In line with the symposium's address to means of describing and analyzing individual and group differences in values, analysis of assumptions of two research strategies, the cognitive-developmental and the attitude-strength, is given. A report on sample results on the same material handled by the two different strategies is presented. Analyses of variance indicate clear differences in social group in type of moral reasoning where differences were expected for theoretical reasons, and not where they were not, as for religious differences. (NF)
The common problem to which this symposium is addressed is "How do we describe and analyze individual and group differences in values?"

The combination of theoretical assumptions and research methods I shall advocate for analyzing values I call the cognitive-developmental research strategy. I shall contrast this research strategy with what I call the attitude-strength research strategy which has dominated American research on values. In the paper, I shall analyze the assumptions of each and report some sample results on the same material handled by the two different strategies.
A. FUNDAMENTAL ASSUMPTIONS IN DESCRIBING VALUES--THE ATTITUDE-STRENGTH APPROACH

Let me start by noting the shared dissatisfactions among the members of this panel with what I shall term the attitude-strength approach to the study of values, and a search for an alternative definition in terms of culturally universal dimensions of the cognitive structure of values. In my case a cognitive-structural approach to values derives from stages of moral judgment and reasoning. This emphasis on moral stages arises partly because of my own particular interest, moralization in childhood and adolescence, and partly because of my preference for the cognitive-developmental theories of moralization of Piaget and Baldwin. In the field of moralization, the moral stage strategy contrasts with attitude-strength research strategy associated with socialization theories such as the psychoanalytic and social learning approaches. The attitude-strength strategy for defining individual differences and assumptions used by socialization theory represents a set of more general methods and assumptions which have dominated social psychological and sociological studies of values.

The attitude-strength approach starts with a set of classes of objects of values, or more abstract dimensions or elements of values and asks "How strongly is this class of objects or acts valued or preferred by an individual?" Variations in strength of preference then define a quantitative dimension on which individuals or cultures may be ordered and compared. Obviously, there is a cognitive component involved in such value classes or dimensions since it is assumed that the respondents make some conscious or unconscious classification of
concrete objects as representing a more general value-class. However, the comparison of individuals focuses not upon differences in the cognitive component, but upon differences in the affective or conative component represented by degree of preference for the class of objects. It is assumed, that is, that everyone possesses the same cognitive capacity for classifying objects as liberal-conservative, authoritarian-democratic, being vs. becoming, and that the critical differences between people or groups are differences in strength of preferences for one or the other class of objects. In other words, it is assumed that the cognitive and the affective components of values are relatively independent of one another, the cognitive is constant across individuals and the emphasis is upon variations in the affective. With regard to these cognitive classes or dimensions of values, the attitude-strength research approach sometimes derives them from theory. Examples would be the Allport-Vernon-Spranger (1951) types of value (the theoretic, the aesthetic, etc.); the Kluckhohn value-orientations (being vs. becoming); Morris's paths of life (the Appolonian, the Buddhist, etc.); and Parson's pattern-variables (the universalistic vs. the particularistic, etc.). While the theoretical bases for defining these various value dimensions varies greatly all approaches must assume that the value-classes with which they start exist as cognitive organizations in the head of the subject or in the collective heads of his culture.

In contrast to a theoretical approach, value classes may be defined empirically by factor analysis. In this case, individuals are asked to choose between, or state degrees of preference for, a variety of concrete objects or acts. Correlations between preference for each
object and each other object are then reduced to factors. These factors represent classes or dimensions of objects and such that if one object in the class is preferred so is another and such that preference for one class of objects or one dimension is independent of another class of objects.

From the point of view of cognitive psychology this factor-analytic approach is safer than the theoretical approach since it does not simply assume that value organizations known to the theorist exist in the head of the subject, but tries to find out what organizations exist in the heads of the subjects. It shares however a second questionable assumption of the theoretical attitude-strength approaches; the assumption that the classes or dimensions used to organize value objects are the same for all subjects. It assumes that what varies from one individual to another is not the cognitive classification or dimensionality of an object, but rather the degree of value or affective strength of attitude toward the classes.

This assumption is of course extremely dubious in light of the known dramatic differences in styles or modes of classification and cognitive orientation from one individual to another. The third dubious assumption made by both the theoretic and the factor analytic attitude-strength approaches to values is their assumption about situational choice. The assumption is made that a situational choice is determined by an individual according to the mathematical balance of the strength of two (or more) values competing in the situation. A choice between going to a symphony or attending a political rally is determined by the relative strength of the aesthetic and political values. A choice of cheating to help a friend is determined by the strength of the particularistic value of friendship versus the
strength of the universalistic social honesty value. This assumption too is extremely questionable in light of what is known about the situational determinants of choice. A great range of studies indicate that one cannot predict from measures of attitude and value strength to actual situational behavior.

This is usually taken to be a problem of the discrepancy between verbal choice and behavioral choice. In fact, however, value-strength measures do not predict well even to verbal situational decisions. When an individual makes a situational choice, he may be doing something different than weighing the fixed strength of two values in his head and deciding for the stronger.

