Developmental moral education, based upon Kohlberg's (1984) study of moral reasoning, has been manifested in a variety of settings and forms of application. One component which is prominent in most forms of developmental moral education is peer moral discussion. Indeed, the first attempts at moral education based on Kohlberg's theory (e.g., Blatt, 1969) were comprised entirely of peer discussions of moral dilemmas. Even more recent and different procedures such as democratic governance (Power, this volume) and counselor training (Sprinthall, 1980) include peer moral discussion as a core ingredient. This paper will explore adolescent moral discussion as a form of moral education from the standpoints of both psychological research and educational practice. First, what we know and what we think we know about moral discussion will be considered. Included in this section will be reflections about what research has taught us. Then moral discussion as a process of structural development will be addressed and a program of research aimed at uncovering the developmental features of adolescent moral discussion will be presented. Finally, an attempt will be made to integrate these two analyses and to consider where this perspective can take moral education and research in the future.
communications, and misinterpretations. Many of the problems center around moral discussion.

Research, theory and practice have produced an educational Zeitgeist that, like some theoretical juggernaut, has taken on a momentum and life of its own. Hence, it has become quite difficult to separate myth from fact. I shall try to address how moral discussion, the most pervasive element in moral education today, influences the development of moral thinking in adolescents.

Kohlbergian moral discussion originated in the doctoral work of Moshe Blatt (1969) under Kohlberg's direction. Blatt used the discussion of hypothetical moral dilemmas as a method for educating for moral development. His original study and subsequent applications by himself and others (Blatt & Kohlberg, 1975; Colby, Kohlberg, Fenton, Speicher-Dubin & Lieberman, 1977; Mosher, 1980) relied heavily upon research by two of Kohlberg's colleagues (Rest, 1973; Turiel, 1966) for their theoretical justifications. Reviews of this literature are plentiful (Berkowitz, 1981; Higgins, 1980; Lockwood, 1978; Sprinthall, 1980), so we will merely summarize some of the conclusions prevalent in this literature.

The moral discussion literature seems generally to include contradictory conclusions about whether exposure to reasoning one stage above one's own leads optimally to moral development. A further conclusion frequently based on the research literature is that interactions by students at a variety of stages is important for moral education to be effective. Teacher facilitation of moral discussion is also typically considered essential to the success of a moral discussion education curriculum. Finally, cognitive conflict is assumed to be a necessary condition for development to result from moral discussion.

Now let us explore in a bit more detail what it is that we actually do know from the research on moral discussion in education. The so-called "+1 convention" may be the most problematic variable in the literature (c.f. Berkowitz, 1981; Lockwood, 1978; Rest, 1980). While the moral education literature does reveal a diversity of interpretations of the psychological research underlying the convention that discussion facilitators need to present reasoning one stage above that of their students, it is nonetheless a widely accepted convention (e.g., Arbuthnot & Faust, 1981). Unfortunately, it is not a convention that has strong empirical support. From my own analyses of examples of moral discussions led by the experts in the field, it appears to be largely a mythical beast (Berkowitz, 1981). Educators simply do not seem to produce "+1" reasoning in moral discussion. Furthermore, despite the recent teacher training book by Arbuthnot and Faust (1981) which argues that "the capacity for +1 reasoning relative to one's students is required to carry out certain of the moral educator's tasks, and therefore, seems essential for optimally effective moral education" (p. 110), one has to agree with Fraenkel (1978) that such "moral educator's tasks" are highly impractical and unrealistic. This seems especially true in light of my failure to find +1 behavior in expert-led discussions. We can perhaps derive a clearer understanding of this controversy and of moral discussion processes by examining the next two variables concerning the form of moral discussion, i.e., classroom stage mixture and teacher facilitation.

A number of studies have indicated that student stage mixture may be an appropriate substitute for the +1 convention. Colby, Kohlberg, Fenton, Speicher-Dubin and Lieberman (1977) have concluded, based upon their massive study of moral discussion classroom programs in civic education, that classroom student heterogeneity of moral reasoning is central to the success of such programs. In our own research we have demonstrated that heterogeneous dyads develop significantly more than homogeneous dyads in a moral dialogue program (Berkowitz, Gibbs & Broughton, 1980). In studying non-moral stage development, Mugny, Perret-Clermont and Doise (1981) conclude that heterogeneous groupings typically produce more development than do homogeneous groups, except for pairings of transitional subjects, who are probably producing a mixture of stages of reasoning. This is all certainly quite consistent with Piagetian theory (1932/1965) that argues for the power of peer interaction in promoting moral development, and is furthermore consistent with Kohlberg's (1980) recent synthesis of the theories of Piaget and Durkheim that argues for the authority and influence of the peer group in moral education and development. Despite this theory and research, the definitive study on the effects of peer stage mixtures in moral discussion programs awaits realization. Nevertheless, we may conjecture that student stage heterogeneity may serve to provide the so-called +1 reasoning that teachers are urged to but typically do not seem to provide. In other words, the exposure to higher stage reasoning that is theorized to be necessary for development resulting from moral discussion may be produced by peers, not by experts such as group leaders or teachers. This again would be quite consistent with the Durkheimian model and with Piaget's original formulation.

