
Early Family Experiences and Adult Values: A 26-Year, Prospective Longitudinal Study

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Archival longitudinal data were used to examine relations of childhood environmental factors with adult values. Parental style and family socioeconomic status (SES) were assessed when participants were 5 years old. At age 31, participants completed the Rokeach Value Survey. Results indicated that adults focused on conformity values were more likely to have restrictive parents and to have been raised in lower SES families. Age-31 self-direction values were negatively correlated with parental restrictiveness at age 5, and age-31 security values were negatively correlated with parental warmth at age 5. Results with parenting variables remained significant after controlling for both childhood and concurrent SES. The pattern of findings is consistent with organismic-based theories, which suggest that the manner in which environments support or hinder need satisfaction influences individuals' value development.

P sychological research has made substantial progress in the past decade toward understanding the nature of human values and demonstrating that these “guiding principles” or “conceptions of the desirable” are important features of personality that affect a variety of aspects of people’s lives. The content, structure, and organization of people’s values have impressive cross-cultural stability (Schwartz, 1992, 1996), implying that the values people experience as consistent or conflictual with each other are reasonably common across different societies. Our understanding of how people’s values influence the specific decisions they make in life has been strengthened through research demonstrating that values influence the valences and attitudes individuals have toward certain objects (Feather, 1992, 1995). Values also are associated with people’s mental health and well-being

(Cohen & Cohen, 1996; Kasser & Ryan, 1993, 1996; Oishi, Diener, Suh, & Lucas, 1999), the quality of their interpersonal relationships (Kasser & Ryan, 2001), their response to social dilemmas (Sheldon & McGregor, 2000; Sheldon, Sheldon, & Osbaldiston, 2000), and what they worry about in life (Schwartz, Sagiv, & Boehnke, 2000).

Given the central place of values in people’s personalities, it is surprising that we still know relatively little about the factors leading individuals to focus on one or another set of values. The present study therefore examines how factors present in early childhood relate to the values people hold as central when they are adults. Drawing from a theory of values (Kasser, 2002) based in self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000), we suggest that the manner in which children’s growth tendencies and psychological needs were

Authors’ Note: The contribution of the first two authors was equal and the order of authorship is arbitrary. This research used the *Patterns of Child Rearing*, 1951-1952 data set (made accessible in 1979, raw and machine-readable data files). These data, collected by R. Sears, E. Maccoby, and H. Levin in 1951 and by D. McClelland, C. Constantian, and D. Pilon in 1978, are available through the archives of the Henry A. Murray Research Center of Radcliffe College, Cambridge, Massachusetts. This study was funded by grants from the Social Science and Humanities Research Council of Canada (SSHRC) and the Fonds pour la Formation de Chercheurs et l’Aide à la Recherche, Quebec (FCAR) to Richard Koestner. Correspondence regarding this article can be addressed to Tim Kasser, Box 83, 2 East South Street, Department of Psychology, Knox College, Galesburg, IL 61401; e-mail: tkasser@knox.edu.

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supported and satisfied has important ramifications for their later values.

The Development of Values

One's understanding of how values develop is naturally shaped by one's definition of values. Perhaps the most cited definition of values comes from Milton Rokeach (1973), who wrote that a value is an "enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence" (p. 5). When values are defined as beliefs, they are seen primarily as cognitive structures, that is, types of schemata about what is important or desirable in life. Because schemata are typically understood to be learned cognitive structures, it is not surprising that the bulk of research on the development of values suggests that they are learned through a process of identification with important others in one's life. This identification theory suggests that when particular values are expressed by parents, friends, and others in one's culture, people take these belief systems into their psyches through a process akin to learning by imitation. Indeed, research supports the notion that many important values are passed on from person to person in this manner (Homer, 1993; Kasser, Ryan, Zax, & Sameroff, 1995; Kohn, Slomczynski, & Schoenbach, 1986; Rohan & Zanna, 1996; Whitbeck & Gecas, 1988).

Rokeach (1973) proposed another definition of values, however, that is less often cited but is nonetheless relevant to another process by which people take on values: "Values are the cognitive representations and transformations of needs" (p. 20). Here, Rokeach was suggesting that what people deem to be important in life is partially dependent on what they need. Other researchers and theorists, especially those concerned with motivation, agree that values are more than solely cognitive constructs and that they derive, at least in part, from people's needs (Kasser & Ryan, 1993, 1996; Maslow, 1959; Schwartz, 1992). From this definition, a value involves one's own mental conception of what is important, based on one's needs.

