

## Three Paths of Adult Development: Conservers, Seekers, and Achievers

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This study examined the development of individuals whose motivations and skills led them to develop in different but equally positive ways. C. D. Ryff's (1989) scales for Environmental Mastery (EM) and Personal Growth (PG) were used to identify three configurations of positive mental health in 111 women of the Mills Longitudinal Study: Achievers, high on both scales; Conservers, high on EM, low on PG; and Seekers, high on PG, low on EM. Each pattern showed a distinctive profile of strengths on four criteria of maturity—competence, generativity, ego development, and wisdom—and each was predicted by distinctive features of positive and negative emotionality, identity processes, and change in self-control across 31 years of adulthood. Identity at age 43 mediated the influence of personality at age 21 in predicting positive mental health pattern at age 60.

Two positions can be identified among theorists of maturity or adult development who have been concerned with positive change in personality over the life course. One emphasizes general principles. Thus, Allport (1961) proposed a set of abstract criteria of maturity, and stage theorists like Erikson (1964) and Loevinger (1976) laid out criteria or milestones of development assumed to apply to everyone. A second position emphasizes individual differences. Buehler (Buehler & Massarik, 1968) and Jung (1971) argued that successful development is rooted in individual gifts or passions, and that development in one direction may preclude development in others.

The second position has received less attention than the first, at least in research journals. Jung's theory of psychological types is elegant but perhaps too complex for successful operationalization and verification. In this article, we do not propose a comprehensive theory of individual differences in adult development. However, we distinguish positive mental health patterns in three groups of people: those who seek the security and harmony of living in accord with social norms (Conservers), those who value social recognition and achievement (Achievers), and those who seek personal knowledge and independence of social norms (Seekers). We suggest that because these individuals have different and often mutually exclusive orientations toward what constitutes a successful life, they develop different strengths.

The purpose of this article is to identify these positive mental health patterns in a longitudinal sample at mature middle age, to

show that they are associated with different criteria of maturity, and then to examine the following features in their development: core characteristics of emotionality and personality, the formation of identity and the role of consolidated identity as a primary component of these patterns, and change toward increasing versus decreasing regulation of behavior in accord with social norms. We studied these processes in the women of the Mills Longitudinal Study, who were followed from the senior year of college to age 60.

This article builds on previous work of Helson and Wink (1987), who found evidence in a broad review of the literature for two conceptions of maturity: one emphasizing adaptive functioning within society and the other emphasizing intrapsychic differentiation and independence of social norms. The distinction between these two kinds of development has proved useful in other work, both in the Mills Study of women (e.g., Wink & Helson, 1997) and also in other samples including both men and women (Dillon & Wink, 2000; Labouvie-Vief & Medler, 1998; Wink & Dillon, in press).

In this article, we extend the work on individual differences in development in methodological and substantive ways. Whereas Helson and Wink (1987) studied criteria of maturity, we studied varieties of positive functioning. We began with two scales developed by Ryff (1989) to assess aspects of positive mental health, Environmental Mastery (EM) and Personal Growth (PG). These scales measure effectiveness in the outer world and intrapsychic development, respectively, along with attitudes and motives leading to these outcomes. Believing that individual differences in adult development often stem from the fact that one kind of orientation precludes another, we focus on the patterning of scores, that is, on whether an individual scored high on one scale and low on the other, high on both scales, or high on neither. In essence, where Helson and Wink (1987) were primarily concerned to make real the difference between the two conceptions of maturity, we were primarily concerned with the development of individual differences in positive mental health over young and middle adulthood. Helson and Wink studied the sample at age 43; we studied development from ages 21 to 60.

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### Environmental Mastery and Personal Growth

The definitions and items of the EM and PG scales were appropriate for our purposes.<sup>1</sup> An individual high in EM is able to achieve a good fit in the environment, "has a sense of mastery and competence in managing the environment, [and] makes effective use of surrounding opportunities" (Ryff, 1989, p.1072). Examples of EM items are "In general I feel in charge of the situation in which I live," and "The demands of everyday life often get me down" (reversed). An individual high in PG "sees the self as growing and expanding; . . .[and] as changing in ways that reflect more self-knowledge and effectiveness" (Ryff, 1989, p. 1072). Examples of PG items are "For me, life has been a continuous process of learning, changing, and growth," and "I gave up trying to make big improvements or changes in my life a long time ago" (reversed).