To illustrate the assumptions of the attitude-strength approach to values, I shall apply it to the nine moral decision situations we have used in our research on moral stages. We ourselves had classified the alternatives involved in these dilemmas according to a theoretical scheme when we constructed them. Each, we thought, involved a choice between following fixed social rules and authority and serving situational human needs and welfare. At the time we constructed the dilemmas we thought that such a rules vs. needs dimension represented Piaget's developmental dimension of heteronomous vs. autonomous moral orientation. Subsequently the dilemmas have been used by Marty Hoffman to measure a conventional as opposed to a humanistic moral orientation, again conceived as an attitude dimension or polarity.

In doing this, we were assuming that there was a set of actions which would be chosen by those high in value-strength on the "conventional" or "heteronomous" orientation, and another set of actions chosen by those high in value-strength on the "autonomous" or "humanistic orientation". We assume, that is, that children would classify acts as either following
rules or serving needs and if they valued following rules more would choose
the "conventional" act, if they valued serving human needs more would choose the need-serving act. If our theoretical assumptions were correct, the results should be apparent in the pattern of associations between items. Those who decided, for instance, that one should steal a drug to save one's dying wife, would also tend to decide to keep quiet about a brother's excuseable lie to his father, because both alternatives would appeal to someone highly valuing serving human needs.
B. FUNDAMENTAL ASSUMPTIONS OF THE STRUCTURAL APPROACH

We have described the attitude-strength values research strategy and its assumption. Its major contrast is with the structural approach to value-analysis. While the structural approach is used by Piagetian cognitive-developmentalists, it is a more general strategy used by Chomsky in linguistics, by Levi-Strauss in anthropology and by certain phenomenologists and logicians in philosophy. The first assumption of the structural approach to the study of values is the phenomenological assumption. Rather than postulating structures in the head of the subject one must try to discover them, to find out how he sees the world by asking the subject how he sees the world and by finding the groupings and connections he makes between one object and another. The search for structure then rests on a second assumption, the need to distinguish between content and structure and to focus upon structure in evaluation.

To illustrate these points we may take our moral dilemmas again. Our phenomenological postulate is exemplified in the fact that instead of asking subjects only for a predefined action choice or for a rating of preference, we asked him to structure the dilemma himself and to explain why and how he would make a choice in the situation. We reject the assumption that all our subjects cognitively organize or classify the alternatives in our dilemmas in the same way, and attempt to find out how the individual structures the dilemmas. As an example, a dilemma of whether to tell one's father about a misdeed of one's brother seems to pit loyalty to brother against loyalty to father, or more abstractly, the need of the brother against conformity to authority and rules. Ten year old
Danny, however, replies: "In one way, it would be right to tell on his brother or his father might get mad at him and spank him. In another way, it would be right to keep quiet or his brother might beat him up." Obviously Danny's decision is structured by his anticipation of who can hit harder, rather than by conflicting loyalty values.

Danny's particular way of structuring the dilemma would be relatively unusual, at least in an adult population. Our variety of structuralism, however, is not content with individual case analyses of unique structures. It looks rather for recurring types of structural systems. Typological analysis is not a locating of individuals at extremes of some quantitative dimension, it is rather a method for attempting to find recurrent regularities of phenomenological structure. In our case, these types define moral stages and Danny's response is an example of Stage 1, the punishment and obedience orientation.

The types of orientation we call stages are not values—or value-orientations in the sense of classes of preferred content, of WHAT is chosen. We distinguish between the content of value judgment and the structure of value judgment. The structure of value judgment is the way in which the individual judges and chooses and reasons, the reasons behind his choice. The distinction between content and structure is basic but not absolute. In the example cited, Danny's reason for choice is avoidance of punishment. Avoidance of punishment is itself value-content, but it derives from a more general reasoning structure. Thus avoiding punishment is structure relative to a choice of stealing or not but it is content to a deeper level of structure. The reason the Stage 1 child sets such a store upon avoiding punishment is not because he values
avoiding punishment and a more mature subject does not. Rather it is because the Stage 1 has a system of rules for abstracting from a situation what is good and right which only allows him to see the punishment feature of the situation whereas the more mature subject sees many other value features of the situation missed by the Stage 1 child.

Now it is clear that an emphasis upon structure as opposed to content is in some sense an emphasis upon the cognitive. It is not that stressing structure as opposed to content means stressing the intellectual as opposed to the affective. The emotions have structure as much as does the intellect. Structure, however, is revealed only cognitively as an organizing tendency, as a rule-system for relating stimuli or objects to one another, so structure must be described in cognitive terms, in terms of patterns of inference, connection and transformation of mental content. Related to the fact that structure is cognitive is the fact that structure is defined by competence, not by performance. By definition structure is general and systematic, and our description of it abstracts from the variations in performance to underlying consistencies. Finally emphasis upon structure is emphasis upon quality, not quantity. This is the reason for reliance upon the typological method. People do not really vary in quantitative degree of possession of a structure. Structure is an all-or-none phenomena. This does not mean that an individual may not have more than one structural system, he may be a "mixed type". But mixed types should not be construed as quantitative variations on a dimension.