What is a need, though? As noted by Ryan (1995), the need concept has various definitions across psychology, ranging from what one wants to what is necessary for one's psychological health and thriving. Used in this latter, more exclusive sense, a need is a "psychological nutriment" (Sheldon, Ryan, & Reis, 1996) required for an organism to thrive and experience optimal health; that is, just as a plant requires water, sunlight, and good soil to grow, people require certain experiences to be psychologically healthy and adapted.

A definition of values based on this conception of needs points toward another process by which individu-

als may eventually conceive of one set of outcomes as more important than others (Kasser, 2002). As suggested by humanistic (Maslow, 1956; Rogers, 1964) and self-determination (Ryan & Deci, 2000) theorizing and research, some environments satisfy important psychological needs and support individuals' tendencies toward growth, whereas others are less successful in these regards. These viewpoints propose that when environments provide love, encouragement, and acceptance of one's unique perspective and desires, people's psychological needs for autonomy and relatedness are well satisfied. The satisfaction of these needs increases the likelihood that people will orient toward opportunities to express themselves; to pursue their interests; and to work toward close, intimate relationships with others. Warm, democratic parental styles thereby help children to feel confident that their needs for autonomy and relatedness will be met; this need satisfaction in turn strengthens "intrinsic" values (Kasser & Ryan, 1996) for growing as a person, being close to others, and helping the community. In contrast, when people experience cold, controlling, rejecting environments where opportunities for self-expression and intimacy are rare, their needs are poorly satisfied. As a result, they become less likely to pursue needs associated with autonomy and relatedness and thus decrease the value they place on such domains of life. Instead, such individuals often focus on obtaining external rewards, the approval of others, and feelings of safety as a way to garner some sense of worth and security as well as to compensate for their need deprivation (Kasser, 2002).

Some empirical work supports these ideas. Kasser et al. (1995) compared the maternal and social environments of a heterogeneous group of 18-year-olds who were either focused on intrinsic aspirations for self-acceptance, affiliation, and community feeling or on aspirations for financial success. Teens with cold, controlling mothers were especially likely to endorse financial success values, whereas teens with warm, democratic moms were more focused on self-acceptance, affiliation, and community feeling values. Williams, Cox, Hedberg, and Deci (2000) have similarly shown that when high schoolers perceive their parents as supporting their autonomy, they are less likely to orient toward goals concerned with others' opinions (e.g., financial success, image, and popularity) and more likely to concern themselves with values reflective of their needs (e.g., self-acceptance, affiliation, community feeling). Cohen and Cohen (1996) also have reported that children focused on materialistic values have parents who are more punishing and possessive; neither of these are parental qualities likely to facilitate growth and the satisfaction of psychological needs.

Broader environmental factors such as socioeconomic status (SES) also may affect the satisfaction of children's needs, and ultimately their values (Kasser, 2002; Stewart & Healy, 1989). For example, research shows that children from socioeconomically disadvantaged backgrounds are less likely to focus on values reflective of autonomy, relatedness, and growth motivations and are more likely to concern themselves with materialistic values based in security and a desire to impress others (Cohen & Cohen, 1996; Kasser et al., 1995). Other research suggesting that socioeconomic factors influence values comes at the national level from the political scientist Inglehart (1971). Drawing from the Maslovian need hierarchy, Inglehart suggests that materialistic values are largely derivative of lower level physiological and security needs, whereas postmaterialistic values result from a concern with higher needs, such as for freedom, aesthetics, and good relationships. His extensive cross-national research program (e.g., Abramson & Inglehart, 1995) has documented that individuals raised in economically poorer times are more likely to focus on materialistic values than are individuals raised in economically secure times, presumably because the former individuals were less likely to have their needs well satisfied. Furthermore, citizens of poorer nations are typically more materialistic than are those from wealthier nations, who can focus on postmaterialist values because of their greater need satisfaction.

The Present Study

Although the literature reviewed above is consistent with a need-based theory of value acquisition, this rather slight body of research on the development of values suffers from at least three limitations. First, much of the work has focused on late adolescents; therefore, we know relatively little about factors leading to the development of adult values. Second, the work has been largely cross-sectional in nature, exploring how environmental factors measured during adolescence relate to values measured during adolescence; therefore, we lack the long-term longitudinal designs that can speak to issues of causation. Third, the measures of values used have been rather limited, focusing on either empirically derived values (Cohen & Cohen, 1996) or values representative of a particular theoretical orientation (Kasser et al., 1995; Williams et al., 2000); therefore, we lack conceptual replications of the theory using other measures of values.