We were further inclined to use EM and PG by the fact that in a sample of 215 midlife men and women studied by Schmutte and Ryff (1997), the correlation between them was low, suggesting that they assessed relatively separate constructs. The same was true in the Mills data. Furthermore, the personality correlates of the two scales in Schmutte and Ryff's sample, as assessed by the Revised NEO Personality Inventory (NEOPI-R; Costa & McCrae, 1992), were quite different from each other. PG had its highest correlations with the Openness and Extraversion scales, whereas for EM these correlations were near zero or modest. EM had its highest correlations with the Conscientiousness scale (positive) and the Neuroticism scale (negative), where PG had its lowest correlations on these scales. We concluded that the low correlation between EM and PG, together with the distinctiveness of their personality correlates, would make these scales advantageous for conjoint analysis.

### Conservers, Seekers, Achievers, and the Depleted

The Ryff scales assess aspects of positive mental health. One notes that the item content of the scales (see above) reflects a mix of motives, values, and skills. In describing the characteristics we expected of the groups to be formed by high and low scores on EM and PG, we relied primarily on the language of motivation.

First, as stated above, the groups were formed by high or low scores on EM and PG (Figure 1). We expected individuals high on EM and low on PG to differ from those with the opposite pattern on the openness dimension of personality. We refer to them as Conservers and Seekers, respectively. We expected Conservers to be motivated to avoid anxiety and seek security and Seekers to seek new experience at the cost of anxiety. Second, women high on both EM and PG would seem to have a conscientious, outgoing orientation with an absence of neuroticism. This combination of characteristics suggested superior effectiveness and integration, which might be brought about by ambitions and clear goals; we refer to this group as Achievers. Women low on both EM and PG would seem to lack confidence and psychological resources; we refer to them as the Depleted. Because the Depleted lack a positive mental health pattern, they are not central to our hypotheses about varieties of positive mental health. In general, we expected them to score low in comparison with members of the other groups, while showing the sharpest contrast with the Achievers.

Though we refer to Conservers, Seekers, Achievers, and the Depleted as discrete patterns, it is important to make clear that EM

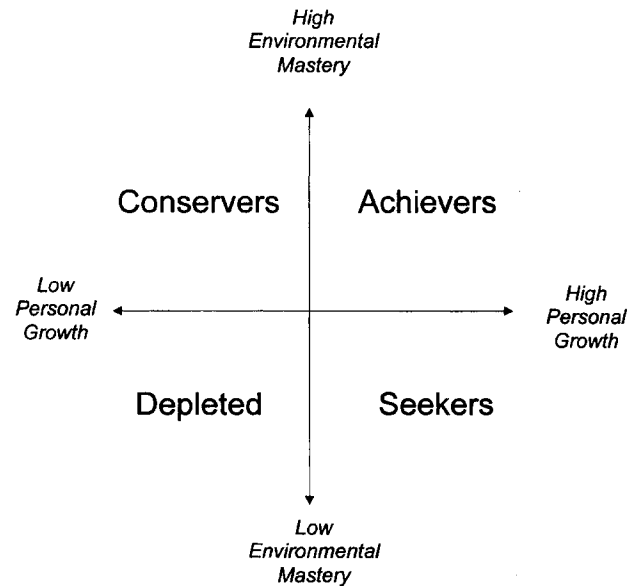


Figure 1. Ryff's (1989) dimensions and the positive mental health patterns.

and PG are continuous, not categorical, variables. To avoid the loss of information and power that median splits and an analysis of variance (ANOVA) approach would entail (McClelland & Judd, 1993), we used the recommended multiple regression approach, with EM, PG, and their cross-product as an interaction term, thus maintaining the continuous nature of the data in our analyses up to the point of generating illustrative means. They can be thought of as prototypes with fuzzy borders rather than as discrete categories (York & John, 1992).

### Individual Differences in Maturity

One might suppose that individuals who have high scores on both EM and PG would score higher on criteria of maturity than those who are high on one and low on another. Our hypothesis, however, was that Achievers, Conservers, and Seekers each had characteristic orientations that led them to advance in some directions more than in others. We examined criteria of maturity that tap psychosocial and intrapsychic development to different degrees (Helson & Wink, 1987). Psychosocial development involves adjustment and one's attainment of identity, intimacy, and generativity and is facilitated by mastery of the social environment. We expected Achievers and Conservers, the groups high on EM, to show strengths on different aspects of psychosocial development, depending on the amount of initiative or agency involved. Intrapsychic development involves the degree of cognitive and affective differentiation and integration and is facilitated by introspection. We expected both Seekers and Achievers, the groups high on PG, to show strengths in intrapsychic development, with Seekers

<sup>1</sup> Ryff (1989) offers four other scales of positive mental health: Autonomy, Positive Relations With Others, Purpose in Life, and Self-Acceptance.

excelling except where the intrapsychic development is in the service of adjustment or achievement.

