfluous distinction.
   (b) Your position implicitly involves an assumption that is questionable ("premise attack").
   (c) Your reasoning does not necessarily lead to your conclusion/opinion, or your opinion has not been sufficiently justified.
   (d) Your reasoning applies equally well to the opposite opinion.
15. *Competitive Extension* (O):
   (a) Would you go to this implausible extreme with your reasoning?
   (b) Your reasoning can be extended to the following extreme, with which neither of us would agree.
16. *Counter Consideration* (O): Here is a thought or element that cannot be incorporated into your position.
17. *Common Ground/Integration* (O):
   (a) We can combine our positions into a common view.
   (b) Here is a general premise common to both of our positions.
18. *Comparative Critique* (O):
   (a) Your reasoning is less adequate than mine because it is incompatible with the important consideration here.
   (b) Your position makes a distinction which is seen as superfluous in light of my position, or misses an important distinction which my position makes.
   (c) I can analyze your example to show that it does not pose a challenge to my position.

Table 2

Comparative Analysis of Transaction at Varied Ages

Age	N	Study	% Transaction		
			Operational	Representational	Total
7	24	Kruger & Tomasello (In press)	--	--	13.3
11	24	Kruger & Tomasello (In press)	--	--	15.5
Mean-19	80	Gibbs et al. (1983)	4	--	--
Mean=21	60	Berkowitz & Gibbs (1983)	16	7	23
Mean=24 (adol. & young adult)	40	Leadbeater (1986)	--	--	20
12-16 w/parents	59 118	Powers (1982)	23	29	52
mothers of 7 & 11 year olds	24	Kruger & Tomasello (In press)	--	--	10.7

Table 3

Mean % of Total Transaction (PT) by Age and Culture

	Age				
Culture	6-8	9-11	12-14	15-17	18-20
US	4.2	11.9	17.1	16.5	19.4
Swiss	0.1	1.8	9.9	23.4	24.4
TOTAL	2.2	6.8	13.5	20.4	22.2

Table 4

Mean % of Operational Transaction (PO) by Age and Culture

	Age				
Culture	6-8	9-11	12-14	15-17	18-20
US	1.9	7.2	9.4	13.0	10.5
Swiss	0.1	1.7	6.5	17.2	18.6
TOTAL	1.0	4.5	8.0	15.4	15.1

Table 5

Mean % of Representational Transaction (PR) by Age and Culture

	Age				
Culture	6-8	9-11	12-14	15-17	18-20
US	2.3	4.6	7.6	3.6	8.9
Swiss	0.1	0.1	3.4	6.2	5.8
TOTAL	1.2	2.4	5.5	5.1	7.1

Table 6

Two styles of interpersonal orientation

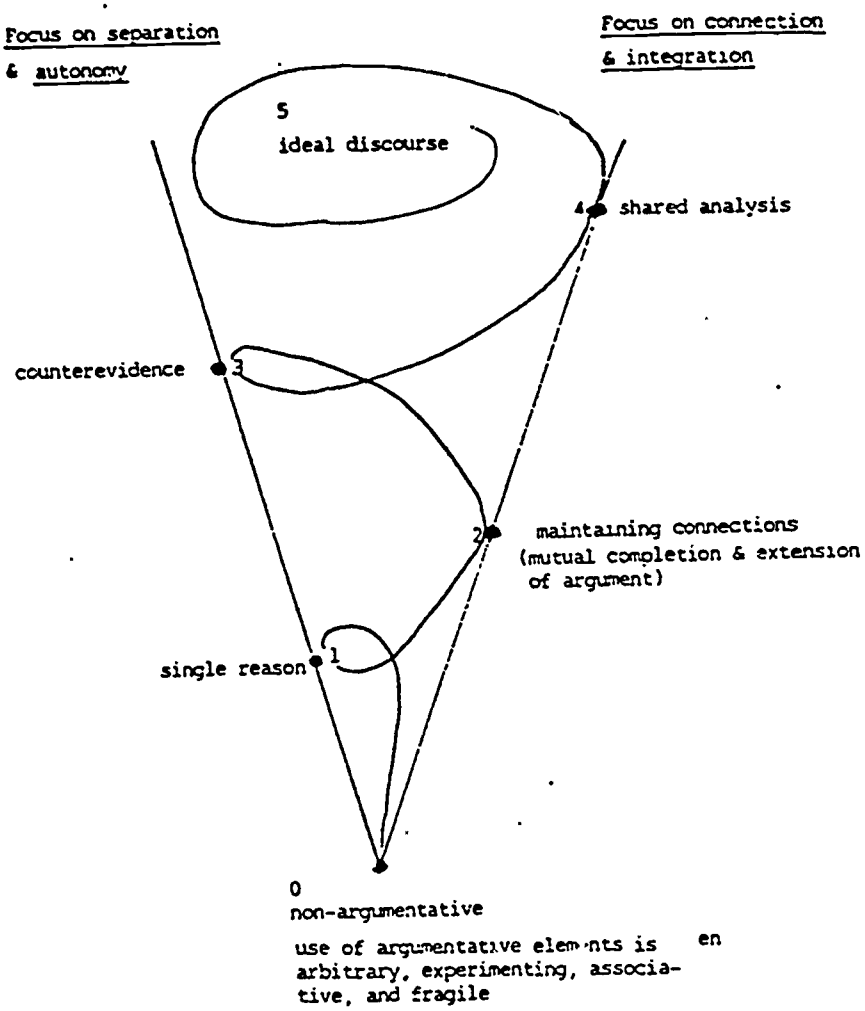
Style	Features	Stages
Autonomy/Individuation	Point and counterpoint "Crossing the swords" Critique of arguments Competition	Single reason (Stage 1) Counterevidence (Stage 3)
Connection/Integration	Avoidance of "hard" argumentation Downplaying differences Emphasizing opportunities for mutual confirmation Cooperation	Maintaining connections (Stage 2) Shared analysis (Stage 4)