The current study addressed these limitations and extended previous research by using archival longitudinal data to examine the relation of preschool parenting and SES to adult values measured with the Rokeach (1973) Value Survey. We used a sample of 5-year-olds

originally recruited by Sears, Maccoby, and Levin (1957) whose mothers were interviewed regarding their own and their husbands' parenting practices. The mothers' responses were coded by raters into more than 160 specific parenting dimensions and later factor analyzed (by Koestner, Franz, & Weinberger, 1990) to construct global dimensions assessing warmth and restrictiveness, two central dimensions of parenting that have frequently been identified by developmental researchers (Baumrind, 1971; Darling & Steinberg, 1993; Maccoby & Martin, 1983). Children's SES at age 5 was indexed by collecting data on their fathers' occupational status and education level, the family's yearly income, and the mother's education.

When sample participants were 31 years old, they completed the widely used Rokeach Value Survey (RVS) (Rokeach, 1973), in which people rank order the importance of 18 terminal values (end states that are phrased as nouns, e.g., wisdom, sense of accomplishment) and 18 instrumental values (modes of behavior that are phrased as adjectives, e.g., independent, broad-minded). Although some past research examines these 36 values individually, we based our scoring of the RVS on the research program of Schwartz (1992, 1996; Schwartz & Bilsky, 1987, 1990), who has been working to identify a "universal" structure of values. His analyses yield a circumplex model that shows that the same basic motivational domains appear in most every country and, what's more, that these domains are related to each other in predictable and consistent ways.¹

The seven value contents identified as "universal" with Schwartz and Bilsky's (1990) analysis of the RVS included (a) self-direction values for independent thought and action choosing; (b) maturity values involving appreciation, understanding, and acceptance of oneself, others, and the surrounding world; (c) prosocial values reflecting active protection or enhancement of others; (d) restrictive conformity values involving restraint of actions and impulses likely to harm others or violate sanctioned norms; (e) security values for safety, harmony, and stability; (f) achievement values involving a focus on personal success; and (g) enjoyment values concerned with pleasure and sensuous gratification. Table 1 presents the actual Rokeach items included in the motivational domains for the sample of American adults Schwartz and Bilsky (1990) studied. The seven value domains are organized so that they fall in the order of the circumplex, working clockwise around the pattern; thus, enjoyment and maturity sit on either side of self-direction in the circumplex.

An important feature of Schwartz and Bilsky's (1990) model is that these seven motivational domains have been found to emerge in the same circumplex pattern

TABLE 1: Motivational Domains Computed From the Rokeach Value Survey, Individual Values Involved, and Means and Standard Deviations in This Sample

<i>Motivational Domain</i>	<i>Individual Values</i>	M	SD
Self-direction	Sense of accomplishment, broad-minded, imaginative, independent, intellectual, logical	9.60	2.59
Maturity	World of beauty, mature love, self-respect, wisdom, courageous	10.88	1.67
Prosocial	World at peace, equality, salvation, true friendship, forgiving, helpful, honest, loving	10.09	2.22
Restrictive conformity	Clean, obedient, polite	5.30	3.43
Security	Family security, freedom, inner harmony, national security, responsible, self-controlled	10.38	1.76
Achievement	Exciting life, social recognition, ambitious, capable	9.12	2.54
Enjoyment	Comfortable life, happiness, pleasure, cheerful	8.79	2.88

across cultures; that is, certain value domains are generally seen by people worldwide as consistent with each other (e.g., maturity and prosocial values are typically consistent), and thus, these motivational domains fall next to each other in the circumplex. Other value domains are viewed by people as in conflict with each other (e.g., self-direction opposes restrictive conformity) and thus fall opposite each other in the circumplex. Another important feature of the circumplex model is that when correlations between the values and some other variable (such as parental style) are graphically represented, they should follow a “sinusoidal pattern” in which the absolute peaks and troughs occur for values on opposite sides of the circumplex, with the overall pattern of correlations resembling a sin wave when graphed (Schwartz, 1992).

Our reading of the seven value domains indexed by the RVS suggested that values for self-direction, maturity, and prosocial behavior most reflect the psychological needs for autonomy, growth, and relatedness that are central to individuals’ functioning (Kasser, 2002) and thus bore a reasonably strong similarity to what we have elsewhere termed intrinsic, growth-oriented values (Kasser & Ryan, 1996). In contrast, values for security and restrictive conformity seemed to straightforwardly reflect desires focused on attaining feelings of safety and fitting into others’ opinions, that is, values we suggest become central when needs have been relatively unsatisfied in the past. We therefore expected that people focused on these two types of values would have experienced less nurturant caregiving and less socioeconomic advantage.

We made no predictions regarding Schwartz and Bilsky’s (1990) achievement and enjoyment value domains, however. The former value domain seemed to include a focus both on being efficacious, which may satisfy needs for competence, and on appearing worthwhile in others’ eyes, which seems reflective of extrinsic desires to impress other people. The seventh motivational domain, enjoyment, did not seem to directly map onto either type of value we have previously studied.