We examined measures representing two kinds of psychosocial maturity: the California Psychological Inventory (CPI) Competence scale (Gough & Bradley, 1996) and a measure of generativity (Peterson & Klohnen, 1995). High scorers on the Competence scale show effective social and interpersonal behavior without anxiety or neurotic symptoms and should be about equally characteristic of both groups high on EM: Conservers and Achievers. Because generativity is assumed to require the integration of agentic and communal attitudes (Bradley, 1997; McAdams, 1988), the Achievers, assuming that they have the effectiveness and integration that we hypothesized, should perform best on this measure. As indices of intrapsychic maturity, we examined ego development (Loevinger & Wessler, 1970) and a wisdom composite (Helson & Srivastava, 2001). Because neither of these measures is related to adjustment, we expected Seekers to score highest, Achievers to score in the middle, and Conservers to score relatively low.

The demonstration of these individual differences in maturity uses the Competence scale and Sentence Completion Test (SCT) measure of ego development that were used by Helson and Wink (1987) along with indices of two additional criteria of maturity: generativity and wisdom. These analyses were intended to provide foundational evidence that the present research with the sample at age 60 was a valid extension of the previous work with the sample at age 43.

#### Development of Individual Differences in Positive Mental Health

We had three sets of hypotheses about the development of patterns of positive mental health. The first concerns the roots of these patterns in emotionality and personality. The second concerns identity and its role as mediator between early personality and mental health pattern. The third concerns change in personality congruent with the positive mental health pattern. Table 1 shows the predicted findings for the developmental hypotheses and also the hypotheses about criteria of maturity.

#### *Emotionality and Personality*

We expected to find the roots of the positive mental health patterns in individual differences in emotionality and emotion

regulation and in personality. Extraversion and neuroticism are stable traits associated with positive emotionality and negative emotionality, respectively (e.g., Costa & McCrae, 1980; Watson & Walker, 1996). We hypothesized that our different groups could be distinguished by differences in positive and negative emotionality (Tellegen, 1985). Our hypotheses were based on Schmutte and Ryff's (1997) findings about EM and PG and the characteristics we attributed to our four groups, in conjunction with theoretical ideas from the emotion regulation literature. In view of the correlation between PG and extraversion and between EM and low neuroticism (Schmutte & Ryff, 1997), we expected PG to be related to positive emotionality and EM to be related negatively to negative emotionality.

We further bolstered this prediction by considering emotion regulation strategies that would support the positive mental health patterns. Research on subjective well-being often emphasizes the importance of a pattern of emotion regulation that, over time, maximizes positive emotions and minimizes negative emotions (Myers & Diener, 1995). Such a pattern would seem to be related to characteristics such as ambition, planfulness, or resilience (Block & Block, 1980; Clausen, 1993; Eisenberg, Fabes, Guthrie, & Reiser, 2000) that are associated with integration of personality, and we expected this pattern to be characteristic of the Achievers.

A relation between PG and positive emotionality and between EM and negative emotionality led us to predict a pattern of muted emotionality for Conservers and a pattern of both high positive and high negative emotionality for Seekers. Labouvie-Vief and Medler's (1998) work suggested strategies of emotional regulation that may be involved. Using data from a large community sample, these researchers compared the strategy of affective dampening, intended to protect against negative or extreme affect, with the strategy of feedback amplification, contained in views of Piaget, Carver and Scheier (1990), and modern dynamic system theorists. The strategy is to amplify deviations through exploration so as to obtain information and a more adequate basis for action, then to integrate positive and negative affect into a new structure. We believe that preference for one or the other of these control strategies would be carried in part by the personality trait of openness. The strategies would seem to serve different motivations, the first bringing security and the second bringing stimulation and possibilities of more complex integration, consistent with our descriptions of Conservers and Seekers. The ability to combine use of both strategies, leading over time to moderately high levels

