

Issues in the Study of Personality Development

Michael Lewis

Institute for the Study of Child Development
Robert Wood Johnson Medical School

The study of personality requires that we understand what we mean by the terms personality and development. Whereas the concept of personality—including individual characteristics that are consistent over context and time—is appealing, serious issues in regard to consistency of characteristics over different contexts and over time remain, suggesting to me that although correlations may be significant, there is relatively little variance accounted for. As such, there is little consistency. The study of human development also has difficulties, especially the idea that earlier events lead to or can predict later events. In this article, these 2 classes of difficulties are addressed. The data suggest that individual characteristics, especially in children, are not consistent over context and time, and that earlier events do not predict later ones. This leads to the conclusion that an analysis of behavior in context may be the best way to understand the changing nature of personality growth and development.

Studying development, whether it be the development of cognition, personality, or psychopathology has many inherent difficulties. In this article, some of these difficulties are considered, especially in light of the added problem that the nature of adult personality is still unclear. The very idea of personality presupposes a set of enduring individual characteristics that are stable and that are consistent across place, tasks, and people's interactions.¹ Whether this is so, not only lies at the heart of personality research, but has direct relevance for the issue of the development of personality as well as the development of psychopathology (see Lewis, 1990a, 1990b; Lewis, 2000).

This article approaches this problem from the point of view of the nature of development and how to understand the processes that should impact on personality formation. The article can be divided into two sections. In the first, the issue of the measurement of a particular personality construct is considered. Specifically, data are brought to bear on the question of whether different raters see the same thing when they rate children. These data raise the general question of the reliability of the measurement of personal-

ity and the broader question of whether the measurement of personality is consistent over time and context.

In the second half of the article I raise more theoretically based issues that complicate our study of personality development. Here I use a second longitudinal study to highlight these points and to argue that the most fruitful course in the study of the development of personality is likely found in a contextual approach, where personality development may be best understood as a dynamic system influenced mostly by this context and by the personal narratives that we construct around ourselves, others, and goals (Lewis, 1997).

General Measurement Problems in the Study of Personality Development

The Nature of the Observer

The problem of the nature of the observer, whether it be the participants themselves, teachers, parents, or therapists, raises the question about this as a source of measurement error. In the following, depression is used as an example of this difficulty.

Typically, children themselves do not determine that they are depressed. Rather, a parent or teacher identifies signs of depression and refers the child to a clinician (Lewis, 1990b). An examination of childhood depression must include parents' and teachers' perceptions of the child as well as the child's own perceptions of itself. However, studies of child depression

¹The variant of course is the standard idea that within context situation, consistency of behavior representing a personality variable can be found. Such an idea is appealing but certainly does not provide the basis for being overwhelmingly confident that a simple structure of personality can be obtained. Thus, even if the Big Five personality variables, or traits, were to emerge as highly salient, the fact that they might each differ across a dozen situations and that each might differ under different situations gives rise to a combinatorial figure beyond the simple idea of five variables as explanatory device.

and pathology show that different people's assessments of the same child do not agree (see, e.g., Jensen, Salzberg, Richters, & Watanabe, 1993; Kazdin, French, Unis, & Esveldt-Dawson, 1983). Patterns of agreement are no more consistent when outside raters such as clinicians, teachers, or peers are employed. Kazdin et al. (1983) found that parents and clinicians were in stronger agreement than children and clinicians, but others have reported the opposite (see Stavrakaki, Vargo, Roberts, & Boodoosingh, 1987). Research examining agreement between teachers and children also show low levels of agreement (Achenbach, 1991; McConaughy, Stanger, & Achenbach, 1992). Peer ratings sometime correlate with the children's self-reported depression (Jacobsen, Lahey, & Strauss, 1983; Lefkowitz & Tesiny, 1984; Saylor, Finch, Baskin, Furey, & Kelly, 1984), but only in normal samples. This raises the general issue of whether the assessment of the child's characteristics may not be consistent across raters or different measures. If this is so, then which factors impact on individual differences may vary depending on the outcome measured.

Ratingers may disagree about the same child for a number of reasons. First, different instruments are usually used to obtain ratings from different people, and the instruments might not be compatible. When raters complete the same instrument (e.g., parent, child, and teacher versions of the Child Behavior Checklist [CBCL], Achenbach, 1991), agreement is often higher than when different instruments are completed by multiple raters (Angold et al., 1987; Weissman et al., 1987). Although using three versions of the CBCL, Achenbach and colleagues (Stanger, McConaughy, & Achenbach, 1992) found some limited agreement among parents, children, and their teachers. However, other studies using the CBCL instruments reveal lower levels of agreement between raters' assessments of children's depression and pathology (Stanger & Lewis, 1993).

Low rates of agreement about child depression may be due to the fact that some raters might not know the child well enough to draw clinical conclusions. This is particularly important for syndromes such as depression, which may reflect a child's "inner state." Without knowing the inner state of the child, an observer might not be able to determine that a child is displaying symptoms of depression. Another reason for low rates of agreement may be due to the rater's own problems. For example, mothers who are depressed perceive their children as more depressed (Richters, 1992).

Finally, it is likely that people's perceptions are based on the child's behavior in different situations. Teachers and parents experience the child in different circumstances that require different coping skills. The fact that children are seen in different situations that

elicit different behaviors is likely to be an important factor. Situationally determined behavior has been well documented (Snyder & Ickes, 1985). There is evidence that different observers base their judgments on different characteristics of the child (Routh, 1990). For example, Kazdin, Moser, Colbus, and Bell (1985) showed that parents and children emphasize different facets of the child's functioning. Children focused on internal feelings and expectancies for the future, whereas parents focused on the child's overt social behavior and outward manifestations of affect. Mischel (1990) suggested that whereas behavior differs across situations, it may be consistent within situations. Although parents, teachers, and children may disagree about the child, they may provide accurate assessments within particular contexts.

We pursued this question looking at depression in a normal sample of 76 children when they were 9 years old. Ratings of children's psychopathology were provided from multiple raters, including mothers, teachers, and the children themselves. To look at agreement between raters, continuous scores for the three raters were correlated. Correlations between continuous scores were low and not significant. Agreement between raters about depressed and nondepressed groups was observed. Rates of agreement are almost the same regardless of gender. For all three pairs of raters, kappa coefficients were computed and there was little agreement between children, mothers, and teachers. Multiple tests of agreement among raters reveal that children, mothers, and teachers do not agree with each other regarding children's depression.

Although this example of the difficulty of finding a relation between different ratings of the same construct is restricted to depression, similar disagreements in ratings exist for other personality variables, such as temperament. Agreement is no better here. Ratings of individual parents are only moderately correlated. Moreover, looking at actual behavior of children rather than ratings reveals that across different situations individual differences show little consistency. In a study of fearfulness, there was little individual consistency between fear shown to a visual cliff as opposed to the fear shown at the approach of a stranger (Goldsmith & Campos, 1982). Even when we turn to personality variables such as the "Big Five," we again find that the coherence of different measures of the same construct across different people or even across different situations reveals at best only moderate relations (see Caspi, 1998).

Findings such as these over the last 25 years has raised a particular challenge for personality theorists because what characterizes personality is the idea of consistency across time, place, and context. If our data on personality characteristics (regardless of the measure) do not adhere to that standard or at least account for considerable variance, what we mean by

personality needs to be questioned. Thus, whether we are studying developmental psychopathology or whether we are studying the development of personality or particular competencies, we are confronted with an inescapable problem that these competencies, although of theoretical importance, are not readily measured reliably. When they are measured, they do not give rise to a high degree of concordance either across different types of measures or different people's ratings. This may well represent a measurement error problem. Measurement, however, is not the only cause of error. Rather, a theoretical alternative has been provided in the idea of either rejecting the traditional concept of personality or by moving toward a personality characteristic by situation analysis (Mischel, 1990). From a developmental point of view, it certainly creates difficulty when the variable one seeks to measure, representing the construct under study, varies by observer or varies by tasks. It is quite clear from the fear literature in early childhood that individual differences in fearfulness, while of interest theoretically, is not readily measured across different contexts.

Measurement Problems Over Time

Whereas there is little consistency between child's, mother's, and teacher's report of the child's depression, it might be the case that one set of ratings is likely related to one outcome more than another. Thus, coherence over time might be the method by which to settle the question posed by the lack of reliability at a given time between observers. Although the teacher, the child, and the mother might have different opinions of the child's characteristics, it might be the case that only one of these ratings was related to the early theoretically interesting variables. If such a finding occurred, we would be spared the embarrassment of low agreement among the three raters and choose that rater whose coherence to the past is greatest. Thus, coherence over time would become the criterion for choosing whose outcome is more important. Such a strategy seems reasonable and certainly should have important results for any theory of personality development. On the other hand, should we believe that each rater is characterizing the child in their particular situation or context, we would have little reason to believe that coherence over time would be stronger for one situation or rater than another.

To look at possible precursors of 9-year-old children's depression, we examined three sets of variables—attachment, amount of stressful events, and the social network of the children—as theory and research concerning infant-parent attachment, social network, life stress, and maternal depression suggest

that each of these factors is related to risk of childhood depression.