Hypotheses

First, we hypothesized that the experience of parental warmth, parental nonrestrictiveness, and socioeconomic advantage in childhood would be associated with adults’ increased concern for self-direction, prosocial, and maturity values. Second, we hypothesized that the experience of parental coldness, parental restrictiveness, and socioeconomic disadvantage would be associated with adults’ increased concern for security and restrictive conformity values. If these hypotheses were supported, we also expected to find that graphing the direction and magnitude of the correlations in their order around the circumplex should yield the sinusoidal wave form predicted by Schwartz (1992). Such a result would not only support our theoretical notions concerning the relations between childhood environments and adult values but also would provide further support for the idea that these seven values are organized in the circumplex fashion suggested by Schwartz (1992).

We further explored whether childhood parenting and SES had relatively independent effects on adult values by examining their associations after partialing out each others’ effects and the effect of adult SES. In line with the results of Kasser et al. (1995), we expected that parenting effects would remain significant even after controlling for socioeconomic factors, because they are rather proximal factors that would have reasonably direct effects on need satisfaction. However, we wondered whether the effects of childhood SES might be mediated by adult SES and parental styles. Such a result would be consistent with the writings of the sociologist Kohn (1977), who suggested that lower socioeconomic backgrounds are associated with a decreased emphasis on self-direction values and an increased emphasis on conformity values because parents from such backgrounds are more restrictive with their children. Kohn believes that such strategies are used by lower SES parents to inculcate in children a preference for valuing conformity rather than self-direction because the former type of values will be more adaptive for the types of

jobs and experiences that children from lower socioeconomic situations are likely to have.

METHOD

Participants

The original sample was recruited in 1951 and 1952 by Sears et al. (1957) and consisted of 379 White, 5-year-old children from two-parent, working-class and upper-middle-class homes in the Boston area. Follow-up data were collected from a subsample of participants when they were about 31 years old (McClelland, Constantian, Regalado, & Stone, 1982); of these, 79 participants (40 women and 39 men) completed the RVS and formed the sample of interest for the current study. Sears (1984) provides a history of every follow-up of his original sample and McClelland et al. (1982) provide details regarding the recruitment of participants at age 31. The large reduction in participants from age 5 to age 31 is accounted for by the difficulty of locating participants after 25 years, exacerbated by the fact that Sears et al. (1957) did not explicitly plan to conduct long-term, longitudinal follow-ups of their sample.

Although McClelland and Pilon (1983) reported that the 31-year-old sample was representative of the original sample on a host of demographic indices, we wanted to ensure that our subsample also was comparable to the original. To this end, we performed *t* tests comparing the 31-year-old participants with the remaining participants from the original sample on the two summary parenting dimensions and SES. No differences approached significance.

Measures

Parenting measures. When the participants were 5 years old, their mothers were interviewed by trained female experimenters using a standardized interview schedule of 72 open-ended questions about child rearing. Interview transcripts were coded later by two independent judges on 167 parenting variables. These variables concerned the mother's report about her own parenting behavior and feelings, the father's parenting behavior and feelings, and the coordination of parenting roles between herself and her husband. Further details about the original interview and coding can be found in Sears et al. (1957).

Subsequent factor analyses of a subset of the Sears et al. (1957) ratings by Koestner et al. (1990) yielded 11 factors reflecting maternal and paternal styles. For the present study, we were interested in parenting factors reflecting restrictiveness and warmth because they were of greatest theoretical relevance. Five of the 11 dimensions were conceptually related to Parental Restrictiveness—general maternal strictness, maternal restriction of sexu-

ality, maternal inhibition of aggression, maternal use of physical punishment, and general paternal strictness. Four of the dimensions were related to Parental Warmth—maternal warmth, maternal use of praise, paternal warmth, and paternal involvement in child care. Appendix A provides examples of the items that made up each of these dimensions.

Global indices of Parental Restrictiveness and Warmth were created by standardizing and combining the scores from each of the dimensions related to these constructs. The factors were scored so that higher numbers indicated greater warmth and greater restrictiveness. A recent study employed these superfactors and described their psychometric characteristics as adequate (Koestner, Walker, & Fichman, 1999).

SES index. Participants' SES at age 5 was indexed by information about the father's occupational status, father and mother's education level, and the family's yearly income.² The sample included a wide range of occupational statuses for the father: 15% professional, 6% semiprofessional, 28% business-managerial, 13% clerical, 27% blue collar, and 11% service. Thirty-seven percent of fathers and 23% of mothers had graduated from college, whereas 15% of fathers and 24% of mothers had not completed high school. The median yearly income in 1951-1952 for the sample was between \$5,000 and \$7,500. Occupational status, educational achievement, and income were each rated by Sears et al. (1957) on 7-point scales. For example, occupational status ranged from 1 (*unskilled worker*) to 7 (*major professional*), whereas education ranged from 1 (*did not complete grade school*) to 7 (*completed college and attended graduate or professional school*). We computed a summary index of SES at age 5 by averaging participants' standardized scores on father's occupational status, father's education, mother's education, and family income. The reliability of this summary variable was adequate: Cronbach's $\alpha = .84$.

