This document addresses itself to the broad topic of recent structural approaches to personality development and to the major research problem of structural consistency and change in young children's social behaviors. As part of a larger longitudinal study, the author assessed the classroom personal-social development of economically disadvantaged urban preschool children, using observation procedure applied to the free play periods of preschool programs. There were two observations on each child. Results included the identifying of configurations of preschool personal-social behaviors which turned out to be familiar in their dimensionality and very similar at both measurement periods. These static structures were then considered more dynamically in terms of multiple gradients for behavior change. Certain determinants of personal-social behavior and change were then investigated, and findings were viewed as interpretable in relation to alternative theories of personal-social development. (Author/PC)
Recent Structural Approaches to Personality Development*

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Not so long ago the idea of personality structure elicited holistic images of relationships among the components of personality. Today's approaches are more modest, attending as they do to differentiated subsystems of psychological functioning. The metaphor of internally organized pattern is carried into our work, but this concept may have very different meanings for learning, cognition, social behavior, and emotion, areas represented in this Symposium. Theories of structure are pulled in different directions according to the nature of the phenomena. Even within my own special interest of personal-social development, it makes a difference whether I am looking at, say, social interaction data, or the cognition of such interactions by the participants themselves. In the case of direct observational data, structural elements consist of person-environment transactions; but when we ask the participants themselves to report about these transactions, we introduce layers of thought and feeling having their own and probably very different structural properties. While this state-of-affairs is not very tidy, it usefully defines the present limits of a paradigm: at the moment, we may be able to agree only on the need for a structural metaphor.

At the same time we should be alert to concepts of structure having more general explanatory power. To illustrate, the cognitive-developmental approach suggests that social motives are organized by stages in ego development, which,

in turn, are grounded in the structure of thought. Or turning matters around, a theory of motivational development might claim that thought structures become differentially engaged, perhaps as rationalizations, in the service of differing needs or motivational states. So we must be careful that our concepts of structure not remain provincial, lest we overlook the possibility that a structural theory can bring greater unity to differentiated systems of functioning.

Let me first briefly mention several concepts of structure currently in use among personality researchers, illustrating in each case the developmental questions that might be asked. Best known, perhaps, are differential structures of ability, temperament, motivation, and personality traits, which isolate the dimensionality of a domain of behaviors, often by means factor analysis. Here we are dealing essentially with associational structures among behaviors. From a developmental standpoint, there is interest in whether such dimensionality is continuous throughout the course of development, or whether there are periods when dimensionality is added, reorganized, or reduced. We ask whether the course of development is such that the underlying meanings of behavioral constructs remain essentially constant over time, or whether there are systematic changes in the meanings of these constructs.

Such correlational structures can be viewed either as a partitioning of a domain into distinct constructs, or as a partitioning of individuals into subpopulations or types. There is renewed interest in personality typologies, including the question of whether types identified at one period of development maintain distinctive characteristics over the course of later development despite certain changes in their behavior. This is a multiple pathway view
of the nature of personality structures and their development, to which I shall return later.

As suggested by cognitive-developmental theories, stage-related modes of thinking may permeate personality functioning. Here, structure refers not to the association among patterns of variables or to distinct types of persons, but rather to the internal organization of thought. Patterns of personality functioning are believed to be orderable on an ego-developmental scale. This is a very different translation of the structural metaphor, because instead of using individual differences to define personality structures, cognitive-developmental theories conceptualize individual differences in terms of differing rates of movement through stages of ego development presumed to be universal.

In still another approach, when the individual's behaviors are related to the contexts in which they occur, it is the structure of the person-environment interaction that is of interest. Such structures are essentially adaptive in nature, and it should be possible in each context to define behavioral patterns that are more or less well adapted to situational requirements. It may take considerable time and experience for individuals to arrive at these structural endpoints, however, and here the developmentalist will be interested in the changing topographies of behaviors within a variety of life contexts and their implications for individual adjustment.

These and other ideas about structural development now constitute a pool from which investigators can draw. While in principle it would be desirable to test these concepts by designing studies around each of them,
developmental-structural studies often require long-term longitudinal data, and few people are willing to risk placing their bets on a single view. In addition, it seems inevitable that new concepts will be introduced during the interval when a particular longitudinal study is still collecting data. What can be done is to design such studies with two or more concepts of structural development explicitly in mind. I think the time is now especially ripe for studies in which alternative structural models are tested within a common body of longitudinal data.