Figure 1 shows the relation between three potentially interesting variables in early childhood as they relate to the ratings of the child's depression at age 9. The figure presents data on developmental paths when the child's rating, the mother's rating, and the teacher's rating of psychopathology represent the outcome variable.

Observation of the path analysis reveals that different outcomes have different paths. There are no variables that predict the child's own rating of itself as depressed. On the other hand, the best predictor of the maternal rating of the child's depression is the mother's rating of her own depression. Finally, the teacher's rating is predicted by the size of the peer network the child had when younger, such that children from small peer networks are reported to be more depressed by their teachers than are children from larger networks.

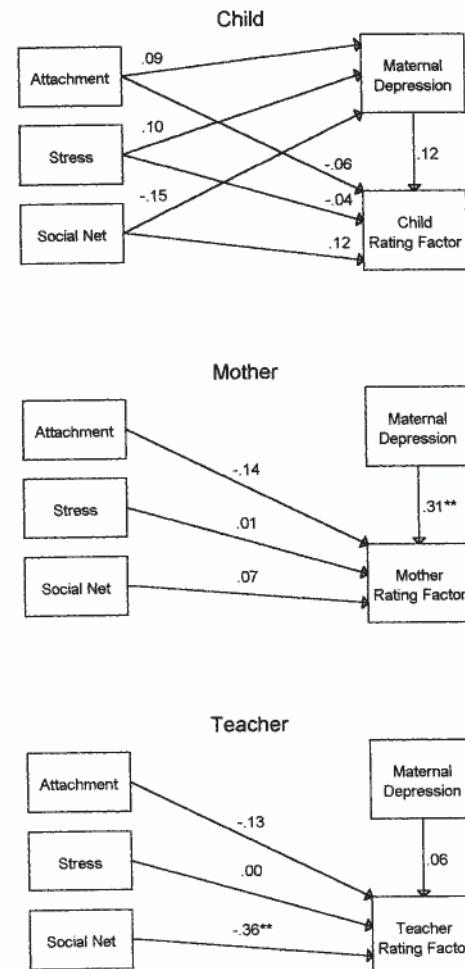


Figure 1. Predicting child, mother, and teacher ratings of depression.

These examples support two measurement ideas that need attention in any study of personality development. The first idea is that of an individual having characteristics that are enduring across situations and time. In general, although there may be some consistency in measures across raters or scales and situations, the variance accounted for remains rather low considering the power of the idea of personality transcending situation, context, and others. Caspi and colleagues (Caspi, Henry, McGee, Moffit, & Silva, 1995), for example, showed only a modest relation between temperament ratings at 3 and 5 years and behavioral problems between 9 and 15. Most correlations are not significant and the ones that are account for less than 12% of the variance (Caspi et al., 1995; Tables 3 & 4).

The second idea is that from a developmental point of view, the idea of predicting individual differences in personality characteristics over time may not be rewarding. Although such a venture receives considerable amount of focus in the developmental social literature, the data are weak, the variance accounted for low even though at times significant. Whereas studies such as these may be questioned on a variety of measurement issues, they raise important questions; individual differences on one measurement system may not be the same as in another and that the prediction over time of such a state of affairs requires multiple measures. Even then, the problem of finding coherence over time is dependent on the idea of the particular developmental model that one espouses. In the next section this idea is considered.

Models of Personality Development

Organismic Model

Although many different models of development have been suggested, and many are in current use, one in particular underlies our idea of development; it is called the *organismic model* because the processes of development are for the most part located in each person. Most of us have come to accept that our early relationship with our parents—our mothers in particular—is one of the most determining forces in our lives. This force resides in us and is a part of us—a trait, an enduring property that constitutes what some have called personality (Pervin, 1990). Some traits—or dispositions—characterize how we think, others how we feel and how we are apt to behave in particular situations. Traits vary in how easily they can be altered and in how long they last. Some dispositions may exist in our DNA or in the neural network of our brains, while others, learned, can be unlearned; for example, a child's dislike for green peppers that disappears in adolescence after the child tastes a just-picked

pepper from a friend's garden (Jung, 1963; Plomin, 1983). We believe that traits formed by our relationship with our parents survive for a lifetime, and that the past influences our present state and is likely to affect our future.

The general proposition, "things past can affect the present," requires that we believe in history—that there was a real past, that it affected us, and that it still affects us or that there was a real past that did affect us but its effect is no more. If we believe that our past affects our present, we have to believe that there are forces that survive over time, continuing to act in the present. What is the nature of these forces? If biological, they could continue to act in some virus-like fashion. Or they could be patterns of behavior learned earlier and are now firmly part of how we act—automatic, like walking. A third choice is that how we think about the past is likely to affect us in the present. For example, if you think that you were not pretty as a child, you may act "ugly," even though you are now an attractive adult.

We can understand why people behave as they do if the outcome is positive, but none of these alternatives explains why people persist in behaving in a certain way even when doing so causes them pain. Allport (1937) suggested that behaviors learned earlier can become "functionally autonomous;" they continue despite the fact that the forces that originally produced them are no longer causing them. Such a theory only confirms our observation that it is possible to behave in a way that is not a result of the initial force. We still do not really know why or whether things such as behavior, feelings, and even desires are sustained over time.

Freud (1953) talked about neurotic repetition of behavior, suggesting that there are advantages of maintaining dysfunctional patterns, the major one being familiarity. We would rather know that something will not work out well than try to change it and experience the unknown, even though the unknown may be better (Greenberg & Mitchell, 1983). Others have theorized that we become fixated at certain stages. Erikson (1950) believed that if we do not solve an earlier set of problems, we cannot go on to other, more advanced problems. His life stages are a series of problems that need to be resolved if we are to successfully meet the next set. Others (Lewis & Lee-Painter, 1974; Lewis & Rosenblum, 1977; Pervin & Lewis, 1978), in contrast, consider the dispositional or behavioral pattern to be located in the interactions between people sustained through the different forms of interaction that the individual maintains.

Another aspect of the organic model is the belief in primacy versus recency. Memories of yesterday's meal are usually clearer than memories of a meal eaten 10 years ago, so we might expect recent

events to exert more power over our behavior than those that happened long ago. The effect of recency is indeed known to play a powerful role in behavior. Yet the organismic model holds that an event that comes first has the greater impact on subsequent behavior than do later events. The theory of critical periods is a good example of this. A critical period is a time-bound interval having a discrete onset and offset. Before and after the period, the theory states, environmental events do not impact on future behavior; between onset and offset, effects of environmental events are profound. In humans, it has been suggested that there are critical periods for the development of perceptual capacities and for language development.

But how is subsequent behavior affected by what happens during critical periods? It is believed that earlier events, when occurring during a critical time, produce or alter particular biologically based structures located in the person. But the theory that structures are changed or created to become biologically supported traits may have been applied too broadly. Hoffman (1974), working with birds, showed that imprinting does not alter or produce structures or traits but simply causes the baby bird to be friendly to the type of bird it follows and to be fearful of all other types. Because the bird is fearful, it will follow only those birds it has been imprinted on, and thus the imprinting period—the time the bird establishes its identity—appears to have a discrete onset and offset. Hoffman was able to show that when he reduced the fear of the unfamiliar, baby birds would follow new types of birds and become imprinted on them after the critical period. In other words, imprinting is not an example of a critical period; it is only an example of how early experiences can impact on later experiences and yet not be the cause of that later experience.

A simpler explanation than the critical period idea can account for the phenomenon that earlier events appear to cause later ones. Consider that a young child who first learns behavior *A* has more difficulty learning behavior *B*, not because of *A*'s direct effect on *B* but because the child must first unlearn *A*. In our culture it takes children longer to learn bowel control (using a toilet) because they are first taught to defecate in their diapers and have to unlearn that behavior before they can learn to use the toilet. In cultures that never teach children to use diapers, they gain bowel control much earlier (Largo, Molinari, von Siebenthal, & Wolfensberger, 1996).

In general, the idea of a critical period in human or animal development has not held up well against the evidence (Bornstein, 1987). Nevertheless, the concept of primacy is so ingrained that it lingers in the form of so-called sensitive periods. Although appealing in its biological simplicity, there is only little support for the existence of these periods.

The formal properties of the organismic model of development are enumerated next. The last is most relevant to personality and emotional development.

1. Development is change with a direction and therefore has an end point.
2. Earlier events are connected to later ones.
3. Change is gradual, a slowly cumulative progression.
4. Events that occur in the first few years of our lives produce the most long lasting and powerful effects.
5. Mothers are the most important element in the child's environment and are more likely than all others to affect our socioemotional well-being, both in childhood and throughout our lives.

The first and second assumptions follow from a deceptively simple and widely held idea; namely, that current psychological problems are a direct consequence of what occurred earlier in life. We also believe that the process of development is made up of small accretion. Whether these accretions are gradual or sudden, continuous or discontinuous, depends on how we choose to think about the process itself. Piaget's (1952) model, the most popular of developmental models, larva to caterpillar to butterfly (the examples often given when talking about change) is a way of thinking about discrete changes in function, structure, and capacity. Whether we perceive continuity or discontinuity in the world, however, may depend largely on our other ideas about how the world operates. Western scholars have focused their attention on the smooth, accumulative transition around change, whereas Eastern scholars have been more impressed with the fact that, in nature, living systems always are changing and that these systems and this course of change are not necessarily dependent on what occurred previously. The idea of linearity is rejected because time is not viewed as moving in a direction. Reincarnation or repeated return as a property of life, the great circle, characterizes this view.