We then devised a measure of age-31 SES by using four parallel indices. These included the participants' occupation and years of schooling, their spouses' occupation (if available), and the family's yearly income. (Spouses' education level was not collected at the 31-year follow-up.) The alpha of this age-31 SES variable was .79, and it correlated with age-5 SES at a significant level, $r = .48, p < .001$.

RVS (Rokeach, 1973). The RVS is a 36-item measure that differentiates people according to their goals in life (terminal values) and modes of conduct (instrumental values). When they were 31 years old, participants were asked to rank 18 terminal values from most to least important and then rank 18 instrumental values in the same manner. All the values were presented in

alphabetical order. The convergent and discriminant validity of this instrument has been supported (Braithwaite & Scott, 1991), and the measure also has shown good test-retest reliability over a period of 14 to 16 months ($r = .69$) (Rokeach, 1973).

As mentioned above, the 36 Rokeach values were categorized in this study according to the framework of Schwartz and Bilsky (1990); in particular, we used their analysis of a large sample of American adults. Table 1 indicates the individual values that were grouped in the categories of self-direction, maturity, prosocial, restrictive conformity, security, achievement, and enjoyment. Summary scores were computed for each of these domains by averaging the relevant individual values, such that high scores indicate a greater value placed on that domain.

RESULTS

Means and Standard Deviations for Value Domains

Table 1 provides the means and standard deviations for the motivational domains derived from the RVS in the order they follow in the circumplex. Maturity was the most highly ranked of the growth-oriented value domains, followed by prosocial and self-direction. Among the value domains focused on security and others' opinions, security was highly ranked but restrictive conformity received lower rankings. Achievement and enjoyment values were ranked relatively low. t tests also revealed that women were significantly more oriented toward prosocial values than were men ($t = -4.08, p < .001$), and men were more focused on enjoyment values than were women ($t = 2.69, p < .01$).

Zero-Order Correlations Between Childhood Environment and Adult Values

To examine how childhood environmental characteristics relate to adult values, we began by conducting the zero-order correlations presented in Table 2. As can be seen, all significant correlations supported our predictions. Self-direction values at age 31 were negatively correlated with parental restrictiveness at age 5. People who placed a strong value on restrictive conformity had lower SES at age 5 and were raised by more restrictive parents. Finally, age-31 security values were negatively correlated with parental warmth at age 5. Although the number of significant correlations was not large, we remind our readers that we only made predictions concerning five of the value domains (i.e., not achievement or enjoyment, for which there were no significant correlations). As such, 4 of the 15 correlations about which we made predictions yielded significant results, a number that exceeds the one significant correlation that might be expected by chance.

TABLE 2: Zero-Order Correlations of Childhood Environment With Adult Values

<i>Value</i>	<i>Parental Restrictiveness</i>	<i>Parental Warmth</i>	<i>Age 5 SES</i>
Self-direction	-.33*	-.04	.15
Maturity	-.13	-.03	.17
Prosocial	.05	.10	-.04
Restrictive conformity	.29**	-.00	-.24**
Security	.03	-.27*	.02
Achievement	.00	.06	.03
Enjoyment	.18	.16	-.15

NOTE: SES = socioeconomic status.

* $p < .05$. ** $p < .01$.

Recall that we also predicted that correlations between environmental factors and values would follow the sinusoidal pattern described by Schwartz (1992). As shown in Figure 1, this hypothesis also received some support in the case of childhood SES and the measure of parental restrictiveness. The sinusoidal wave form is notable such that the peak of the SES wave occurs at self-direction and maturity, whereas its trough occurs for the value opposite in the circumplex, restrictive conformity, with the other values falling in a patterned way in between. Similarly, for parental restrictiveness, the peak of the wave form occurs with restrictive conformity values and the trough occurs for self-direction. The only value that does not seem to follow the predicted sinusoidal pattern is enjoyment (a value about which we had made no predictions for our environmental variables). We would also note that the sinusoidal pattern was present, although substantially weaker, for parental warmth.³

Partial Correlations

Partial correlational analyses were used for two purposes: (a) to test whether the significant relations obtained between parenting variables and adult values would remain significant after controlling for participants' SES and gender and (b) to test a model inspired by Kohn (1977) in which the impact of SES on later values is mediated by parental practices.⁴

First, the three significant correlations reported in Table 2 between parenting factors and adult values were recomputed after controlling for the effects of age-5 SES, age-31 SES, and participants' gender; all three correlations remained significant. Parental restrictiveness was still associated with lower self-direction values ($pr = -.28, p < .05$) and higher restrictive conformity values ($pr = .22, p < .05$); parental warmth was still related to lower security values ($pr = -.25, p < .05$). Thus, in all cases, the effects of childhood parenting on adult values were not reducible to the effects of gender or SES.