Table 1  
*Predicted Characteristics of the Mental Health Patterns*

Domain	Achievers	Conservers	Seekers	Depleted
Emotionality (ages 27, 43, & 52)	Maximize positive affect over negative	Dampen affect	Amplify affect	Mired in negative affect
Personality influence on identity (age 21)	Ambitious	Closed	Open	Unambitious
Identity status (age 43)	Integrated	Accepting	Searching	Diffuse
Change in normative orientation (ages 21–52)	Increasing CPI Self-Control	Increasing CPI Self-Control	Decreasing CPI Self-Control	(Not predicted)
Area of maximum maturity (middle age)	Generativity; CPI Competence	CPI Competence	Ego development; wisdom	None

Note. CPI = California Psychological Inventory.

of positive emotionality and moderately low levels of negative emotionality, would be expected of Achievers. Thus, we examined whether these different patterns of positive and negative emotionality were associated over young and middle adulthood with being an Achiever, Conservator, or Seeker at age 60. The relation of ambition and openness to the positive mental health patterns will be examined in connection with identity.

### *Identity*

Identity is the structure of social and personal identifications, goals, and priorities that guide behavior (Baumeister, 1986; Erikson, 1964). It is "a self structure—an internal, self-constructed, dynamic organization of drives, abilities, beliefs, and individual history" (Marcia, 1980, p. 159). Identity has the double function of articulating the place of individuals within society and affording them a sense of their uniqueness. Thus, we expected identity formation to be a major factor in the early development of positive mental health patterns. Then we expected the developed identity to maintain and guide the further honing of the pattern. Roberts and Caspi (in press) suggested many ways in which identity processes may increase consistency of personality in adulthood and also influence personality change.

### *The Relation of Identity Status to Positive Mental Health Pattern*

Marcia (1966) proposed that two main processes in identity development, exploration and commitment, yield four identity statuses. A young person who both explores and commits is said to have an achieved identity status, whereas a person who does neither is said to have diffuse identity status. A person who commits without exploration has a foreclosed identity status, and a person who explores but does not commit remains in moratorium identity status.

In our study, identity statuses were assessed as Q-sort prototypes (Block, 1978; Mallory, 1989). When measured in this way, two dimensions emerge: identity acceptance (vs. searching), which contrasts the moratorium and foreclosed statuses, and identity integration, which contrasts the achieved and diffuse statuses (Helson, Stewart, & Ostrove, 1995; Mallory, 1989). We expected Conservators and Seekers to show most and least evidence of identity acceptance, respectively, and Achievers and the Depleted to show most and least evidence of integration of identity, respectively.

### *Linking Personality, Identity, and Positive Mental Health Pattern*

If the characteristics of personality we expected to be associated with the positive mental health patterns were already evident in adolescence, we suggested that they would have been related to identity formation. Let us consider openness and ambition.

Low openness should make it easy for a person to commit without exploring, and high openness should predispose a person to extended exploration without commitment; thus, openness should be negatively related to identity acceptance. An accepting identity should support the need for security and embody values of conservation and tradition, thus encouraging EM but not PG and

being characteristic of the Conservators. A searching identity (low acceptance) would support the need for self-direction and stimulation, leading to PG but not EM and typifying the Seekers.

Ambition should lead a person to explore options and commit to them, and lack of ambition should make it difficult to establish and act on clear priorities; thus, we proposed that ambition is conducive to identity integration. An integrated identity can promote achievement values, leading to both EM and PG; thus, we expected ambition to characterize the Achievers. An unintegrated identity should encourage neither EM nor PG and would thus characterize the Depleted.

Though we believe that personality traits affect the formation of identity, it was our hypothesis that identity becomes a major integrative structure that absorbs and shapes the influence of personality and is a major component of the positive mental health pattern. We tested the hypothesis that identity pattern mediates the relation of personality antecedents (openness and ambition as assessed at age 21 by scales derived from the CPI) to positive mental health pattern at age 60.

### *Change in Normative Regulation of Behavior*

In our conceptualization, personality change takes place as identity shifts or is consolidated, and when this process is working effectively, the nature of long-term change is congruent with the developing positive mental health pattern. The theories of maturity that Helson and Wink (1987) drew on would imply that some forms of positive mental health are associated with increasing effectiveness within the structure of social norms, whereas others are associated with increasing independence of social norms. However, this implication was not tested by Helson and Wink.