The Western idea of continuity embraces constancy, uniformity, seriation, and progress and, because of this, is associated with a conservative ideology. Discontinuity is linked with social and political challenge or with political radicalism. That change occurs cannot be questioned. It is the models that describe it that are open to debate: "The essential model issue ... is whether successive behavioral forms are reducible (i.e., are continuous) or irreducible, here meaning discontinuous, to prior forms" (Reese & Overton, 1970, p. 141). The ideas of slow, gradual accumulation as well as discrete and radical change reside in ideology rather than in the data themselves. (See Alvarez, 1982; Eldredge

& Gould, 1972 for the challenge to this idea in evolutionary biology.)

The three major developmental models that derive from this idea are accretional, transformational, and additive. According to the accretional model, also described as accumulative, the original process remains active. For example, physical growth continues in the same way across a person's entire developmental range. The transformational model relies on the idea that a second developmental process completely replaces the first, the way the butterfly appears to replace the caterpillar. In an additive model, the first process remains active while a second process emerges, resulting in the coexistence of both. The first two models are organismic, while the last approaches a contextual model, one that will be taken up later.

The Accretional Model

The accretional or incremental model states that a particular function, structure, or skill exists in its adult form (i.e., it will not change) at the beginning of development. The process of development, therefore, involves an increase in amount rather than a change in type, although many variations on the theme are possible. The shape of the growth curve is one possibility. The form can grow rapidly in early life and then level off near maturity, as is the case with a child's physical growth. The form also may grow slowly at first and then suddenly take off before leveling off again. Either way, the structure that exists at the beginning increases or decreases as a function of this process. Because the structure already exists and changes only in amount, it is possible to view this model as continuous. However, not all skills exist in their form at birth; they may appear at different points in the lifetime of an individual. The start up and increase in hormonal activity specifically related to puberty and adolescence constitute prime examples of developmental processes that start later in life. At a certain point after birth, on the average of 12 years or so, new functions "kick in" to be followed by growth and development.

A Transformational Model

A transformational model differs from an accretional model in several ways, the primary feature being that successive behavior forms are irreducible to prior forms. Such models also have been called stage models of development. In these models, forms are transformed through their interaction with the world. Transformational models, made most popular by Piaget, are not continuous, but most often they adhere to the view that earlier events are connected to later

ones. Why else call development transformational? So, Piaget's model, where the caterpillar became a butterfly, which becomes a larva, involves a change in structure and function. The development of intelligence is viewed as a series of transformations wherein sensorimotor ability is replaced by formal logical operations (Piaget, 1952). In a similar fashion, the psychoanalytic model proposed by Freud (1953) contains transformational processes. More recently, the object relation theorists have used a transformational model to explain how a child's early attachment relationship with his mother becomes peer friendships and then adult romantic relationships (Bowlby, 1988). Each of these examples can be characterized by metamorphosis and change, where earlier behaviors change and ultimately assume adult forms. Although they are transformed into entities of different form or structure, they can be connected. Thus, this model features what I consider a connected process, where there is a sequence with an order and where early events are related to later ones.

The transformational model represents the prevailing view of development today, yet its underlying assumptions have been criticized. One concern is that the transformational model is directional. Transformations follow a particular order and direction, moving from *A* through *B*, then *C*, and *D*. Although transformations may require the child to interact with the environment, the transformations themselves and their order appear to be relatively fixed. Yet not all children go through the same sequence. For example, whereas most children crawl after sitting up and before walking, not all children who walk crawl.

Second, a feature of transformation is its irreversibility. *A*, in becoming *B*, ceases to exist. This requirement implies that *A*, what occurred earlier, affects or causes *B*, what occurred later. The metaphor of the larva becoming the caterpillar implies explicitly that the larva ceases to exist when the caterpillar emerges and that there is no chance of reversibility. This idea presents problems for the possibility of regression to earlier levels, a phenomenon that is often observed, especially under stress. Of even more concern is that once a level emerges, only this single highest level is available for use in interaction with the environment, regardless of the task or problem at hand. The earlier levels, having been transformed, are no longer present.

Finally, the transformation of *A* into *B* requires that something be added to *A* for it to become *B*. *B* is different from *A* and, as such, is a different form. Again, this requirement is necessary if we wish to argue that *A* and *B* are different but that *A* and *B* are related and that *B* is derived from *A*. Such a view fails to satisfy logical requirements. Flanagan (1991), in analyzing the problem inherent in this view of development and of Piaget in particular, stated, "If the story Piaget tells

about cognitive development is right, he needs to explain how the mind builds richer and richer systems of cognitive structures." (p. 135). What we have is a constructivist problem: "One cannot build new and richer hypotheses out of less rich conceptual resources *simpliciter*" (p. 139). If development is transformational, it is not clear how *A* becomes *B*. *A* and *B* are different essences, and one cannot be derived from the other (Pascual-Leone, 1990; Sugarman, 1987).

The requirements of a transformational model that insists on these principles violate much of what we know about children. One solution to this dilemma is to suggest that *A* and *B* are unconnected and unrelated. Although *A* may participate in and be necessary for the creation of *B*, *A* is not itself transformed or lost; *A* is maintained as *B* develops—it is what I call an additive model.

An Additive Model: The Move Toward Contextualism

There are major differences between transformational and additive models of development. Like the transformational model, the additive model has directionality; it moves from *A* through *B* and *C* to *D*. Also, as in the transformational model, development in the additive model takes place in interaction with the environment. Indeed, the environment is a very important aspect of the model. The most significant difference between the two is that in the additive model development does not occur through transformations. *B* may be only partially, or not at all, related to *A*. It may need *A* to come into existence, but it is not made up of *A*, or it may come into existence without *A* ever being present. *B* can arise as a consequence of some environmental interaction. In this case, as the environment changes, *B* comes into existence. Again, *B* follows *A*, but is neither of *A* nor caused by it (Mounoud, 1990). *B*, like *A*, may develop further once it emerges, but transformations are not as we might have envisioned them to be. It is more like the addition of new skills and the accretion of those skills that have already emerged; for example, *A* → *A*₁, *B* → *B*₁, and so forth. This model represents radical discontinuities and gradual changes. Such a model now exists as the best estimate of biological evolutionary change; it is called *stasis* and *sudden change*.

In the additive model there is no single end point, *D*, but rather the coexistence of all earlier abilities and skills. This allows for reversibility or regression; under stress a child who has passed the thumb-sucking stage can and does suck her thumb. It also allows for multiple use; a child who has learned to walk can still crawl if he so desires.

The existence of multiple levels allows for a set of capacities and abilities that can be employed selec-

tively when confronted with a task; that is, the organism can choose which level to employ for which particular task. The choice of ability cannot be a function of the limitation of choice; it must be a function of some other phenomenon. Such choices are probably based on socialization factors or on a program available to the organism to choose which level to employ.

Individual "programming" may also account for which level is used to solve a task. If we think of these levels as involving different processes, we can recognize some levels employing different brain structures. We might suppose that people would use one level for emotional and another for nonemotional tasks (LeDoux, 1990). As we can see, the availability of choice means that the additive model must be more contextually determined than the transformational model and that the developmental process itself cannot be understood without determining the nature of the environment and how it changes.

Contextual Model

The traditional developmental models, while using social interaction to generate individual characteristics, does not need the context to enforce their expression or to change their nature once formed. Thus, the organicistic model of development traps us in our past. Freud's (1953) theory claims that particular early experiences determine our future, except, of course, if we are psychoanalyzed. Freud believed that even though early events affected our future, our destiny can be altered by later events. Thus, the theory had it both ways: a theory relating earlier to later events in a deterministic way and a therapy that could alter the impact of earlier events. Why is it that only a psychoanalyst could alter the past? Why not a lifetime of experiences?

The organicistic model of development, most often viewed as a causally related chain of events, allows for prediction. Therein lies its appeal. Our belief in the ability to predict over relatively large spans of time has captured our interest. Given the strength of that model, ample evidence that what happens earlier affects what happens later should have been accumulated. Yet most short- and long-term longitudinal studies have failed to find much of a relation between earlier and later events. Even when a significant relationship between variables is found over time, 85 to 90 percent of the association between these variables is not accounted for. Even more disappointing is that as the time between events increases, the relation between them decreases, a common finding called a *simplex pattern*. It is as if we have the power to predict the next 5 min and little beyond.

Based on the collective evidence to date—in a multitude of domains, including cognitive, social, emo-

tional, and psychopathological—the best that can be said is that there sometimes is very limited support for the belief that earlier events are connected to later ones. Given that there is very little empirical evidence to support the organismic model, our strong belief rests on belief rather than fact.