Figure Captions

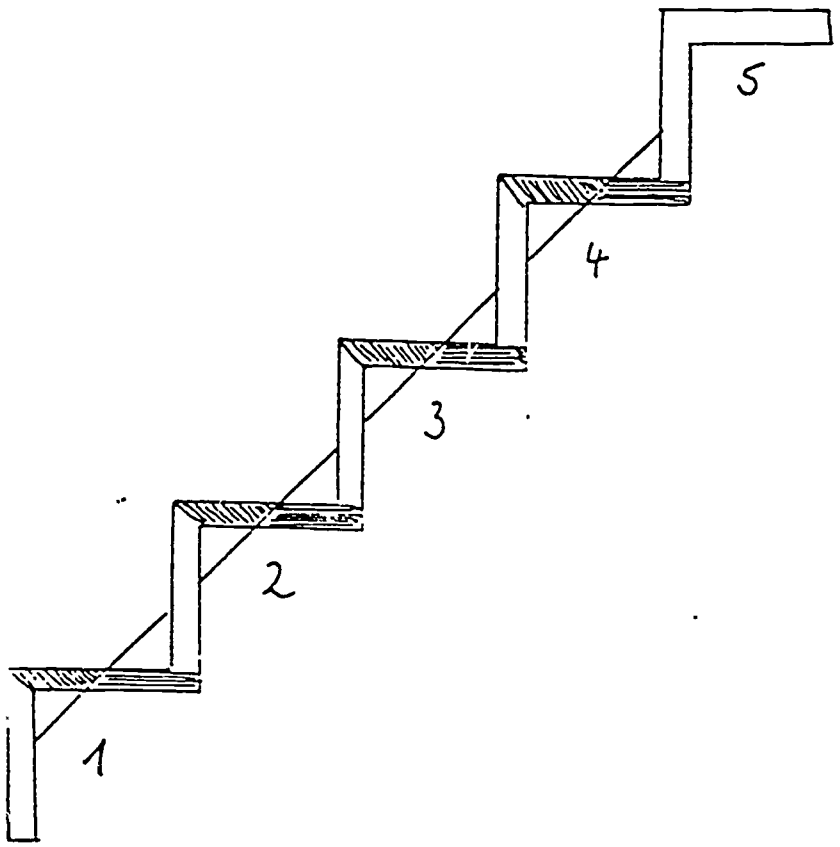
Figure 1: Model 1: Oscillating Styles

Figure 2: Model 2: Alternate Styles

MODEL 1


Focus on separation
& autonomy
Focus on connection
& integration
5
ideal discourse
4
shared analysis
counterevidence
3
2
maintaining connections
(mutual completion & extension
of argument)
single reason
1
0
non-argumentative
use of argumentative elements is
arbitrary, experimenting, associa-
tive, and fragile

MODEL 2



STYLE

mode of orientation 1: autonomy, distance, separation, different.

mode of orientation 2: connexion, closeness, relation, integration

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