One of the intriguing issues in this area concerns the way that development is articulated with structural concepts. By way of illustration, suppose we wish to understand the dimensionality of individual differences at two periods of development. One possibility is simply to take our measures within each time period, isolate the two structures, and then compare their dimensionality. Here, time is external to the structure itself, although certainly still relevant to questions of structural consistency and change. This approach is characteristic of my own work, which I will report shortly. But there is an interesting alternative that recently has drawn the attention of investigators. In this case, covariation between as well as within time periods is included in the definition of personality structure. The rationale for this procedure is well stated by Jack Block in his study of Lives Through Time. Quoting Block: "Personality types change and evolve in lawful ways over time and we are interested in the developmental trends manifested by these various modes of personality organization. A personality type early is a personality type later, albeit a different one perhaps. We need to be able to plot the various separate trend-lines of our personality
types, attending both to the cross-sectional comparisons available at each slice of time and to the directions and the significance of the changes observed over the years. It is types of personality development, not types of personality that serve the conceptual purposes of the longitudinal inquiry. Using Q-sorts on California Growth Study Subjects when they were adolescents and adults, Block constructed meaningful typologies representing different pathways of personality consistency and change over time. The logic of this approach to structure recently was further clarified and extended in an essay by Norman Livson, who offers a systematic method for identifying structures based upon the predictability of individual differences across developmental periods.

My own work has been addressed to the question of structural consistency and change in young children's social behaviors. As part of a larger longitudinal study, we assessed the classroom personal-social development of economically disadvantaged urban preschool children, many of whom were black and were enrolled in Head Start. Personal-social measures were based upon an observation-rating procedure applied to the "free play" periods of preschool programs. There were two observations on each child, first in the Fall and then in the Spring of the preschool year, yielding short-term longitudinal information on personal-social development. Data were collected at several sites throughout the continental United States. Locally trained pairs of raters simultaneously observed the target child continuously for 25-30 minutes, after which they independently rated the child on a comprehensive set of 148 personal-social attributes. Rater reliabilities were satisfactory, although not typically as high as could be achieved under
controlled laboratory conditions. The study's measures were based upon consensus ratings arrived at by the paired raters after they made their independent judgments.

Separate structural analyses were conducted within the Fall and Spring periods. These were based upon Louis Guttman's configurational approach, which interprets correlational matrices as ordered distance relationships among variables. Rather than isolating multiple factors presumed to define many so-called first order factors, we extracted as few dimensions as possible, treated these as axes for defining a spatial configuration of behaviors, and derived behavioral constructs to sample this space.

The results were clear, and I think I can describe the essential outline of the configuration without a slide. There were three basic dimensions, defining a hemispheric space. The first two dimensions were the familiar ones of Extraversion vs. Introversion, and Love vs. Hostility. When these two bipolar dimensions were cross-classified, they defined the well-known circumplex ordering of personal-social constructs, especially that applied by Becker and Krug to children's behaviors. Going clockwise, and starting at the extraversion pole, these constructs were circularly ordered as follows: Sociable, Affectionate or Loving, Cooperative, Compliant, Submissive, Withdrawn, Distrusting, Hostile, Assertive, and back to Sociable, completing the circle. I should add that each of these circumplex-ordered constructs was associated with an ordered patterning of discrete behaviors, providing concrete behavioral referents. For example, number of smiles was most associated with Loving, and number of physically aggressive acts directed toward peers was most associated with Hostility.
Now imagine that this circular ordering lies on a plane that defines the base or floor of a hemisphere. The third dimension, rising from this base, was Task Orientation, including such constructs as Autonomous Achievement and a variety of classroom activities including fine manipulative behaviors, artistic activities, and engagement in tasks obviously requiring relatively complex cognitive processing.

This configuration is similar to that which Earl Schaefer has found to fit a number of studies in this area, adding to evidence for its universality among young children. Also, the essential dimensionality did not change from Fall to Spring, providing evidence for continuity in structure. Of course, this time interval was relatively short, so that the question of structural continuity-discontinuity in development was not really put to the test. The structure also was essentially the same for boys and girls.

Thus far I have noted only the static properties of this structure within each of the two time periods. But consider the question of how individuals might be consistent or change over time in terms of their locations within the configuration. Here I draw upon Uriel Fea's analysis of behavioral changes along gradients within an ordered configuration.