I present the strong alternative, hoping to attract attention to other ways of studying development, especially personality development. James (1975) described a position that is called *pragmatism*, expanded by Pepper's (1942) *contextualism*. Contextualism, for our developmental point of view, argues that to understand meaning we have to understand it as embedded in events occurring now. Contextualism is not historical; events in the past are not related to events now. James (1975) arrived at this position because for him there was no way of knowing if events in the past were related to events now. He said, in discussing the characteristics of the mind, "The mind may change its states and its meanings at different times; may drop one conception and take up another, but the dropped conception can in no intelligible sense be said to change into its successor" (p. 462). For James, these thoughts or properties of mind occurred in the context of the moment. As the context changed, so, too, did the thought. His pragmatic position, in which contextualism played a central role, did not utilize the concept of progress toward an end point; nor did it need the idea of a linear causal relation where earlier events are likely to cause later ones. In regard to progress and causal sequential relations, James's position is best seen as a belief that history is simply a collection of facts that are not necessarily related to one another. Such a view also questions the idea that there is an order or a sequence as an objective reality; that is, that there is something that exists independent of us, toward which we move.

We can see how different this contextual view is from that of the organismic model since it holds that development is a sequence of causally related changes—that is, development as a historical theme—but is a sequence with a goal, whose order is fixed, with the child coming to this order through basic processes located in the genotype. Thus, although the environment is needed for the child to acquire intelligence, the sequence of acquisition and the nature of intelligence are fixed properties, independent of the child.

Because James (1975) did not accept a historical perspective or, therefore, the idea of progress, he also did not believe in an end point in the developmental process. What James did have was an interest in the self and a belief in the self as an active constructing agent. Because of this, he proposed a type of teleological theory of mind. For him, the mind lent substance to our existence and was determined by our purpose. Our

goals, desires, and wishes created mind, and in turn our minds created these goals, desires, and wishes. For James, then, a developmental theory would have several important features:

1. An active self exists, one capable of thinking, planning, and having goals and desires.
2. These goals and desires are best understood within a meaning system occurring now; thus, the emphasis on contextualism.
3. Earlier events need not necessarily determine later events; thus, there is no need to think of development as a unidirectional, bounded process.
4. Finally, there is no need to postulate progress as an essential feature of the developmental process. In other words, there is no end point in the developmental process, no final state to be achieved.

More recent views (Ford & Lerner, 1992) capture the ideas that humans have selves that play a central role in their lives and in their development. The importance of the self forces the idea of history as past events acting on the present to yield to the idea that the present reconstructs the past. That is, it suggests that our pasts are not real but more a construction. In the construction, little need remain of that which led to the construction. Even more important is the idea that it is nearly impossible ever to determine what the real thing in the past was.

This antihistorical argument has a parallel in how we now think of memory. Most of us viewed memory as a photograph, an accurate representation that captured in detail all of what occurred. If our memory was so accurate, then history, too, had to be real; it had to be possible to capture the past. More recent views, however, suggest that memory is a construction that may or may not bear a strong resemblance to what occurred. Perhaps even more important, the constructed memory can, over time, undergo elaborate change and transformation. If we reject the memory-as-photograph model, we need to do the same for historicism, the argument that there really is something back there in time that can be measured and that determines what occurs in the future.

Instead, memory may be based on our current needs, either what we anticipate needing for the future or what we know we need now. In other words, memory is contextual and pragmatic as James (1975) argued; memory or history has to do with the goals and desires we have at the point of memory. Notice that at the point-of-memory can be either the now when you first experience the event or any now when you remember it in the future. So, if memory depends on the meaning needed at a particular time, memory should have the capacity to alter or change, depending on the context at that point. James's proposed teleology of the

mind thus makes sense; minds—or, in this case, memories—are constructed around needs, and the needs that arise are the functions of our minds.

A contextual worldview also alters our sense of time. According to James (1975), order is not inherent in nature; we create it to understand the world through science and logic. Pepper (1942) picked up on this point as well: “For the contextualist, the dimension ‘time’ of mechanism [the Newtonian theory of an orderly clock] is a conceptual scheme useful for the control and ordering of events, but not categorical or, in that sense, real” (p. 462). The idea that time is relative allows us to consider an important possibility in understanding both memory and development: that history may represent not the past acting on the present but the present reconstructing the past. If we view history not as what actually occurred in the past but as a construction of what we believe occurred, we allow for the possibility that our actual histories have relatively little bearing on our development. Rather, current behavior is influenced by what we think our histories were. Human beings have the capacity to alter the past in light of the present.

As we can see, this backward construction of reality does not agree with our temporal sense of development as being unidirectional, going from earlier to more recent events. Essential to such a view is an active mind, a self with feelings, thoughts, and memories—the important features in determining a life course (Lewis, 1990b). In the organicistic or passive view, events act in a unidirectional manner on people. In this contextualist view people act on and create their own lives, including their memories and their futures, through the formation in the present of future goals, desires, and needs. As Bruner (1990) suggested, we construct a story not only to explain our past but also to explain who we are now. This story contains pieces of smaller stories, or events, which we have chosen selectively from a larger set of recollections to create the desired narrative. The events may or may not be historically correct. The narrative explains our selves as what we are, what we wish we were, or what we want to be in the future. “It is an account given by a narrator in the here and now about a protagonist bearing his (her) name who existed in the there and then” (Bruner, 1990, p. 21). This view, expounded in social psychology by Gergen (1973), also found a voice earlier in time. I am reminded of Kierkegaard’s (1846) idea of existential contingency. For him, fear was produced when the past did not provide meaning for the present or the future. It was the present that provided meaning to the past. A meaningful life was one in which the present was sufficient to explain the past. In other words, health, for Kierkegaard, depended on the ability to use the present to explain what we were. This demand on the pres-

ent for meaning produced trembling, whereas what would be in the future produced fear. Kierkegaard may have been correct; we are caught between the two dilemmas.

Ross (1989) reviewed the mechanisms that underlie the relations of personal histories. He suggested that the first step in constructing our past involves people noting their present status; they ask themselves what they are like now and utilize this information to make a determination about the past. Ross argued that people do this because “the present is generally more salient and available than a person’s earlier standing” (p. 342). The second step in this process of reconstruction involved deciding about the likely stability of one’s current self. Paying attention to one’s present self was necessitated by its salience, a proposition that seems quite reasonable. The ideas embedded in this theory have much in common with my propositions that memory is a construct that may or may not reflect what actually happened if we could measure it, which we cannot, and that what we construct about our past is related to our present. Ross’s data also implied that a bias in recall may contribute to the maintenance of the exaggerated beliefs. If this is true, we have, in effect, a measure of James’s (1975) idea of mind; namely, that the mind, or memory, functions to lend substance to our existence, which itself is determined by our purpose. In other words, our belief about our current condition influences our current belief about the past, and our belief about the past in turn gives us meaning about the present.

These studies from the social psychology literature support the idea that what we believe in the present affects our memories of what happened in the past. Although the study of people’s recollections or memories has received relatively little scientific attention, the general finding appears to be that there is limited agreement between what happened and the recall of what happened. More important, however, is the finding that the present status impacts on the recall of what was. Perhaps most relevant to our focus on development is a study done by Yarrow, Campbell, and Burton (1970) of both the mother’s and the child’s recollections of their relationship in the past. In this study they gathered what they called the “baseline data,” which were derived when the children were young. Through observations, tests, ratings, and reports, information on the mother–child relationship gathered years before was evaluated. Yarrow and her colleagues found that there was little overall relation between children’s recollection of their relationship with their mothers and their actual relationships. Mothers’ recall of the earlier relationship was no better. As Yarrow and her colleagues stated (Yarrow et al., 1970),

Mothers who have had pleasant and rewarding experiences in rearing their children, mothers who feel hostile to their children, and mothers who have had especially stressful life situations may not be equally able to report on their own rearing behavior or on the behavior of their children. (p. 41)

Even more important to this discussion, however, was that Yarrow et al. found maternal and child recall of their earlier relationship depended on the current relationship. The degree of warmth or coolness in the current relationship shifted the recollection of the past in the direction of the current status.

For groups in which the relationships were rated as "cold," shifts in recall tended to be in an unfavorable direction; and for groups in which the relationships were rated as "warm," shifts in recall tended to increase the felicity of earlier times. (Yarrow et al., 1970, p. 48)

Mothers' recollections of the preschool personalities of their children were structured so as to conform to their perceptions of the children's present personalities. For example, if the children were now seen as shy, mothers tended to recall them as being shyer in early childhood relative to the actual data collected. If, on the other hand, children were described as outgoing now, they were rated as more outgoing earlier. These occurred not only for the dimensions of shy or outgoing, but also for the dimensions of children's response to authority and of their independence. The same was true of the children. If they rated themselves more shy now, they also rated themselves as more shy when they were younger.

These findings have important implications for longitudinal studies. In such studies we gather data and then try to relate those data to something in the future. The coherence among past, present, and future is most often minimal, perhaps because in predicting the future, past events are less important than our beliefs about those events. If this is the case, then it is important to study not only what occurred in the past, but also what people now believe occurred in the past. Obtaining measures on maternal behavior toward children may not, for example, enable us to predict whether or not good mothering affects a child's subsequent development unless we also know what the children think about their past experiences.