A fundamental way in which people monitor their behavior is through self-control. Some individuals restrain their emotions and behavior in the interests of conforming to norms that they consider important and right, in contrast to giving free expression to their personal feelings and inclinations. Why should differences in self-control develop over time? Our hypothesis was that Achievers and Conservators worked to sustain commitments to goals such as promotion in work or stability in marriage that are facilitated or rewarded by adherence to social and interpersonal norms, whereas Seekers tried to de-emphasize these norms and to learn to trust their own feelings and sense of self as a part of their pursuit of personal growth. We tested the hypothesis that Achievers and Conservators increased in self-control over young and middle adulthood whereas Seekers decreased.

### *Overview*

We used the EM and PG scales to identify the three patterns of positive mental health that we called those of Conservators, Seekers, and Achievers. We first tested the hypothesis that these groups showed distinctive profiles on different criteria of adult development. We then examined three aspects of development. Because the recently constructed Ryff scales were available only for the assessment done at age 60, we showed the antecedents of the patterns over time rather than change on the patterns themselves. We first tested the hypothesis that distinctive patterns of positive and negative emotionality characterized the groups over time. Next we asked whether distinctive patterns of identity characterized the

groups and whether identity status mediated the influence of openness and ambition in the development of the positive mental health pattern. Then we tested our last hypothesis, that Achievers and particularly Conservers increased in self-control over young and middle adulthood whereas Seekers decreased. Finally, we ended with descriptive analyses of lifestyle indicators.

## Method

### Participants

The participants in this study graduated from Mills College, a private women's college in Oakland, California, in 1958 or 1960. A representative two thirds of each senior class had participated in a study of creativity, leadership, and future plans among college women (Helson, 1967). Most were White, reflecting the composition of the student body in the late 1950s. Most of their fathers were in business or the professions, and most of their mothers were homemakers.

When the women were approximately 27, 43, and 52 years old, they completed follow-up inventories and questionnaires by mail. Approaching age 60, the women returned questionnaires that included the Ryff scales for positive mental health. A total of 111 of the participants completed the Ryff scales; this group formed the sample for the present study and represented 87% of the 128 women alive and locatable and 78% of the original sample. Because of slightly different participation rates at each assessment, the *n* for each analysis was sometimes smaller than 111; these *ns* are reported with each analysis. Also, some variables applied to the entire sample, others only to subgroups (e.g., work satisfaction measures were obtained only from women in the labor force). At ages 59–60, 68% of the women were in a committed couple relationship, 74% had children, 63% were in the labor force, and 19% had retired.

### Measures

*Ryff's (1989) measures of positive mental health.* EM and PG were assessed with shortened versions of Ryff's (1989) positive mental health scales, using 6 items for each scale as recommended by Ryff (C. D. Ryff, personal communication, December 1996). The EM scale includes items such as "I am quite good at managing the responsibilities of my daily life"; the PG scale includes items such as "For me, life has been a continuous process of learning, change, and growth." Alpha reliabilities in the Mills sample were .67 for EM and .66 for PG, acceptable values for 6-item scales measuring relatively broad constructs (John & Benet-Martinez, 2000). The correlation between the scales was low,  $r = .19$  ( $p < .05$ ,  $N = 111$ ). The Ryff scales were available for the sample at age 60.

*Criteria of adult development.* We used four criteria of adult development, two emphasizing psychosocial maturity and two others emphasizing intrapsychic maturity (Helson & Wink, 1987).

The first of two indexes of psychosocial development was a generativity prototype scored from the California Q Sort (CAQ; Block, 1978). The CAQ consists of 100 personality descriptors that raters sort on a 9-point scale according to a fixed normal distribution. Sorts were made in the Mills sample at age 43 on the basis of extensive open-ended material that the women provided about various aspects of their lives since college; this material permitted file raters to Q sort 96 women from the present sample.

Peterson and Klohnen (1995) developed the generativity prototype and scored it from Q-sort data available for the Radcliffe and Mills longitudinal samples in their early 40s. Each woman's individual Q-sort profile was correlated with the prototype, and the correlation coefficients were used as prototype scores. Main themes across the Mills and Radcliffe longitudinal samples were nurturance and interpersonal caring, prosocial competence and productivity, and ability to take a broad social perspective.

The other index of psychosocial development was the Competence (third vector) scale of the CPI. It is a measure of overall effectiveness of social,

emotional, and intellectual functioning. High scorers see themselves as in harmony with the circumstances of their lives, as making good use of their capabilities, and as reasonably self-actualized (Gough & Bradley, 1996; Weiser & Meyers, 1993). Alpha reliability of this 58-item scale for 3,000 women was .89 (Gough & Bradley, 1996).