A sidelight on the stage mixture issue is the question of absolute stage. There is evidence that suggests that moral discussion programs are more effective for low stage students than for high stage students. Lockwood (1978), in his critical review of the moral education intervention literature, concludes that there is little evidence for the effectiveness of moral interventions in producing development beyond stage 3. Likewise, in a non-moral domain, Mugny, Perret-Clermont and Doise (1981) report that the most consistent gains are found for low and intermediate subjects, although their definitions are relative to a single stage of development rather than across the entire spectrum of logical stages.

The third variable we mentioned, teacher facilitation, is also related to the +1 controversy outlined above. There are actually two issues here: (1) Is teacher facilitation necessary for successful moral education?; and (2) if so, what form should it take? Again, we do not have adequate bases for answering these questions definitively, but, fortunately, we do have enough information to begin to examine them. Except for some control groups in the Blatt and Kohlberg (1975) study that showed mixed results, educators have not adequately explored the potential of peer-led moral discussion programs. In the psychological liter-
family is traditionally assumed to be the major force in the moral growth of
cognitive conflict. This is certainly not an argument against teacher
facilitation, but it does serve to suggest that such teacher roles may be
expansible. Once again we do need more research in this area. As for the second
question, the educational curriculum literature is replete with suggestions for
"teach roles," "teaching techniques," "facilitator behaviors," etc. They
range from the +1 directions already discussed (Arbuthnot & Faust, 1981) to
facilitation of peer interaction (Galbraith & Jones, 1976). They include small
group construction, dilemma writing, "Socratic" probing and a wide variety of
other behaviors. While most of these have not been directly studied, it seems fair
to conclude from our previous discussions that behaviors that enhance the like-
lihood of students at different stages interacting in discussions of moral justifica-
tions will be successful moral education techniques.

A fourth assumption about the form that moral discussion programs of educa-
tion should take concerns cognitive conflict. This is perhaps the most fundamental
of the ingredients and one that differs in an important respect from the +1
convention, student interaction, class composition, and teacher facilitation. Cog-
nitive conflict is a "first order" variable in moral education whereas +1, peer
interaction, class composition and teacher facilitation are "second order" vari-
ables. By this, I mean that the second order components are all designed to cause
the first order component. For example, peer interaction is assumed to be effec-
tive because it produces disequilibrium or cognitive conflict (Mugny, Perret-
Clermont & Doise, 1981). Disequilibrium, or, more colloquially, cognitive con-

tict, is a fundamental element in Piagetian structural theory. It is the dynamic
counterpart to static structure. Indeed, in his later writings Piaget (e.g., 1971)
seemed to focus more on process than he had previously. Actually, for some time
Piaget (1967) had contended that: "What is important for psychological explica-
tion is not equilibrium as a state but, rather, the actual process of equilibration.
Equilibrium is only a result, whereas the process as such has greater expository
value" (p. 101). While it is abundantly clear that structural development theory
contends that the equilibration process demands that cognitive conflict occur for
structural shifts to ensue, the moral education literature has largely ignored this
process dimension of moral development, except perhaps for theoretical treat-
ments. Research on cognitive conflict in moral education has been largely nonex-
istent, and, for this reason, educational practice has either ignored it or has
simply had to engage in untested attempts at manipulations that are assumed to
be likely to result in cognitive conflict.

We therefore will discuss cognitive conflict as a variable in our second section
of this paper on the processes of moral development and education. First, let us
examine another area that can shed some light on the issue of the role of moral
discussion in moral development and education, i.e., the family. While the
family is traditionally assumed to be the major force in the moral growth of
children and adolescents, it has not been studied as extensively by moral stage
researchers as might be expected. This is due at least in part to the perspective of
stage theory on the role of the family in moral development. Both Piaget
(1932/1965) and Kohlberg (1969) have historically deemphasized the impor-
tance of the family in moral development. A recent review of the literature on
the role of childrearing on moral development (Speicher-Dubin, 1982) suggests that
parents may have much more impact than has previously been suggested.

Two variables have been studied repeatedly in this small but informative
literature: (1) parent stage of moral reasoning, and (2) parental childrearing
techniques. We may think of the former as somewhat parallel to the +1 variable
and the latter as parallel to the group interaction variable, although the sim-
ilarities are far from exact. For example, only one study (Parikh, 1980) separated
out the effects of the two variables completely. Parikh found them to both be
highly significant in predicting child stage, but also to be highly redundant. It is
clear that parent stage is related to childrearing technique, with higher stage
parents using induction, the technique most positively related to higher child
stage. Nevertheless, the literature in general does permit some conclusions about
the role of the family in child moral development (see Lickona, this volume, for
a broader review of this literature).