To exemplify what we have just said about the structural approach we may use another example than the moral stages. This is the classification we have just made into two types of orientation to the study of
values, the attitude-strength approach, and the structural approach. This classification is itself an ideal typology, based on the notion that each type represents a set of interlocked assumptions about the nature of mental reality. As my paper unfolds, you will see that I myself am a mixed type and sometimes fall back on the attitude-strength mental orientation to describe or explain value phenomena. You would, however, gain a very poor understanding of how my mind worked if you attempted to describe me by locating me on an attitude-strength dimension of hard-nosed quantitative vs. soft-nosed qualitative or any other such dimension.
C. THE TWO APPROACHES APPLIED TO MORAL DILEMMAS

Let us now illustrate in a systematic quantitative way the two approaches applied to our moral dilemmas. In so doing, I hope to provide a case study of just what is wrong with the attitude-strength approach to values. It will be recalled that the value-strength approach in its theoretical form starts with some classification or dimension assumed to be present in the head of the subject as an organizing dimension. In our stories, we had assumed this dimension was one of heteronomous-conventional adherence to rules and authority vs. autonomous-humanistic concern for the welfare and needs of others in the situation. If such a general dimension existed, there should be a single general factor determining choice, such that all situations should associate with all other situations. In fact, in the actual associations between items there are only five significant fourfold point correlations out of a possible 36, hardly above chance. Even these correlations become insignificant when age is partialled out.

These results, then, indicate the failure of our original theoretical value-strength orientation to describing choice. The absence of correlation, however, also indicates the failure of a more empirical or factor-analytic attitude-strength approach to these verbal choices.

The factor-analytic approach to values in our choice situations would start empirically. Our nine situations call for choices which might be classified in different ways. A boy must choose between stealing a drug or allowing a wife to die, between saving his family or saving the lives for which he has delegated responsibility, etc. These alternatives might involve underlying value classes or dimensions like love versus
punishment, the one versus the many, or they might be the family versus the public. If such values do underlie our choice situations, they would be revealed by clusters or factors in the association between choice on the nine situations. Choice of the family against rules of honesty (III) might be expected to correlate with choice of the family against staying at one's post (IX). If strength of value dimensions determines choice, we should expect more than one factor, as many as there are value-objects in the situation. The absence of systematic associations rules this alternative out also. Choice of family in stealing the drug dilemma does not correlate with choice of family in leaving the post dilemma.

Not only do value dimensions fail to appear in the correlations between items but they fail to appear clearly in differences between social groups of children. There were almost no significant differences in the choices of old as opposed to young boys, of middle class as opposed to lower class, of boys popular with peers as opposed to those isolated from the peer group, of Catholic as opposed to Protestant boys, of delinquent vs. non-delinquent boys. The few differences could not be ordered in terms of some underlying value-classes or dimensions.

In contrast to these findings, let us consider the results when responses to moral situations are defined by type of structural orientation. We do not wish to raise the issue of whether our types or stages form a developmental order. Instead we wish to know only whether if an individual has a single orientation to one dilemma, he does to others. The appropriate measure of consistency is the polychoric correlation, which makes no assumptions of order or quantity. It is a generalization of the tetrachoric correlation to multiple cross-classifications. The correlations are good and a single general factor orders them.
consistent across situations in their mode of defining or of organizing the situations.

Analyses of variance indicate clear differences in social group in type of moral reasoning where differences were expected for theoretical reasons, and not where they were not, as for religious differences.

In summary, while there are no general attitude-strength dimensions of values revealed by choice content of dilemmas, there are general cognitive-structural orientations to the dilemmas revealed by the individual qualitative patterns of reasoning about the dilemmas.
D. COGNITIVE ORIENTATION AND VALUE CHOICE

We may be satisfied that our results show general cognitive-structural orientations but the problem of values is still a problem of choice. If our cognitive orientations do not allow us to predict choice they are indeed cognitive in the conventional sense of being an intellectual or verbal style which does not settle the problem of value choice. Once having discriminated between structure and content we seem to have left the problem of values to the problem of content.

Suppose we assume that distinguishing between content and structure implies the independence of choice and reasoning. At the extreme this would mean that a Nazi might advocate genocide using Stage 6 principles or moral reasons. As we noted earlier, however, the distinction between content and structure is not absolute. Furthermore the logical distinction between content and structure does not imply the empirical independence of content and structure. In fact a number of studies indicate that there is a relationship between the content of choice and stage of moral reasoning, though stage of reasoning does not completely determine choice.

How we conceptualize the bridge between content and structure is something I cannot deal with in the time today so I have to end by saying I operate as a mixed type in a structuralistic-attitude-strength typology. I suspect the other panelists fall in the same uncomfortable bind. Its resolution seems fundamental to research programs in this area.