Bowlby (1980), in trying to understand the relation between children's early interaction with their parents and subsequent development, raised the intriguing possibility that children carry with them a working model, or a memory, of the relationship with their mother. He believed that this working model of the relationship should have a correspondence with what occurred in the past but also that it might be altered by

subsequent experiences. This idea obviously has much in common with the new view of memory. In addition, said Bowlby, this working model affects subsequent relationships; that is, a person's model of her relationship with her mother determines her future social life. For example, a mother who has a working model of a secure attachment with her own mother is likely to behave in such ways as to establish a secure attachment with her own child.

Subsequent experiences can affect memory and past events. This is a heated debate topic in regard to sexual abuse. Although all the information is not yet complete, it appears that subsequent events, in this case how the child is asked about possible sexual abuse, affects whether the child remembers the event. A study by Goodman and Clarke-Stewart (1991) serves as a good example of this process. In an experimental situation, a child is placed in a room and after a few moments sees a man enter and watches as he dusts the objects in a room, including a doll. After a few minutes, he leaves. Next, an experimenter enters and asks the child a series of questions about what just occurred, such as "What did the man do?" The child has no difficulty responding to such a question. Next comes a series of direct questions, such as "Did the man pick up and kiss the doll?" The child most often remembers correctly and answers, "No, he did not." The experimenter leaves, and another experimenter enters. This experimenter asks the child, "Did the man pick up and kiss the doll?" Surprisingly, a large number of children now report, "yes." As more and more experimenters ask the child the same question, it becomes more and more likely that the child will answer "yes." Such studies along with Ross's (1989) analysis leads us away from an organismic model with a real past acting on the individual.

Contextualism and Organismic Approaches to Development: A Case Study of Attachment

James (1975) addressed this idea and argues that truth is not a static property of something but rather happens to an idea: it becomes true; it is made true by events. History's role is to create truths. These, rather than earlier events, are likely to cause later events. People remember their pasts in the present to find and maintain their own truth. Elsewhere I have likened this truth to the idea of identity; the idea of me (Lewis, 1990b).

The best way to compare the usefulness of contextualism is to apply it to a problem in development. Consider this example. A child is being raised by a mother who is depressed. The child's condition at one year of age is influenced by her mother's psychopathology. As in most studies, we can ask, "what will that child be like when she is of school

age?" Assuming that the child showed poor school adjustment, we could argue that the child's earlier adjustment pattern influenced her later development. The organismic model assumes that, in a trait-like way, the events that occurred earlier produced in the child a quality that impacted on her behavior years later. If we look at the same problem using a contextual model, we can argue that the context in which the child was raised at 1 year of age affected her current adjustment because there was an interaction between the child and her environment. This is a contextual finding since the child's behavior can be understood in terms of her adaptation to her depressed mother at 1 year. The prediction of what the child's behavior will be like at age 6 is not based on her current adjustment. What is needed is to study the context of the child at 6 years in terms of her current relationship with the depressed mother. If the child shows poor adjustment earlier because she is adapting to the context of poor mothering, why should the child not remain in trouble if the poor mothering environment continues? The contextual model states that the child's status at any point will be affected by the environment at that point.

In other words, an organismic model requires us to assume that the trait of maladjustment is located in the child and that it is this trait, established earlier, that produces the later maladjusted school-age behavior. What if the mother was no longer depressed when the child was school age? In such a case the current context would have changed, and it is likely that the child will not show maladjustment at 6 years. As the context changes, so does adaptation. In the few studies that have supplied data by which alternative models can be considered, the findings support the idea that current status is just as important as, if not more important than, earlier conditions (Lewis & Feiring, 1991). In other words, developmental continuity, which we believe is located in the child, may be located in the context to which the child adapts. This can be seen in a recent longitudinal study of attachment characteristics of children from infancy to late teens.

Attachment: Trait or Idea

We studied attachment because it seeks to explain, in part, the origins of social and emotional behavior. Attachment has been considered both as a set of overt behaviors (e.g., Ainsworth, Blehar, Waters, & Wall, 1978; Belsky, Rovine, & Taylor, 1984) as well as a representation or model of close relationships (e.g., Bowlby, 1973). Early formulations of attachment emphasized a connection between infants' early overt behaviors and later responsiveness. Bowlby (1973) argued for a link between early attachment behaviors and later representations: "The varied expectations of the accessibility and responsibleness of attachment

figures that different individuals develop during the years of immaturity are tolerably accurate reflections of the experiences those individuals have actually had" (p. 202). This idea has been held by most (see Main, 1990; Main, Kaplan, & Cassidy, 1985; Sroufe, 1983). The child's model of the attachment relationship is viewed as organized around the history of the caregiver's responses to the infant's actions. Thus, the construct of attachment as measured by mental representations is believed to be formed around early parent-infant experiences. Differences in early mother-infant interactions produce individual differences at one year of age in sets of overt behaviors (Ainsworth et al., 1978; Belsky et al., 1984; Lewis & Feiring, 1989). The differences in types (*A, B, C, D*) reflecting the quality of the attachment relationship are seen as predicting subsequent representations (Bretherton, 1985).

Studies used to support this supposition have linked overt attachment behaviors in infancy to later social competence and psychopathology (e.g., Elicker, Englund, & Sroufe, 1992; Lewis, Feiring, McGuffog, & Jaskir, 1984; Londerville & Main, 1981; Matas, Arend, & Sroufe, 1978; Pastor, 1981; Sroufe, 1983; Sroufe, Egeland, & Kreutzer, 1990; Sroufe & Fleeson, 1986). The relations between early attachment behaviors and later competencies are assumed to reflect the ongoing impact of a stable attachment construct. Although these studies show associations between early overt attachment behaviors and subsequent competence, they do not examine continuity in attachment behaviors with later representations; therefore, not providing support for the idea that infant attachment is a prototype for later attachment. By assuming that attachment remains stable, these studies and their interpretation mistakenly promote the view that infant attachment status is a trait-like attribute of an individual throughout development. As Waters, Posada, Crowell, and Lay (1993) pointed out,

attachment theorists often referred to infant attachment status as if it were a trait like characteristic that an individual carried throughout life. This has stood both as dogma and doctrine based on empirical research. Indeed, attachment theorists are often criticized for offering an "inoculation" theory of development. Secure attachment in infancy inoculates a child from adverse outcomes throughout development. Conversely, early attachment difficulties place the child at risk or even cause subsequent problems. (p. 217)

The adolescent literature also has treated attachment as a stable individual characteristic related to competence and psychopathology (e.g., Cole-Detke & Kobak, 1996; Kobak & Sceery, 1988; Kobak, Sudler, & Gamble, 1991; Rosenstein & Horowitz, 1996; Sroufe et al., 1990; Sroufe, Schork, Moffi, Laworsky, & La

Freniere, 1984). Attachment quality is assumed to be stable and therefore continues to have a significant impact on intimate relationships and other competencies into adulthood (e.g., Hazan & Shaver, 1987).

Several possibilities exist. In the first, the current adult representation is solely dependent on the current environment, with the previous representation having little affect on the current one, a contextual model. Second, early representations form a trait (a set of representatives in whatever form we like), and this trait lasts over time; an organismic model. A third model, the interactional one, holds that the current environment interacts with the past representation to produce a current representation.

For either contextual or interactional models, it is necessary to take the nature of the environment into account. In the attachment literature, there already exists data to show that in early childhood when the caregiving environment changes, the quality of attachment changes as well (Belsky, Campbell, Cohn, & Moore, 1996; Thompson & Lamb, 1983a, 1983b). For example, Vaughn, Egeland, Sroufe, and Waters (1979) found that early attachment classification changes if maternal behaviors change, in this case as a function of stressful life events. To relate early to later attachment, it is necessary to measure the environment and its change over time (Bronfenbrenner & Crouter, 1983; Dunn, 1993; Lewis, 1984; Suomi, 1979; Waters et al., 1993).

In the longitudinal study we looked at a particular environmental factor, divorce, because it captures many aspects of the caregiving environment because it directly impacts on parents, children, and the emotional and social experiences in the family (Davies & Cummings, 1994; Fauber, Forehand, Thomas, & Wierson, 1990; Grych & Fincham, 1993). As an index of disruption in family life, economic hardship, and decreased availability of caregivers, divorce provides the type of environment that could have an impact on early childhood attachments as well as effecting change in representation.

In the longitudinal study, we examined the consistency of attachment classification from 1 to 18 years using divorce as a measure of the caregiving environment (Lewis, Rosenthal, & Feiring, 2000). Eighty-four infants and their mothers were seen at 1 year in a modified Strange Situation Procedure (Waters, Wippman, & Sroufe, 1979). At 18 years, participants were interviewed following the protocol developed by George, Kaplan, and Main (1985) and Kobak, Cole, Ferenz-Gillies, Fleming, and Gamble (1993). At both ages, attachment classification on these children was obtained as was the divorce status of the family.

The results indicated that 1-year attachment was not related to 18-year attachment. Of the insecure 1-year-olds, only 38% (9/24) are insecurely attached at 18 years of age, whereas for the secure 1-year-olds, 43% (26/60) are insecurely attached.