Next, applying the criteria established by Baron and Kenny (1987), we used correlation and partial correla-

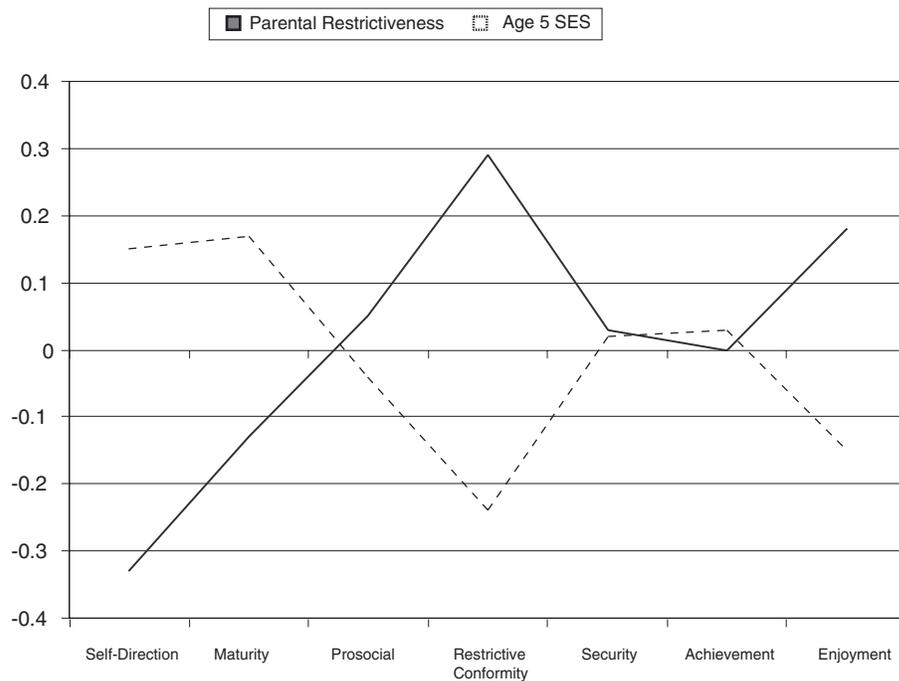


Figure 1 Sinusoidal wave pattern representing the magnitude and direction of correlations of individual value domains with age-5 socioeconomic status and parental restrictiveness.

tion analyses to test the ideas resulting from Kohn's (1977) model regarding the impact of SES on adults' values for restrictive conformity. The first criteria, of a significant relation between the predictor (childhood SES) and the outcome (age-31 restrictive conformity values), was met: the two variables correlated $r = -.24$. The second criteria, of relations between the proposed mediator variable (parental restrictiveness) and both the predictor and the outcome, was also met; restrictive parenting correlated with both age-5 SES ($r = -.41$) and with age-31 restrictive conformity values ($r = .29$). Finally, we tested the third criteria of mediation, that the relation between the predictor variable and the outcome is substantially reduced when the effect of the proposed mediator is controlled. Results showed that the relation between age-5 SES and age-31 restrictive conformity values was reduced to nonsignificance after controlling for gender and parental restrictiveness ($pr = -.12$, $p > .10$). These results suggest that the impact of childhood SES on adult restrictive conformity values is at least partially mediated by parental restrictiveness.

DISCUSSION

The present study tested humanistic and organismic theories concerning the developmental antecedents of people's values (Kasser, 2002; Maslow, 1956; Rogers, 1964). Starting from a definition of values based in needs (Rokeach, 1973), we suggested that the ways in which

environmental circumstances support or hinder important psychological needs (Ryan & Deci, 2000) have important ramifications for the values a person eventually holds. Specifically, when environments support children's needs to grow, be choiceful, and be close to others, they will focus on values reflective of these needs once they reach adulthood. In contrast, when environments block or frustrate such needs and motivations, people will become concerned with security and how others view them.