One of the more pronounced findings is that, across different cultures and
diverse measures of both parenting and moral stage, induction is a parenting
technique that is related to higher stages of reasoning in offspring (Hoffman &
Saltzstein, 1967; Holstein, 1969; Parikh, 1980; Peck & Havighurst, 1960;
Speicher-Dubin, 1982). Induction is a technique that is best typified by discus-
sion and reasoning. Hoffman and Saltzstein defined induction as an appeal, in
discipline, to the consequences of the child’s actions. Holstein used the term
"encouragement" to represent taking the child’s opinion into account in making
decisions. Other researchers used similar definitions. We may thus conclude that
opportunities for democratic decision-making (Peck & Havighurst, 1960), rea-
soning about discipline (Hoffman & Saltzstein, 1967; Parikh, 1980), and ex-
pressing one’s opinion (Holstein, 1969) in the family will lead to greater child
moral development. Furthermore, in training studies, Grimes (reviewed in Hig-
development. Furthermore, in training studies, Grimes (reviewed in Hig-
development when parents are included in moral discussions. Grimes found
significantly greater development when mothers were included in moral discus-
sions with their children than in the also significant traditional classroom discus-
sions. Stanley uncovered part of the process by noting that only the successful
parent group, i.e., parents trained with their adolescents, showed a decrease in
authoritarian decision-making in family discussions. This seems quite similar to
the parallel effects of moral discussion in the classroom.

The role of parents' stages is somewhat less clear. As Speicher-Dubin (1982)
points out, there is a clear and consistent relationship between the parents' stages
and the stages of their children. However, as we have already noted, parent stage
is related to parenting technique. We therefore need to know if it is the technique of reasoning with one’s child or the stage of the parents’ reasoning that leads to the child’s development, or both. Unfortunately, only parent technique has been studied directly in parenting situations. That is, no direct assessment of spontaneous parent moral reasoning has been done. Olejnik (1980) has found, however, that a relationship exists between the second order conditions (i.e., the parental reasoning stage) and the first order variables (i.e., the child’s reasoning stage). This leads us to a new distinction. The second order variables give us only limited understanding of the developmental process. We may term this “predictive” or “conditional” understanding. That is, by understanding which second order variables have which effects, we are able to predict the success or failure of a moral education intervention, i.e., we know the conditions under which such education will produce development. However, we do not know precisely how the effects are produced. In other words, we do not know the first order process. If we study cognitive conflict directly, however, we will have a different form of understanding, which I will call “causal” or “process” understanding. In other words, we can come to understand how those second order conditions cause development.

Unfortunately, successful attempts to directly measure the first order process of disequilibration do not exist. Our initial attempt at this enterprise (Berkowitz, Broughton & Gibbs, 1977) was somewhat less than revolutionary. We have since taken a middle ground stance by exploring the disequilibrating features of the adolescent discussion process. Research by Maria Taranto (1984) with our data set is intended to more directly explore the disequilibration process in adolescent moral dialogue by focusing on centrations and decentrations, much as has been suggested by Bearison (1982) with child moral discussion. Thus, our discussion of developmental process does not directly assess disequilibrum; rather, it explores the interactional bases for moral discussion. We may think of peer discussion as a variable that intervenes between what we have called second order variables and the first order variable of cognitive conflict.

As has been suggested by Piaget (1967) and others (e.g., Miller, 1981), the study of process should take precedence over the study of structure. Yet, what we find in the literature on moral education is that the study of moral education is often quasi-naturalistic, they do not typically study pretest and posttest change in moral reasoning. Rather, they correlate current stage of reasoning with family conditions (cf. Speicher-Dubin, 1982). We therefore cannot infer any causal mechanisms. We don’t know, for instance, if parent stage causes parenting style which causes child development or if parenting style causes parent and child stage, or if some other entirely different process is at work. The training studies do, however, allow us to infer process.

Let us now briefly review what we have concluded thus far about moral education. First, there are many confusions about what the psychological research literature prescribes for moral education through peer discussion. Second, the need for exposure to teacher-produced higher stages of reasoning is not supported. Third, peer interaction, especially in stage heterogeneous moral discussions, is an important part of moral education programs. Fourth, the literature on the role of parenting in moral development supports the moral education literature in suggesting that the largely egalitarian moral discussion process may be more central to moral stage growth than the transmission of content.

The central role of the moral educator then becomes the facilitation of open peer discussion of moral issues. Let us now turn to a discussion of the process dimension of moral education and development.