Out of 84 families, 14 had experienced a family divorce by the time the children were 18 years of age. There was no relation between child attachment at 1 year and whether there was a subsequent divorce. However, when the teens were 18 years old, attachment classification and divorce status of the family are significantly related. Those adolescents whose parents were divorced were more likely to be classified as insecure, whereas those classified as secure were more likely to be from intact families. Because the time of divorce varied, there might be a relation between early or later divorce and 18-year attachment. When the time of the divorce was compared to the 18-year-old attachment classification, no relation was found. Timing of divorce was not related to any of the other measures.

Because of our interest in individual trajectories of attachment coherence and relations with divorce, we followed an analytic strategy that allows us to examine individual children's paths over time. We determined the path each individual followed in terms of attachment and divorce. As already mentioned, attachment at 18 years is related to divorce status but not to attachment in infancy; thus, there is no support for an organismic model. How about an interactional model? Were there any interactions between attachment in infancy and family divorce as they affect attachment at 18 years? Our findings indicate no interactional effects; secure attachment at 1 year does not buffer children from developing insecure attachments at 18 years if they are from divorced families. If attachment at 1 year and divorce interact in their contributions to attachment at 18 years, one would expect that adolescents who were insecure at 1 year and come from divorced families would have been more likely to be insecure at 18 than adolescents who were secure at 1 year and come from divorced families. This was not the case.

Our findings reveal a lack of continuity between overt attachment behaviors at one year of age and representations in adolescence. Others also have found a lack of continuity from infancy, both for predicting attachment behaviors in childhood (Belsky, Spritz, & Crnic, 1996; Thompson & Lamb, 1983a, 1983b) and for predicting representations in adolescence (Zimmerman, Fremmer-Bombik, Spangler, & Grossman, 1997). Even when consistency is found, there exists significant numbers who change their attachment status over time (Main et al., 1985; Waters, Treboux, Crowell, Merrick, & Albersheim, 1995). This suggests that continuity in attachment may be influenced by contextual factors, a finding suggested by others (Egeland & Farber, 1984; Lamb, Thompson, Gardner, & Charnov, 1985; Sroufe, 1997; Waters et al., 1995).

The data are coherent. Attachment at 1 year of age as measured by overt behaviors does not show continu-

ity with attachment at 18 years of age as measured by representations. However, concurrent attachment, regardless of the age or method, is related to the nature of the caregiving environment. At 18 years, attachment classification is related to concurrent familial environment. Adult attachment is related to concurrent parenting behaviors (Ainsworth & Eichberg, 1991; Main et al., 1985; Posada, Waters, Crowell, & Lay, 1995; van IJzendoorn, 1995; van IJzendoorn, Kranenburg, Zwart-Woudstra, van Bussbach, & Lambermon, 1991). Together, these findings suggest that although the attachment representation is not stable over time, current representations are related to important indicators of current functioning.

The early studies of attachment did not present any data on the environment at the time when outcome measures were obtained. Without such data, we cannot address whether consistency of the environment or characteristic of the child accounts for continuity. The few studies that include some indicators of the caregiving environment (Vaughn et al., 1979; Waters et al., 1995) reveal that continuity in attachment is affected by environmental factors.

The data presented in this study support a contextual rather than an organismic model. Stated simply, what is happening concurrently in the child's environment, at least through adolescence, exerts powerful effects on the child's attachment behaviors and representations. The degree to which environment factors remain consistent represents the degree to which the individual's attachment remains consistent. Moreover, a contextual model emphasizes concurrent adaptation as the single most important process in understanding children's emotional and social development. Such a view is supported by the developmental literature (Lerner, 1986; Lewis, 1997).

Unlike an organismic model, a contextual model argues that should the context change, earlier events may have little impact on subsequent behavior. The question, then, is not how a person progresses but how the context in which an organism adapts to changes over time. Rather than an orderly progression on the basis of some internally derived imperative driving the person toward an end point, it may be that contexts alter and change, sometimes in an orderly fashion, often disorderly or chaotic. It is these changing contexts that affect change in the child.

The contextual approach also requires that we understand that behavior is produced to aid in the person's current adaptation. Such an approach reflects the pragmatic task of the person to adapt to the current challenge. It does not rely on the past and so allows for our ability to alter our developmental trajectory. The ability to think about the future, the use of our consciousness to make plans and alter past mistakes, the occurrence of chance events in the sequence of development are not isolated happenings but the fabric of

our lives (Lewis, 1990b). They are, as James (1975) said, a collection of unordered facts. These factors suggest that continuity and prediction, even at a group level, are difficult and may be even more so for the individual (Elder, 1986). Without an appreciation of the role of these factors in development, we will remain disappointed by our level of understanding. Bandura (1982), touching on chance encounters, wrote, "Developmental theory ... must specify [the] factors that set and alter particular life courses if it is to provide an adequate explanation of human behavior" (pp. 747–755). This issue, together with the work in physics and evolutionary biology, suggests that developmental theory resting on the assumption that what occurs earlier in time has a direct relation to what occurs later cannot readily be supported.

Thus, besides a Jamesian view of pragmatics, a Kantian view also is required, one that introduces the idea that people have conceptions of what they want and should do to reach the goals they have chosen. Each of these ideas, desires, actions, and goals can be changed. The choices are, in part, the environments that people create. Events that we like to call basic realities are occasions when "indeterminate possibilities are transformed into determinant actualities" (Whitehead, 1978, p. 233), a basic premise of quantum mechanics that needs to be applied to human life as well. A contextual approach allows us to reconstruct how life progresses but does not allow us to predict. Like historians or evolutionary theorists, our strength may be more in how we construct our narratives and less in how such narratives are related over time.

Summary

I approached the problem of the development of personality from two points of view. In the first, I raised the issue of how to characterize a personality variable. It is the issue of how to characterize children when seen in different contexts. Our findings, namely that parents, children, and their teachers do not rate the children the same is consistent with data from many other studies. These findings raise the question of whether children can be said to have a particular personality that is consistent over different contexts and time. If it is the general case that how we measure children's characteristics is not stable over contexts, observers, or time, then the concept of a personality variable needs to be seriously questioned. Longitudinal studies, for the most part, found only weak correlations of personality variables over time. Although these may be significant, they account for very little variance. Given our strong belief in personality—that is, that characteristics are stable over time—such weak findings raise doubt as to meaning of personality. Of

course, these weak findings can be attributed to measurement error. Nevertheless, such errors over the last 50 to 75 years of research need to be taken seriously. We need either to find better measurement procedures or else decide to consider a new approach to the concept of personality.

The second point of view raised in this article has to do with general models of development that need to be taken into account when dealing with the specific issue of personality development. I argued here for a model of development that relies more on the effects of context rather than on a model that I called organismic. Although much of developmental study relies on this organismic model, there is ample support for the view that such a model does not fit well with the developmental data of the last 100 years. Because personality development has essentially incorporated an organismic view, it is important that in the study of personality we consider other models. Here we argued for such a model, one that places an active self as the center of the process of growth and change. This contextual model suggests that personality, its stability and change, are to be found in the stability and change of the context in which people find themselves in, and that to understand personality development we need to focus more on the context of people's lives.

Notes

Portions of this article appeared in L. Pervin and O. P. John (Eds.). (1999). *Handbook of personality* (2nd ed.). New York: Guilford.

Michael Lewis, Institute for the Study of Child Development, Robert Wood Johnson Medical School, 97 Paterson Street, New Brunswick, NJ 08903.