To illustrate the approach we have taken, consider two kinds of correlations over time. The first is the traditional stability coefficient, which is the correlation between the same construct assessed at two times. The second is a transformation coefficient which is the correlation between a construct measured earlier and a different construct within the same configuration measured later. If individuals tend to maintain their rank orders on the same constructs over time, this evidence for individual consistency will be revealed by high stability coefficients, perhaps throughout
the configuration. But if the locations of individuals within the configuration change, stability coefficients will be relatively low, and transformation coefficients will be relatively high. Note that low stability in this case, even a zero correlation, cannot mean that measurement is unreliable, or that individuals fluctuate randomly due to the differential impact of environmental factors. Rather, this pattern of change must be systematic because temporal correlations across constructs are high. I have gone into some detail on this point because so often low stability coefficients are assumed to signify malleability of the human personality.

A pattern of low stability correlations and high transformation correlations leads to the very different conclusion that personal-social tendencies change qualitatively in a way that systematically links an earlier personality disposition to a later one. This point, so often overlooked, becomes obvious when behavioral change is considered from a configurational standpoint.

Since the present configuration is three-dimensional, numerous gradients radiate out from any given location within the space. We are now investigating the nature of these gradients of change. Specifically, we believe that different kinds of change gradients might be coordinated to the different models of structural development that I mentioned earlier.

For example, it seemed likely that there would be changes at the beginning of the preschool year, when children are "settling down" after making the initial transition from home to preschool. Here, an adaptational model of change seems most appropriate. In terms of the configuration, we would expect children during this period to move along the three major axes, from withdrawal toward social outgoingness, from negative to more positive expressions of affect, and toward increased task orientation. In a subsudy of
the present sample, this is precisely what happened. Relative to a group observed early in the Fall, that group observed later in the Fall was significantly more socially outgoing, affectionate, and task-oriented. Moreover, changes in social behaviors were perfectly ordered on the complex, centering around increased Cooperation. These findings tell us little that is new about children in preschools, but they do confirm the applicability of an adaptational model for interpreting behaviors changes throughout the configuration.

In other analyses we have found gradients of change which do not clearly fit an adaptational model. There was such evidence for the construct called Autonomous Achievement, involving a range of purposeful, self-initiated, and largely independently conducted activities at which the child persisted. Children who were older when they entered preschool, who were more verbally skilled, and who came from higher socioeconomic backgrounds, tended to exhibit greater Autonomous Achievement in the Fall than in the Spring. Children who were younger when they entered preschool, who were less skilled verbally, and who came from lower socioeconomic backgrounds, tended to exhibit greater Autonomous Achievement in the Spring than in the Fall. This difference in pattern does not fit an adaptational model because different groups of children are changing in different directions. Rather, these findings suggest that the growth of Autonomous Achievement may be curvilinear at this age, as implied by ego-developmental theories which consider early independence strivings to be a milestone in development rather than a cumulative trend. Since those groups which dropped in this behavior over time were more advanced in terms of background and other indexes of maturity,
it would appear that they were further along this curvilinear developmental trend, whereas less advanced groups were still on the rise. We are still uncertain about this explanation, but for the moment it serves as an illustration of how behavioral changes within the configuration might be coordinated to a cognitive-developmental model.

Since the configuration defines many possible change gradients within a given level of adaptation, it opens up the possibility of identifying different subgroups or types which change in different ways. We are currently exploring this multiple pathway view. The approach is to consider a variety of antecedents of personal-social development, also measured in the larger longitudinal study, especially various facets of the mother-child relationship. The idea here is that a given antecedent, such as a pattern of maternal control, could propel affected children along a particular developmental pathway. This strategy differs from the usual study of antecedent-consequent relationships in socialization because the present consequences, namely personal-social behaviors, are seen as themselves in the process of developmental change. Our procedure can also detect consequences which do not change over time, but we are not limited to this case. While these analyses are not yet completed, we do find evidence for changes in antecedent-consequent relationships for personal-social behaviors measured in the Fall and Spring. Moreover, such changes appear to be ordered within the configuration, indicating that they are systematic in nature.

To summarize very briefly, we first identified configurations of preschool personal-social behaviors, which turned out to be familiar in their dimensionality and very similar at the two periods of measurement. These
static structures were then considered. Core determinants of personal-social behavior and change were then investigated. Findings from these analyses were seen as interpretable in relation to alternative theories of personal-social development. These theories place different kinds of constraints upon gradients of personal-social change. There was evidence in support of several of these views, including the view that adaptation to a particular context increases with experience. There is also evidence for a developmental theory and for a multiple pathway view in which certain life experiences propel individuals along different routes within the configuration.

It comes as no surprise that personal-social development in everyday contexts requires multiple explanations. The more interesting possibility is that a thoroughgoing structural approach will help us identify those aspects of personal-social development which each theoretical model best explains.