**MORAL DISCUSSION AS DEVELOPMENTAL PROCESS**

We have already defined what we have termed “first order” and “second order” variables in moral education. This is largely parallel to what empirical researchers term dependent and independent variables, respectively. We cannot directly control the dependent variable, indeed it is dependent upon that which we can directly control, i.e., the independent variable. In this case, we cannot directly manipulate cognitive conflict, an intra-individual variable (Mugny, Perret-Clermont & Doise, 1981). Rather, we influence cognitive conflict by manipulating second order variables such as class composition. This leads us to a new distinction. The second order variables give us only limited understanding of the developmental process. We may term this “predictive” or “conditional” understanding.
While the American conservationists gave up that line of research, and Doise and his colleagues were focused more directly on the second order dimensions of peer interaction such as stage mixture, our plan of attack shifted and John Gibbs and I began to look for the "developmental features" of moral discussion. We wanted to uncover the discourse process of moral development. Elsewhere I have termed this process "the social construction of knowledge" (Berkowitz, 1980). The aspect of this process that we specifically explored is the dialogic interaction of reasoning structures, or, in our terms, "transactive" discussion. We have defined transactive discussion as "reasoning that operates on the reasoning of another" (Berkowitz & Gibbs, 1983). We view such discussion as dialectical in its ideal form, with Ego's (the speaker's) reasoning confronting Alter's (the listener's) in a dynamic and constructive interplay.

It is interesting to note that Bill Damon (Damon & Killen, 1982) and David Bearison (1982) are attempting to construct similar schemes with young children. Mugny, Perret-Clermont and Doise (1981) have inferred such processes in their research. All of these investigations, however, have been directed toward young children. Because we are studying adolescent moral discourse, we see a qualitative difference in the form of moral discussion between the subjects in these studies and the subjects in our own.

This points to a marked neglect of one particular developmental perspective in this literature. Typically, authors do not consider the structural capacities of their subjects as relevant to their interactional performance. They merely see interaction as affecting structural development. Max Miller (1980) has most directly confronted this issue in his investigation of the development of moral discourse. He has acknowledged that it is a developmental phenomenon and has, quite bravely, attempted to determine the parallelism between the development of moral discourse and the development of logical and social thinking. Nevertheless, his subjects are all young children as well and his work is, self-admittedly, quite preliminary.

When we originally began this research, we noted the work of Scott Miller (Miller & Brownell, 1975) with young children and the conservation task. One reason for our choice of adolescence as the age group to study was the relative immaturity of the communication skills that Miller and Brownell were limited to assessing. Furthermore, we noted Piaget's (1972) description of the nature of formal operational discussion:

From the social point of view, there is also an important conquest. Firstly, hypothetical reasoning changes the nature of discussions: a fruitful and constructive discussion means that by using hypotheses we can adopt the point of view of the adversary (although not necessarily believing it) and draw the logical consequences it implies. In this way, we can judge its value after having verified the consequences. (p. 4)

Let us now take a closer look at (1) how we discovered transactive discussion, (2) its features, and (3) our empirical evidence for its existence and validity. We began our research with two different but complimentary perspectives. On one hand we had our a priori theoretical assumptions about what the adolescent manifestation of disequilibrating discourse should look like. On the other hand, we realized that we needed to refine our theoretical ideas with concrete data. We borrowed this "'mutual bootstrapping'" approach to theory construction from Kohlberg's (1981) work in the development of a moral stage scoring manual. Our basic theoretical assumption was that adolescent disequilibrating discourse should include an active reflection and operation upon the reasoning of a discussion partner.

In order to shape these notions with data, we began a moral discussion intervention with adolescents. Since these data are published elsewhere (Berkowitz, Gibbs & Broughton, 1980), I will merely summarize them here. We asked 30 same-sex undergraduate dyads to engage in a series of weekly to bi-weekly moral dialogues to be preceded and followed by a Kohlberg standard moral judgment interview. Dyads were paired on the bases of content differences (action choices in moral dilemmas), and stage differences (based on the pretest interview). Dyads were either at the same stage of moral reasoning, less than a full stage apart or approximately one full stage apart. We discovered that the group with less than a full stage disparity developed approximately one third of a stage on the average (about the norm for most successful moral reasoning interventions), which was significantly greater than any of the other groups, including a control group that engaged in no discussions. Despite these significant differences we were interested in the dialogues themselves. We found that some dyads in the "success" group did not develop and some from the unsuccessful groups did. We hypothesized that the nature of their dialogues should explain this so-called error variance.

The next step was to explore some of those dialogues in order to develop our understanding of disequilibrating dialogue. We compared success dialogues with non-success dialogues and discovered what you have been introduced to as transactive discussion. In doing so, we have identified 18 types of dialogue behavior which we classify as either higher order or lower order (Berkowitz & Gibbs, 1979). In Table 8.1, where all 18 transacts are presented, the higher order forms are followed in parentheses by the letter O representing Operational Transact, and the lower order forms by the letters R for Representational or E for Elicitational. There are also a few hybrid transacts. The Operational Transacts fit our definition of transaction fully; i.e., they are characterized by a transformation of Alter's reasoning via integration, logical analysis or some other operation. An example of higher order Operational Transacts, and a model of the ideal transact as well, is Integration/Common Ground. In this case, Ego (the speaker) attempts to dialectically integrate his or her own reasoning with Alter's reasoning. Another example is Contradiction, where Ego points out how Alter is contradicting him or herself.

Representational Transacts are best likened to lower order reflective counseling behaviors (e.g., Carkhuff, 1969; cf. Berkowitz & Prestby, 1980) in that they...
TABLE 8.1
Table of Transacts

1. Feedback Request (E)
   Do you understand or agree with my position?

2. Clarification (O)
   (a) No. What I am trying to say is the following.
   (b) Here's a clarification of my position to aid in your understanding.