Results using this archival, prospective, longitudinal data set supported these hypotheses. Restrictive parenting at age 5 was related to a focus on conformity values and less emphasis on self-direction values when the participants were 31 years old. Cold parenting at age 5 also related to an adult concern with security values. Examination of the broader, extrafamilial factor of SES showed that children from less advantaged situations were more likely to value restrictive conformity as adults. The fact that the patterns of correlations between these environmental variables and the value domains followed the sinusoidal wave pattern predicted by Schwartz (1992) adds further credence both to our hypotheses and to the circumplex model of values he and his colleagues have been developing.

Additional analyses suggested that the impact of a low SES background on valuing conformity was mediated by parental restrictiveness and by the individuals' eventual SES; that is, low SES in childhood appears to exert its

influence on conformity values by leading parents to behave in a more restrictive manner. This pathway fits well with Kohn's (1977) arguments that lower SES parents, who occupy work roles with fewer opportunities for self-direction, suggest to their children that behaving in a conforming fashion is more important than making one's own choices in life. We are unaware of any research that has examined this hypothesis with such an extensive longitudinal study or with Schwartz and Bilsky's (1990) measure of values. These mediational results with SES must be interpreted cautiously, however, because all participants were from White, two-parent families in which the father was employed, and from an era in which mothers were much less likely to work outside the home. Furthermore, the small sample size may lead to unstable partial correlation coefficients. Nonetheless, the results point to an important pathway by which the more distal environmental characteristic of SES may affect values via more proximal effects, in this case parental styles.

Whereas the relations of childhood SES to adult values were well accounted for by other environmental factors, this was not true in the case of childhood parenting; that is, partial correlations suggested that children's parental environment bore a significant association to their adult values, even after controlling for the effects of gender and both age-5 and age-31 SES. This suggests that something about the effects of parental restrictiveness and warmth, beyond just their associations with SES, may lead individuals to differentially orient toward values as an adult. Our belief is that such parental styles affect the manner in which children's needs are satisfied, which then translates into the values they pursue and believe to be of importance in life. Some parental styles may be more likely to occur in some socioeconomic environments than in others, but regardless of a family's wealth, the way children are treated by their parents seems to influence their eventual values.

These results are particularly impressive when considered in light of several important factors. First, the present study used a 26-year prospective longitudinal design, whereas previous studies have used a single-assessment, contemporaneous research design (Kasser et al., 1995; Williams et al., 2000). We left unmeasured a wealth of life experiences that could affect adults' values yet still demonstrated reliable and predicted relationships between childhood experiences and adult values. Second, the present study employed a different methodology for assessing the relative importance of values than has been used in past work. Although it would have been worthwhile to duplicate Kasser et al.'s (1995) assessment of intrinsic and extrinsic values, it is perhaps a more rigorous test of the generalizability of this organismic theory to use the value dimensions included on the RVS and identified by Schwartz and Bilsky (1987, 1990). Finally, it

is noteworthy that the study used multiple methods to index the primary study variables; that is, environmental predictors were assessed via interviews with participants' mothers, whereas information on values was obtained via participant self-report with a well-known and validated scale. Thus, significant results are unlikely due to mere method-based associations between variables.

Limitations and Future Directions

Despite these strengths, it is important to also acknowledge several limitations of our investigation. First, the parental behaviors measured apply only to the first 5 years of life; the meaning and effects of parenting practices certainly change as children age (Darling & Steinberg, 1993). Thus, more research needs to examine how parenting at other ages relates to values. Second, all participants were children in the 1950s. The traditional family structure of this cohort (two parents with father as primary wage earner) is no longer the norm, and it is not clear whether similar patterns would be found within other family structures, such as single-parent or two-breadwinner families. It is also not clear how particular social events of the era (such as the Cold War and the rise of consumer culture) may have influenced this cohort's value development (Stewart & Healy, 1989). Third, our hypotheses were examined in the highly individualistic culture of the United States; because the meanings of security, conformity, and self-direction values may be different in collectivist cultures (Kim & Markus, 1999), future research in other social contexts is required. Finally, it is important to remember that even a prospective longitudinal design cannot demonstrate causal relations. The relations between childhood experiences and later adult characteristics could be due to the effects of unmeasured third variables (i.e., genetically transmitted behavioral dispositions) that influence both parents' child-rearing practices and children's later behavior (Plomin, 1995); it would be interesting to know the extent to which values may be inherited.

In addition to correcting the limitations of this work, substantial longitudinal research is needed to better explore other environmental factors that might influence value development. Aside from one's early parenting experiences, there are a host of other environmental factors, such as exposure to media, style of formal education, availability of role models, and more general social developmental factors, that may influence the development of values. Indeed, a review of the developmental literature reached the conclusion that peer groups exert far greater influence on children's personality development than do parents (Harris, 1995).