References

- Achenbach, T. M. (1991). *Manual for The Child Behavior Checklist and 1991 Child Behavior Profile*. Burlington: University of Vermont, Department of Psychiatry.
- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Ainsworth, M. D. S., & Eichberg, C. G. (1991). Effects on infant-mother attachment of mother's unresolved loss of an attachment figure or other traumatic experience. In C. M. Parkes, J. Stevenson-Hinde, & P. Marris (Eds.), *Attachment across the life cycle* (pp. 160-183). New York: Tavistock/Routledge.
- Allport, G. W. (1937). *Personality: A psychological interpretation*. New York: Holt, Rinehart & Winston.
- Alvarez, L. W. (1982). Experimental evidence that an asteroid impact led to the extinction of many species 65 million years ago. *Proceedings of the National Academy of Science*, 80, 627-642.
- Angold, A., Weissman, M., John, K., Merikangas, K. R., Prusoff, B. A., Wickramaratne, P., Gammon, G. D., & Warner, V. (1987). Parent and child reports of depressive symptoms in children at low and high risk of depression. *Journal of Child Psychology and Psychiatry*, 28, 901-915.
- Bandura, A. (1982). The psychology of chance encounters and life paths. *American Psychologist*, 37, 747-755.
- Belsky, J., Campbell, S. B., Cohn, J. F., & Moore, G. (1996). Instability of infant-parent attachment security. *Developmental Psychology*, 32, 921-924.
- Belsky, J., Rovine, M., & Taylor, D. G. (1984). The origins of individual differences in infant-mother attachment: Maternal and infant contributions (The Pennsylvania Infant and Family Development Project). *Child Development*, 55, 718-728.
- Belsky, J., Spritz, B., & Crnic, K. (1996). Infant attachment security and affective-cognitive information processing at age 3. *Psychological Science*, 7, 111-114.
- Bornstein, M. (Ed.). (1987). *Sensitive periods in development: Interdisciplinary perspectives*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Bowlby, J. (1973). *Attachment and loss: Vol. 2, Separation*. New York: Basic Books.
- Bowlby, J. (1980). *Attachment and loss: Loss, sadness, and depression*. New York: Basic Books.
- Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development*. New York: Basic Books.
- Bretherton, I. (1985). Attachment theory: Retrospect and prospect. *Monographs of the Society for Research in Child Development*, 50 (1-2, Serial No. 209).
- Bronfenbrenner, U., & Crouter, A. C. (1983). The evolution of environmental models in developmental research. In W. Kessen & P. H. Mussen (Eds.), *History, theory, and methods: Handbook of child psychology* (Vol. 1, pp. 357-414). New York: Wiley.
- Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.
- Caspi, A. (1998). Personality development across the life course. In W. Damon (Series Ed.), & N. Eisenberg (Vol. Ed.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (5th ed., pp. 311-388). New York: Wiley.
- Caspi, A., Henry, B., McGee, R. O., Moffit, T. E., & Silva, P. A. (1995). Temperament origins of child and adolescent behavior problems: From age three to age fifteen. *Child Development*, 66, 55-68.
- Cole-Detke, H., & Kobak, R. (1996). Attachment processes in eating disorder and depression. *Journal of Consulting and Clinical Psychology*, 64, 282-290.
- Davies, P. T., & Cummings, E. M. (1994). Marital conflict and child adjustment: An emotional security hypothesis. *Psychological Bulletin*, 116, 387-411.
- Dunn, J. (1993). *Young children's close relationships: Beyond attachment*. Newbury Park, CA: Sage.
- Egeland, B., & Farber, E. A. (1984). Infant-mother attachment: Factors related to its development and changes over time. *Child Development*, 55, 753-771.
- Elder, G. H., Jr. (1986). Military times and turning points in men's lives. *Developmental Psychology*, 22, 233-245.
- Eldredge, N., & Gould, S. J. (1972). Punctuated equilibria: An alternative to phyletic gradualism. In T. J. M. Schopf (Ed.), *Models in paleobiology* (pp. 82-115). San Francisco: Freeman, Cooper, & Co.
- Elicker, J., Englund, M., & Sroufe, L. A. (1992). Predicting peer competence and peer relationships in childhood from early parent-child relationships. In R. Parke & G. Ladd (Eds.), *Family-peer relationships: Modes of linkage* (pp. 77-106). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

- Erikson, E. (1950). *Childhood and society*. New York: Norton.
- Faubert, R., Forehand, R., Thomas, A. M., & Wierson, M. (1990). A mediational model of the impact of marital conflict on adolescent adjustment in intact and divorced families: The role of disrupted parenting. *Child Development*, 61, 1112–1123.
- Flanagan, O. (1991). *The science of the mind*. Cambridge, MA: MIT Press.
- Ford, D. H., & Lerner, R. M. (1992). *Developmental systems theory: An integrative approach*. Newbury Park, CA: Sage.
- Freud, S. (1953). Three essays on the theory of sexuality. In J. Strachey (Ed. & Trans.), *In collaboration with A. Freud, The standard edition of the complete psychological works of Sigmund Freud* (Vol. 7, pp. 123–243). London, England: The Hogarth Press and the Institute of Psychoanalysis. (Original work published 1905)
- George, C., Kaplan, N., & Main, M. (1985). *The attachment interview for adults*. Unpublished manuscript, University of California-Berkeley, Department of Psychology.
- Gergen, K. J. (1973). Social psychology as history. *Journal of Personality and Social Psychology*, 26, 309–320.
- Goldsmith, H., & Campos, J. (1982). Toward a theory of infant temperament. In R. Emde & R. Harmon (Eds.), *The development of attachment and affiliative systems* (pp. 161–193). New York: Plenum.
- Goodman, G. S., & Clarke-Stewart, A. (1991). Suggestibility in children's testimony: Implications for sexual abuse investigations. In J. Doreis (Ed.), *The suggestibility of children's recollections: Implications for eyewitness testimony* (pp. 92–105). Washington, DC: American Psychological Association.
- Greenberg, J. R., & Mitchell, S. A. (1983). *Object relations in psychoanalytic theory*. Cambridge, MA: Harvard University Press.
- Grych, J. H., & Fincham, F. D. (1993). Children's appraisals of marital conflict: Initial investigation of the cognitive contextual framework. *Child Development*, 64, 215–230.
- Hazan, C., & Shaver, P. (1987). Conceptualizing romantic love as an attachment process. *Journal of Personality and Social Psychology*, 52, 511–524.
- Hoffman, H. S. (1974). Fear mediated processes in the context of imprinting. In M. Lewis & L. A. Rosenblum (Eds.), *The origins of fear: The origins of behavior*, Vol. 2 (pp. 25–48). New York: Wiley.
- Jacobsen, R. H., Lahey, B. B., & Strauss, C. C. (1983). Correlates of depressed mood in normal children. *Journal of Abnormal Child Psychology*, 11, 29–40.
- James, W. (1975). *Pragmatism* (F. Bowers, Text Ed.). Cambridge, MA: Harvard University Press.
- Jensen, P. S., Salzberg, A. D., Richters, J. E., & Watanabe, H. K. (1993). Scales, diagnoses, and child psychopathology: I. CBCL and DISC Relationships. *Journal of the American Academy of Child and Adolescent Psychiatry*, 32, 397–406.
- Jung, C. (1963). *Psychology of the unconscious: A study of the transformations and symbolisms of the libido* (B. M. Hinkle, Trans.). New York: Dodd-Mead. (Original work published 1916)
- Kazdin, A. E., French, N. H., Unis, A. S., & Esveldt-Dawson, K. (1983). Assessment of childhood depression: Correspondence of child and parent ratings. *Journal of the American Academy of Child Psychiatry*, 22, 157–164.
- Kazdin, A. E., Moser, J., Colbus, D., & Bell, R. (1985). Depressive symptoms among physically abused and psychiatrically disturbed children. *Journal of Abnormal Psychology*, 94, 298–307.
- Kierkegaard, S. (1846). *The present age* (A. Duc, Trans.). New York: Harper & Row.
- Kobak, R. R., Cole, H. E., Ferenz-Gillies, R., Fleming, W. S., & Gamble, W. (1993). Attachment and emotion regulation during mother-teen problem solving: A control theory analysis. *Child Development*, 64, 231–245.
- Kobak, R., & Sceery, A. (1988). Attachment in late adolescence: Working models, affect regulation, and representations of self and others. *Child Development*, 59, 135–146.
- Kobak, R. R., Sudler, N., & Gamble, W. (1991). Attachment and depressive symptoms during adolescence: A developmental pathways analysis. *Development and Psychopathology*, 3, 461–474.
- Lamb, M. E., Thompson, R., Gardner, W., & Charnov, E. (1985). *Infant-mother attachment: The origins and developmental significance of individual differences in strange situation behavior*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Largo, R. H., Molinari, L., von Siebenthal, K., & Wolfensberger, U. (1996). Does a profound change in toilet-training affect development of bowel and bladder control? *Developmental Medicine & Child Neurology*, 38, 1106–1116.
- LeDoux, J. (1990). Cognitive and emotional interactions in the brain. *Cognition and Emotions*, 3, 265–289.
- Lefkowitz, M. M., & Tesiny, E. P. (1984). Rejection and depression: Prospective and contemporaneous analyses. *Developmental Psychology*, 20, 776–785.
- Lerner, R. M. (1986). *Concepts and theories of human development* (2nd ed.). New York: Random House.
- Lewis, M. (1984). Social influences on development: An overview. In M. Lewis (Ed.), *Beyond the dyad* (pp. 1–12). New York: Plenum.
- Lewis, M. (1990a). Models of developmental psychopathology. In M. Lewis & S. Miller (Eds.), *Handbook of developmental psychopathology* (pp. 15–28). New York: Plenum.
- Lewis, M. (1990b). Self knowledge and social development in early life. In L. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 277–300). New York: Guilford.
- Lewis, M. (1997). *Altering fate: Why the past does not predict the future*. New York: Guilford.
- Lewis, M. (2000). Models of developmental psychopathology. In A. Sameroff, M. Lewis, & S. Miller (Eds.), *Handbook of developmental psychopathology* (2nd ed.). New York: Plenum.
- Lewis, M., & Feiring, C. (1989). Infant, mother, and mother-infant interaction behavior and subsequent attachment. *Child Development*, 60, 831–837.
- Lewis, M., & Feiring, C. (1991). Attachment as personal characteristic or a measure of the environment. In J. L. Gewirtz & W. M. Kurtines (Eds.), *Intersections with attachment* (pp. 3–22). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Lewis, M., Feiring, C., McGuffog, C., & Jaskir, J. (1984). Predicting psychopathology in six-year-olds from early social relations. *Child Development*, 55, 123–136.
- Lewis, M., & Lee-Painter, S. (1974). An interactional approach to the mother-infant dyad. In M. Lewis & L. A. Rosenblum (Eds.), *The effect of the infant on the care giver: The origins of behavior* (Vol. 1, pp. 21–48). New York: Wiley.
- Lewis, M., & Rosenblum, L. A. (Eds.). (1977). *Interaction, conversation, and the development of language: The origins of behavior*, Vol. 5. New York: Wiley.
- Lewis, M., Rosenthal, S., & Feiring, C. (2000). Attachment over time. *Child Development*, 71(3), 707–720.
- Londerville, S., & Main, M. (1981). Security of attachment, compliance, and maternal training methods in the second year of life. *Developmental Psychology*, 17, 298–299.
- Main, M. (1990). Cross-cultural studies of attachment organization: Recent studies, changing methodologies, and the concept of conditional strategies. *Human Development*, 33, 48–61.
- Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. In I. Bretherton & E. Waters (Eds.), *Growing points of attachment theory and research: Monographs of The Society for Research in Child Development*, 50(1–2, Serial No. 209).
- Matas, L., Arend, R. A., & Sroufe, L. A. (1978). Continuity of adaptation in the second year: The relationship between quality of at-