3. Competitive Clarification (O)
   My position is not necessarily what you take it to be.

4. 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).

5. Paraphrase (R/E)
   (a) I can understand and paraphrase your position or reasoning.
   (b) Is my paraphrase of your reasoning accurate?

6. Justification Request (E)
   Why do you say that?

7. Completion (R/O)
   I can complete or continue your unfinished reasoning.

8. Extension (O)
   (a) Here's a further thought or an elaboration offered in the spirit of your position.
   (b) Are you implying the following by your reasoning?

9. Competitive Paraphrase (R/O)
   Here's a paraphrase of your reasoning that highlights its weakness.

10. Contradiction (O)
    There is a logical inconsistency in your reasoning.

11. 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.

12. 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.

13. Counter Consideration (O)
    Here is a thought or element that cannot be incorporated into your position.

14. Juxtaposition (R)
    Your position is X and my position is Y.

15. Common Ground/Integration (O)
    (a) We can combine our positions into a common view.
    (b) Here's a general premise common to both of our positions.

16. Dyad Paraphrase (R)
    Here is a paraphrase of a shared position.

17. Competitive Juxtaposition (R)
    I will make a concession to your position, but also reaffirm part of my position.

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 8.2
Percentages of Total Statements in Each Transact Category for Pretest to Posttest Moral Stage Changers and Non-Changers

<table>
<thead>
<tr>
<th>Transacts</th>
<th>Changers</th>
<th>Non-Changers</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Representational</td>
<td>8.8</td>
<td>7.2</td>
</tr>
<tr>
<td>Operational</td>
<td>17.8</td>
<td>12.9</td>
</tr>
<tr>
<td>Transacts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Changers</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Changers</td>
<td>27</td>
<td></td>
</tr>
</tbody>
</table>
optimal student behavior will necessarily follow. Note the unidirectionality of this model. Teachers are instructed to "get the kids to X" or "make sure that students don't Y," as if the ability to X or Y must be innate, and teachers need only trigger or suppress their appearance. I contend that students are not spontaneously proficient in moral discussion skills. Certainly, we did find about 15% of spontaneous adolescent moral discussion to be Operational Transaction and an additional 8% to be Representational Transaction. There was a significant difference between the moral stage changers and non-changers on these variables. I would guess that these are not upper limits we observed, and that training could increase the degree of transactive behavior in a moral discussion. Unfortunately, we have not yet run the training study that would test this hypothesis. We have, however, done some preliminary research that may shed some light on the issue. In an undergraduate peer counselor training program, John Prestby and I assessed the differences in moral discussion behavior between the counselors and three control groups. As we had predicted, the training of lower order reflective counseling skills produced the highest degree of Representational Transactive behavior and lowest degree of Operational Transactive behavior in the peer counselors. This Training by Transact Type interaction was statistically significant (Berkowitz & Prestby, 1980). We have shown these data to the personnel running the peer counselor program and have convinced them to include some more confrontive and directive counseling skills in their training. They have done so and we have collected a new round of data. Unfortunately, these data have not yet been analyzed. We do not have high hopes for this study, however, since we discovered after the fact that the additional training was limited to only one 1-hour session. It is very clear from the literature, however, that adolescents can be trained successfully in general communication skills. Furthermore, peer counselor training has led to moral development (e.g., Mosher, 1980; Sprinthall, 1980). We have further noted in our research that pairing students to maximize moral opinion differences, such as whether the fabled Heinz (see p. 29, this volume) should steal the drug, increases the length of discussions. It also appears that a desensitization period for nonfamiliar discussants may increase the length of discussions as well as the density of transaction in the discussions. We, therefore, will assume that students can also be trained in transactive behavior. We actually are assuming two points here: (1) that transactive behavior in a discussion causes the ensuing moral stage development; and (2) that individual differences in spontaneous moral discussion behavior are alterable to a significant degree through training. We have in actuality demonstrated neither of these as of yet. The training study we are planning will test both, however.

### ROLE OF TRANSACTIVE DISCUSSION IN MORAL EDUCATION

One cynical but important question this raises is, So what? In other words, what can we do with this scheme? Let us reflect back now on our preceding analysis of the moral education discussion literature. We had concluded that we seemed to have some reasonable understanding of what I have termed second order, or predictive, variables of moral discussion, such as group stage heterogeneity, although we did uncover significant disagreement and confusion over some variables, such as teacher +1 modeling. We also noted, however, that we had a very limited understanding of first order or process variables in moral discussion. Indeed, this was a principal reason for the research that led to the discovery of transactive moral discussion. I would claim that we have clearly approximated a first order process variable in moral discussion. Furthermore, it seems to account for more variance in the developmental effects of moral discussion than does the more traditional second order variable of stage disparity. What we may have then is a variable that can significantly increase the power of moral discussion education programs. How then can we utilize this laboratory discovery to improve moral education?