The mediating processes involved in the acquisition of values also require further study. More research could explore whether people's levels of need satisfaction

actually vary as a function of parental style and socioeconomic circumstances and whether need satisfaction actually later influences values. It also would be interesting to explore in further detail the correlations between SES, parental styles, and parental value systems. Perhaps, for example, parents with restrictive parenting styles also hold conformity and security values as prominent in their own system, whereas parents who are more democratic value self-direction. Indeed, Kasser et al. (1995) found that mothers who strongly valued their children's financial success were likely to be rather nonnurturant and from lower SES backgrounds. The current data could then be interpreted as consistent with an identification model of value acquisition. Thus, it is unclear from the present data whether the childhood factors we examined influenced values via need satisfaction, parental modeling of values, and/or some unexplored other sets of mediating variables (such as attachment styles or genetics). It seems likely that many different pathways simultaneously operate in the development of an aspect of personality so important as values.

Appendix A

Sample Items for Parental Restrictiveness and Warmth

- (1) Parental restrictiveness
 - a. General maternal strictness
 - Amount of pressure for conformity with table manners and restrictions
 - Level of standards, neatness, orderliness, and cleanliness
 - b. Maternal restrictiveness, re: sexuality
 - Amount of pressure that mother has applied for modesty indoors
 - Severity of pressure that has been applied against sex play
 - c. Maternal inhibition of aggression
 - Level of mother's demands for child to be aggressive toward others (reversed)
 - Permissiveness for inappropriate aggression toward other children (reversed)
 - d. Maternal use of physical punishment
 - Extent the mother spansks
 - Use of reasoning (reversed)
 - e. General paternal strictness
 - Father's standards for obedience: How strict is he?
 - How lenient is father with child? (reversed)
- (2) Parental warmth
 - a. Maternal warmth
 - Warmth of affectional bond: mother to child
 - Amount of affectional demonstrativeness, mother to child
 - b. Maternal use of praise
 - Praise for table manners
 - Praise for nice play

- c. Paternal warmth
 - Amount of coldness and lack of affection between child and father (reversed)
 - Nature of affectional bond, father to child
- d. Paternal involvement in child care
 - Extent to which father stays with child when mother is out
 - Amount father does in connection with taking care of child

NOTES

1. One limitation of archival research is that the measures originally administered to participants are unlikely to represent the "cutting edge" of contemporary research. For example, at the time these individuals were 31, the Rokeach Value Survey (RVS) was easily the most widely used survey to assess values; today, that statement would be less true. Furthermore, Schwartz's (1992, 1996) recent research, conducted in more nations and based on measures other than the RVS, has now identified 10 rather than 7 motivational domains as "universal." What's more, his later work has found that some of the specific values previously classified in one motivational domain are now part of a different domain (e.g., inner harmony was previously in security and now is in universalism) and that the circumplex has a somewhat different structure than was reported in earlier samples. We therefore found ourselves in a bit of a quandary as to how best use the RVS and whether to apply Schwartz's earlier scheme or his later ones. In the end, we chose to apply the computational scheme from Schwartz and Bilsky (1990) because it was based on the exact same value measure as used in this sample and because the scoring had been validated on U.S. citizens. We did take into consideration refinements of the circumplex patterning in forming some hypotheses, however.

2. Mother's occupation was only coded for 28% of the original sample, resulting in substantial missing data; therefore, we did not use it to compute our summary variable.

3. For purely exploratory purposes, we conducted hierarchical multiple regressions to examine whether adult values might be influenced by interactions among gender, age-5 socioeconomic status (SES), parental warmth, and parental restrictiveness. In all cases, these four variables were first entered as a set of predictors, followed by the two-way interactions among these variables in a second set, and then by the three-way interactions in a third set. Only three significant interaction effects were detected, all involving the two value domains (i.e., achievement and enjoyment) about which we had made no main effect predictions. First, an interaction between gender and warmth was detected ($t = 2.00, p < .05$), showing a tendency for warmth to relate negatively to achievement values for men ($r = -.22$) but positively for women ($r = .19$); neither of these correlations in the split-sample analysis were significant, however. Second, gender interacted with age-5 SES ($t = -2.03, p < .05$) such that SES was negatively related to achievement values for women ($r = -.13$) but positively for men ($r = .15$); again, neither of these correlations were significant. Finally, gender again interacted with age-5 SES ($t = 2.00, p < .05$) in the prediction of enjoyment values; SES was significantly negatively related to enjoyment for men ($r = -.33$) but unrelated for women ($r = .02$). We remind readers that our power was quite low to detect interactions and thus believe these results should be treated with great caution.

4. Although it would have been interesting to test other mediational models with different parenting practices and value outcomes, only the model tested below met the initial criteria specified by Baron and Kenny (1987) for mediation, namely, significant correlations of both predictors (SES and parenting) with the outcome (values) (see Table 2).

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