- tachment and later competence. *Child Development*, 49, 547–556.
- McConaughy, S. H., Stanger, C., & Achenbach, T. M. (1992). Three-year course of behavioral/emotional problems in a national sample of 4- to 16-year-olds: I. Agreement among informants. *Journal of the American Academy of Child and Adolescent Psychiatry*, 31, 932–940.
- Mischel, W. (1990). Personality dispositions revisited and revised: A view after three decades. In L. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 111–134). New York: Guilford.
- Mounoud, P. (1990). Consciousness as a necessary transitional phenomenon in cognitive development. *Psychological Inquiry*, 1, 253–258.
- Pascual-Leone, J. (1990). Intension, intention, and early precursors of will: Constructive epistemological remarks on Lewis's research paradigm. *Psychological Inquiry*, 1, 258–260.
- Pastor, D. L. (1981). The quality of mother-infant attachment and its relationship to toddlers' initial sociability with peers. *Developmental Psychology*, 17, 326–335.
- Pepper, S. C. (1942). *World hypotheses*. Berkeley: University of California Press.
- Pervin, L. A. (Ed.). (1990). *Handbook of personality: Theory and research*. New York: Guilford.
- Pervin, L. A., & Lewis, M. (Eds.). (1978). *Perspectives in interactional psychology*. New York: Plenum.
- Piaget, J. (1952). *The origins of intelligence in children*. New York: International Universities Press.
- Plomin, R. (1983). Childhood temperament. In B. Lahey & A. Kazdin (Eds.), *Advances in clinical child psychology*, Vol. 6 (pp. 45–92). New York: Plenum.
- Posada, G., Waters, E., Crowell, J. A., & Lay, K. (1995). Is it easier to use a secure mother as a secure base? Attachment Q-Sort correlates of the adult attachment interview. *Monographs of the Society for Research in Child Development*, 60 (2–3, Serial No. 244).
- Reese, H. W., & Overton, W. F. (1970). Models of development and theories of development. In L. R. Goulet & P. B. Baltes (Eds.), *Life-span developmental psychology: Research and theory* (pp. 115–145). New York: Academic.
- Richters, J. E. (1992). Depressed mothers as informants about their children: A critical review of the evidence for distortion. *Psychological Bulletin*, 112, 485–499.
- Rosenstein, D. S., & Horowitz, H. A. (1996). Adolescent attachment and psychopathology. *Journal of Consulting and Clinical Psychology*, 64, 244–253.
- Ross, M. (1989). Relation of implicit theories of the construction of personal histories. *Psychological Review*, 96, 341–357.
- Routh, D. K. (1990). Taxonomy in developmental psychopathology: Consider the source. In M. Lewis & S. M. Miller (Eds.), *Handbook of developmental psychopathology* (pp. 53–62). New York: Plenum.
- Saylor, C. F., Finch, A. J., Baskin, C. H., Furey, W., & Kelly, M. (1984). Construct validity for measures of childhood depression: Application of a multitrait-multimethod methodology. *Journal of Consulting and Clinical Psychology*, 52, 977–985.
- Snyder, M., & Ickes, W. (1985). Personality and social behavior. In G. Lindzey & E. Aronson (Eds.), *Handbook of social psychology, Volume II: Special fields and applications* (pp. 883–947). New York: Random House.
- Sroufe, L. A. (1983). Infant-caregiver attachment and patterns of adaptation in preschool: The roots of maladaptation and competence. In M. Perlmuter (Ed.), *Development and policy concerning children with special needs: The Minnesota Symposia on Child Psychology* (Vol. 16, pp. 41–83). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Sroufe, L. A. (1997). Psychopathology as an outcome of development. *Development and Psychopathology*, 9, 251–268.
- Sroufe, L. A., Egeland, B., & Kreutzer, T. (1990). The fate of early experience following developmental change: Longitudinal approaches to individual adaptation in childhood. *Child Development*, 61, 1363–1373.
- Sroufe, L. A., & Fleeson, J. (1986). Attachment and the construction of relationships. In W. Hartup & Z. Rubin (Eds.), *Relationships and development* (pp. 239–252). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Sroufe, L. A., Schork, E., Moffit, E., Laworsky, N., & LaFreniere, P. (1984). The role of affect in social competence. In C. Izard, J. Kagan, & R. Zajonc (Eds.), *Emotion, cognition, and behavior* (pp. 289–319). New York: Plenum.
- Stanger, C., & Lewis, M. (1993). Agreement among parents, teachers, and children on internalizing and externalizing behavior problems. *Journal of Clinical Child Psychology*, 22, 107–115.
- Stanger, C., McConaughy, S. H., & Achenbach, T. M. (1992). Three-year course of behavioral/emotional problems in a national sample of 4–16 year olds. II: Predictors of syndromes. *Journal of the American Academy of Child and Adolescent Psychiatry*, 31, 941–950.
- Stavrakaki, C., Vargo, B., Roberts, N., & Boodoosingh, L. (1987). Concordance among sources of information for ratings of anxiety and depression in children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 26, 733–737.
- Sugarman, S. (1987). *Piaget's construction of the child's reality*. Cambridge, MA: Cambridge University Press.
- Suomi, S. J. (1979). Differential development of various social relationships by Rhesus monkey infants. In M. Lewis & L. Rosenblum (Eds.), *The child and its family: The genesis of behavior* (Vol. 2, pp. 219–244). New York: Plenum.
- Thompson, R. A., & Lamb, M. E. (1983a). Individual differences in dimensions of socioemotional development in infancy. In R. Plutchik & H. Kellerman (Eds.), *Emotion: Theory, research, and experience. Emotions in early development* (Vol. 2, pp. 87–114). New York: Academic.
- Thompson, R. A., & Lamb, M. (1983b). Security and attachment and stranger sociability in infancy. *Developmental Psychology*, 19, 184–191.
- van IJzendoorn, M. H. (1995). Adult attachment representations, parental responsiveness, and infant attachment: A meta-analysis on the predictive validity of the Adult Attachment Interview. *Psychological Bulletin*, 117, 387–403.
- van IJzendoorn, M. H., Kranenburg, M. J., Zwart-Woudstra, H. A., van Bussbach, A. M., & Lamberman, M. W. (1991). Parental attachment and children's socio-emotional development: Some findings on the validity of the Adult Attachment Interview in the Netherlands. *International Journal of Behavioral Development*, 14, 375–394.
- Vaughn, B., Egeland, B., Sroufe, L. A., & Waters, E. (1979). Individual differences in infant-mother attachment at 12 and 18 months: Stability and change in families under stress. *Child Development*, 50, 971–975.
- Waters, E., Posada, G., Crowell, J., & Lay, K. (1993). Is attachment theory ready to contribute to our understanding of disruptive behavior problems? *Development and Psychopathology*, 54, 215–224.
- Waters, E., Treboux, D., Crowell, J., Merrick, S., & Albersheim, L. (1995, April). *From the strange situation to the Adult Attachment Interview: A 20-year longitudinal study of attachment security in infancy and early adulthood*. Poster presented at the biennial meeting of the Society for Research in Child Development, Indianapolis, IN.
- Waters, E., Wippman, J., & Sroufe, L. A. (1979). Attachment, positive affect, and competence in the peer group: Two studies in construct validation. *Child Development*, 50, 821–829.
- Weissman, M. M., Wickramaratne, P., Warner, V., John, K., Prusoff, B. A., Merikangas, K. R., & Gammon, G. D. (1987). Assessing

TARGET ARTICLE: STUDY OF PERSONALITY DEVELOPMENT

- psychiatric disorders in children: Discrepancies between mothers' and children's reports. *Archives of General Psychiatry*, 44, 747–753.
- Whitehead, A. N. (1978). *Process and reality: An essay in cosmology*. New York: Free Press. (Original work published 1929)
- Yarrow, M. R., Campbell, J. D., & Burton, R. V. (1970). Recollections of childhood: A study of the retrospective method. *Mono-*
graphs of the Society for Research in Child Development, 35(5).
- Zimmerman, P., Fremmer-Bombik, E., Spangler, G., & Grossman, K. E. (1997). Attachment in adolescence: A longitudinal perspective. In W. Koops, J. B. Hoeksema, & D. C. vandenBoom (Eds.), *Development of interaction and attachment: Traditional and non-traditional approaches* (pp. 281–291). Amsterdam: North-Holland.

Copyright of Psychological Inquiry is the property of Lawrence Erlbaum Associates and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.