One critique I have often leveled at moral educators and theorists is that there seems to be an acceptance of an implicit assumption that optimal facilitator behavior is non-spontaneous and needs to be trained, but that optimal student discussion behavior is spontaneous and therefore requires no training. This does not seem to me to be a very reasonable assumption. It is assumed that if the right classroom or school atmosphere is established by trained teacher behavior then

<table>
<thead>
<tr>
<th>Transact Measure</th>
<th>MOPP</th>
<th>MRPP</th>
<th>MTPP</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Changers</td>
<td>0.92</td>
<td>0.44</td>
<td>1.36</td>
<td>14</td>
</tr>
<tr>
<td>Changers</td>
<td>1.12</td>
<td>0.59</td>
<td>1.71</td>
<td>16</td>
</tr>
</tbody>
</table>

variable, stage disparity between dyadic partners. Furthermore, our measures of interrater agreement (Pearson correlations) average over .87 for myself and John Gibbs, over .76 for myself and the trained graduate student, and .70 for myself and the self-trained undergraduate (Berkowitz & Gibbs, 1983).

At this point, we felt that we had demonstrated both the validity and reliability of transactive discussion.

### TRANSACTIVE DISCUSSION IN THE FAMILY

Previously, in discussing moral discourse, we examined the literature on moral development in the family. As we have noted, this literature has a high degree of...
similarity and relevance to the moral education literature. We now will turn again
to family phenomena to learn more about transactive moral discussion. Sally
Powers (1982) has been working in Stuart Hauser's laboratory on the role of
family interactions in moral development. As part of a much larger project
(Hauser, Jacobson, Noam & Powers, 1983; Hauser, Powers, Jacobson & Noam,
in press), she has created a highly comprehensive coding scheme for analyzing
mother-father-adolescent "trialogues" of moral dilemmas. Part of the coding
scheme is an adaptation of the Berkowitz and Gibbs (1979) transactive coding
scheme. In a study of over 50 families, Powers has questioned whether families
with higher stage adolescents use more transaction than families with lower stage
adolescents. She bases this hypothesis on the Berkowitz and Gibbs (1983) finding
that higher degrees of transaction are related to greater gains in moral develop-
ment. Hence, families whose children have achieved higher stages of moral
reasoning may be using more transaction in their family discussion of moral
issues. To test this, videotapes of each family discussing their individual posi-
tions about the Heinz dilemma were analyzed for degree of transaction in the
discussion.

While the results are not perfectly consistent, there was a significant positive
correlation between the adolescents' stages of moral reasoning and their own
transaction in the discussions. However, only one of six correlations between
mothers' or fathers' transaction and the adolescents' stages was significant and in
this case mothers' transaction was negatively correlated to adolescent stage. This
appears to be due, at least in part, to group differences in the sample. Families of
both psychiatrically institutionalized adolescents and non-psychiatric adolescents
were studied. The mother transaction/adolescent stage correlation was not signif-
ificant for either of the groups individually. Adolescents' transaction was
positively and significantly related to their own stages in the total sample and in
the psychiatric group, but not in the control group. Thus, we see some evidence
for the child's stage to be related to his/her own discourse, but not related to
father's discourse and possibly negatively related to mother's discourse.

Powers (1982) also looked at parents' transaction and their own stages. Moth-
ers show a confusing pattern, with no total sample relationship, and with a
significant positive correlation for the control group and a significant negative
correlation for the psychiatric group. Fathers had a non-significant positive trend
for the total sample, which seemed due to the strongly significant positive cor-
relation for the control group. Overall then, parents' transaction was not signifi-
cantly related to their own stages for the total sample, was positively related for
both parents in the control group, and was negative for the mothers and non-
significant for the fathers in the psychiatric group.

What can we conclude from these results? We certainly now have further
evidence that transaction is related to moral growth. Nevertheless, the results are
somewhat inconsistent, and at this point, still somewhat incomplete. When we
consider the relation of transaction to one's own stage of moral reasoning for

FATHER-ADOLESCENT RELATIONS

From the data presented above, it appears that there is some relationship
between the stage of moral reasoning and the amount of transaction that
occurs in the family discussion. However, this relationship is not always
consistent and may vary depending on the group being studied. Powers' data
suggest that adolescents may use more transaction in their family discussion
when they are at a higher stage of moral reasoning. This finding is consistent
with the idea that adolescents may be more likely to engage in transactive
discussion when they are more advanced in their moral development.

In contrast, the relationship between parents' stage of moral reasoning and
their use of transaction is less clear. While there is evidence of a positive cor-
relation between parents' stage and their use of transaction in the control
group, this relationship is not significant for the psychiatric group. This
suggests that factors other than the parents' stage of moral reasoning may
be influencing their use of transaction in the family discussion.

Overall, these findings indicate that transactive moral discussion may
be an important mechanism for moral development. Further research is
needed to understand the factors that influence the use of transactive
discussion in family interactions and how this relates to moral growth.
stages. The research in transactive discourse is not an exception. Ironically, this research has stemmed from the discipline of developmental psychology. Nevertheless, the development of such discourse has been sorely neglected to date, except for the pioneering work of Max Miller (1980).

One way that we have attempted to tackle this developmental issue has been to look for developmental precursors to the use of transaction in adolescence. We have long been interested in Piaget's contention that formal operations implies a particular form of discussion. We have also long been aware of the logical basis for many of the Operational Transacts. We have, therefore, hypothesized for some time that formal operations may be necessary for some of the Operational Transacts.

Before we proceed further, however, let us examine a conversation between two ninth grade boys (approximately 13 or 14 years old) that I overheard on a public bus and have reconstructed. You may recognize this exchange as a good example of developmental play (what I term "practice/play") in the service of exercising nascent formal operational structures. These two boys were in essence playing "put down" on a public bus. They were using a concept which they called "hornybird." It seemed to have a clearly derogatory connotation which appeared to be derived from its homosexual and hypersexual features. What you called "hornybird." It seemed to have a clearly derogatory connotation which appeared to be derived from its homosexual and hypersexual features. What you will be reading is a reconstruction and excerpt, since I was remiss in my duty as a social scientist and did not have recording equipment with me at the time. I will simply refer to the boys as "A" and "B."

A1. You are a hornybird.
A2. No. You are a hornybird.
A3. No, I'm not, you hornybird. You're such a hornybird I can't believe it.
A4. Your mother is my girlfriend.
A5. Oh, big man! You'd be afraid to go near my mother.
A6. Oh, no I wouldn't.
B1. Why don't you ask her out then? Because you're a hornybird—that's why!
B2. I will so ask her out. Besides, you're the hornybird—not me. Hornybirds are always confused.
B3. Right and you're confused if you think I am the hornybird, so that proves you are a hornybird, you hornybird.
B4. Hornybirds always deny they are hornybirds. That's a sure test of being a hornybird, and you said you're not a hornybird, so that makes you a hornybird.
B5. Are you a hornybird?
A6. I used to be a hornybird. I admit it, but I'm not anymore, you hornybird.
B7. Ah, so you deny you are a hornybird. That makes you a hornybird.
A8. I didn't deny it. I admitted I used to be. Only non-hornybirds can admit they used to be hornybirds.
B9. Are you a hornybird now?
A10. I used to be.
B10. Are you a hornybird now?
A11. No.
B11. Aha! That proves it! You are a hornybird. You said hornybirds always deny they are hornybirds and you just denied it, you hornybird.
B12. But non-hornybirds can also deny it, and I am not a hornybird. But hornybirds are also always accusing non-hornybirds of being hornybirds. Are you calling me a hornybird?
A13. No "buts." You are accusing me of being a hornybird, so that not only makes you a hornybird, homybird, hornybird, but proves that I am not a hornybird. Besides, I've seen that Elaine that you went out with. What a pig! (At this point the two exited from the bus, to my disappointment and the relief of all the other passenger, two of whom were seniors in the same high school as the two discussants. One of the older students remarked at their passing, "What infants! They must have just taken freshman logic!")

We can note a number of interesting aspects of this exchange. First, note the conflictual mode of the discussion. It need not be malicious to be conflictual. Indeed, a good dialectical theorist should tell us that conflict can be cooperative and constructive. Second, note the sequence of strategies employed. At first, assertion and denial are the tactics used to apply the derogatory label "hornybird" to each other (statements A1-A3). Then, in statement B1, B begins to try to "prove" his accusation. A counters in A4 with a standard "put-down" which leads the discussion into regressing into name calling and the denial of every assertion (statements B4-B5). In A6, A again attempts a logical "proof." These proofs are based on spontaneously generated characteristics of the derogatory concept "hornybird." B simply elaborates and applies A's criterion to A in B6. Then, A generates a new logical proof in statement A7 which produces a lengthy and interesting logical battle (B7-B12). In A12 and A13, A produces a resolution and a new proof which, along with A's return to name calling, concludes the argument.

We can note from this exchange that the new acquisition of formal logical thinking in adolescence may influence the nature of discourse, particularly discourse which is directed at resolving differences and conflicts, as Max Miller (1980) has suggested. These two adolescent boys seemed to be employing their nascent logical structures to reconcile their difference of opinion concerning which of them is to carry the burden of the label "hornybird." Let us now look at a somewhat less colorful but more rigorous investigation of this relationship between moral discourse and logical thinking.

We (Gibbs, Schnell, Berkowitz & Goldstein, 1984) have administered a measure of formal operational reasoning (Tobin & Cupie, 1981) to college undergraduates and created 40 same-sex pairings of both formal, both transitional or both non-formal scores on this Test of Logical Thinking (TOLT). On a scale of 0—
10, formal reasoning has been operationalized as 6 and above, transitional as 2 or 3, and non-formal as 0 or 1. We then asked the dyads to engage in a tape-recorded moral dialogue of a pre-determined dilemma. As in our prior research, we transcribed the recordings and scored the discussions for transaction.

Since we only hypothesized that Operational Transaction would be related to formal operations and since only Operational Transaction has been found to be significantly related to stage development, we coded only Operational Transaction. Furthermore, it is important to note that the coding scheme used for these analyses is a working revision of the set of categories in Table 8.1.

Using a chi-squared analysis, we found a significant trend for formal reasoners to be more likely than transitional reasoners who were more likely than nonformals to evidence high levels of transactive behavior; \( X^2 (2) = 25.6, p < .0001 \), as can be seen in Table 8.4. The frequencies of nontransaction are 9, 20 and 11 for the formal, transitional and nonformal individuals respectively, while there were 31 formal, but only 8 transitional and 1 nonformal subjects exhibiting any transaction. The overall mean percentages of statements that were Operational Transacts were 7% for the formal reasoners, 1.9% for the transitional and 0.4% for the nonformal reasoners. The generally low percentages of transaction are due to two factors. First, they are limited only to Operational Transaction. Second, these discussions were the first interactions for each dyad. This is a variable which seems to reduce both the length and form of the discussion.

The “acid” test of our hypothesis is whether nonformal, as opposed to low or high formal, thinkers produce any transaction in their dialogues. While TOLT scores of zero or even one are extremely rare in an undergraduate population, the data just presented include 12 individuals with TOLT scores of zero or one. Eleven of those 12 evidence no transaction at all. Thus, the results support our hypothesis of the relationship between formal operations and Operational Transaction.

We find a similar and compatible conclusion in Mugny, Perret-Clermont and Doise’s (1981) review of their own research in the social-cognitive process of moral development. They note that “in order for the predicted cognitive acquisition to take place, the child should already possess certain ‘prerequisites’ which render him or her capable in some way of playing a significant part in an active confrontation and discussion with his partner” (p. 322). Similarly, Miller (1980), as we have noted, has attempted to explore the parallels between logical thinking, social thinking and moral discussion skill development in children. For adolescents, this readiness that Mugny et al. refer to should be based in the acquisition of formal reasoning, as we have tried to demonstrate.

**FUTURE DIRECTIONS**

Where do we go from here? That is always the easiest and most enjoyable point of conjecture, largely because it does not require commitment or action. As I have suggested elsewhere for professional ethics education (Berkowitz, 1982), we need to build into moral education procedures for both assessing and training discussion skills and prerequisite skills in students. For adolescents, we need to determine readiness for transaction by assessing the degree of development of formal reasoning structures. If the structures are present, we need to train the transactive behaviors, and if they are not, we need to facilitate logical development first. I have begun experimenting with some one-trial training procedures, but have not yet systematically developed a training model. I would hope for the development of such a model to be influenced largely by moral educators themselves rather than by researchers and psychologists.

As I have already mentioned, we are also currently planning a laboratory training study, but I would expect that to be followed eventually by actual applications of our model of transactive discussion in classrooms. Furthermore, I would hope to assess the effects of such curricula.

Fritz Oser and I have also begun to explore the nature of child and preadolescent moral discourse. Max Miller (1980), and William Damon (Damon & Killen, 1982) have already begun such work with children. David Bearison (1982) has begun some parallel work in social cognition with children. We can further learn much from the work of Mugny, Perret-Clermont and Doise (1981) in the area of logico-mathematical thinking with children. Hopefully, all of this work will lead to a life-span understanding of socio-moral interaction and its relationship to development. Such knowledge, may lead to better education for morality and social maturity.

**REFERENCES**


In the fall of 1981 Brookline High School, a semi-urban public school with approximately 2000 students and 200 faculty held its first Town Meeting, a democratic assembly of representatives from the student body, faculty, administration, and support staff. That meeting inaugurated one of the first large scale attempts to apply the cognitive developmental approach to democratic schooling. This approach grew out of Kohlberg (this volume) and Mosher’s (1978, 1980) work consulting for three alternative high schools—S.W.S. (School Within-A-School) in Brookline (MA), Cluster in Cambridge (MA), and S.A.S. (Scarsdale Alternative School) in Scarsdale (NY). Experience in these experimental schools suggested organizational structures and intervention strategies for the Brookline High School (B.H.S.) Democracy Project.

In the first section of this chapter I will outline how these alternative schools were organized and how they functioned in order to give some substance to what I mean by the developmental approach to democratic education. Since Kohlberg (1980) and Mosher (1980) present somewhat differing accounts of how they undertook their tasks in the alternative schools, I will address the question of whether they, nevertheless, share a general approach applicable to the average large, public high school. In the second section I will argue that large, bureaucratized high schools tend to produce a moral atmosphere conducive to disciplinary breakdown. The democratic approach, as developed by Kohlberg and Mosher, offers a way of responding to disciplinary breakdown by providing an alternative organizational structure for the public high school. Finally I will discuss how the democratic approach is becoming institutionalized in a large high school, specifically B.H.S., and how those of us involved in the Democracy Project at B.H.S. have undertaken the task of staff preparation.