One of the two indexes of intrapsychic maturity was the SCT measure of ego development (Loevinger & Wessler, 1970). Scoring was done as prescribed in the SCT manual. In the Mills sample, two raters scored 90 protocols with a reliability coefficient of .87 obtained between the total protocol ratings (Picano, 1984).

The other index of intrapsychic maturity was a composite (Helson & Srivastava, 2001) of three measures of wisdom: the Practical and Transcendent Wisdom Scales (Wink & Helson, 1997) and a wisdom task modified from Baltes, Staudinger, Maercker, and Smith (1995). The Practical Wisdom Scale is a 17-item scale based on self-description by means of adjectives from the Adjective Check List (ACL), including items such as clear-thinking, fair-minded, insightful, mature, realistic, and understanding. Alphas for men and women of a community sample were .78 (men) and .75 (women; Wink & Helson, 1997). The Transcendent Wisdom Scale (Wink & Helson, 1997) measures the articulation of part of a philosophy of life. Alpha reliability for two raters was .90 in the Mills sample at age 60. The wisdom task requires the participant to give advice about how to respond to a telephone call from a friend who has decided to commit suicide. Responses were coded on four dimensions with alpha reliability for two raters between .80 and .96. The highest Q-sort correlates of the composite measure of wisdom concerned meaning-making (e.g., has insight into own motives; interested in philosophical questions, the meaning of life, and so forth), with other sets of correlates reflecting benevolence, originality, and lack of conventionality (Helson & Srivastava, 2001).

*Emotionality.* Tellegen's (1985) emotionality constructs, positive emotionality and negative emotionality, were scored from the ACL (Gough & Heilbrun, 1983). The ACL consists of 300 adjectives; participants use a check-no check format to select those adjectives that are self-descriptive. It was administered at ages 27, 43, and 52. The emotionality scales both consist of 20 items and were constructed to be minimally intercorrelated (Gough, Bradley, & Bedeian, 1996; see also Helson & Klohnen, 1998). Coefficient alpha reliabilities for both of the scales in the Mills sample were above .85 at all times of testing. Stability of these scales is high: Over the three ages, retest correlations in our sample ranged from .58 to .73 for the Positive Emotionality Scale and from .60 to .70 for the Negative Emotionality Scale. (These correlations were previously reported for a slightly different subsample in Helson & Klohnen, 1998.)

*Identity status.* Drawing from Erikson's theory of ego-identity formation as the task of adolescence, Marcia (1966) conceptualized and developed an interview to measure four identity way stations or styles that he called identity-statuses: achieved, in moratorium, foreclosed, and diffuse. On the basis of Marcia's work, Mallory (1989) developed prototypes that can be scored from the CAQ to measure these identity statuses in adults.

To construct the Q-sort identity prototypes, Mallory (1989) asked Marcia and others who had worked with his ideas to use the Q-sort deck to describe the prototypical person of each identity status. Following are the items (abbreviated) that the judges placed highest to describe persons with each of the four identity statuses:

1. Achieved: Values own independence; clear, consistent personality; ethically consistent behavior; warm, compassionate; productive; insight into own behavior.
2. In moratorium: Values own independence; philosophical concerns; basically anxious; rebellious, nonconforming; introspective; verbally fluent.
3. Foreclosed: Sex-appropriate behavior, satisfied with self, conventional, moralistic, conservative values, represses conflicts, overcontrol of impulses, self-defensive.

4. Diffuse: Unpredictable, avoids close relationships, brittle ego-defense system, reluctant to act, lacks sense of personal meaning, withdraws from frustration.

These prototype scores have shown their validity in the Mills, Radcliffe, and Institute of Human Development (IHD) longitudinal samples (e.g., Helson, 1992; Helson, Stewart, & Ostrove, 1995; Mallory, 1989). Because the Achieved and Diffuse prototypes showed a very high negative correlation, we used the Achieved prototype score to measure what we call the identity integration dimension. In a similar manner, the Foreclosed and Moratorium prototypes also showed a very high negative correlation, so we used the Foreclosed prototype score to measure the identity acceptance (vs. search) dimension. (The pattern of results does not change substantially if the Diffuse and Moratorium measures are used instead.)

*Personality characteristics.* Our measures of personality characteristics were drawn from the CPI (Gough & Bradley, 1996), an instrument that has been used to study individuals from middle adolescence to old age. CPI scales focus on three main themes: interpersonal assurance, norm adherence, and adaptive autonomy. Scores on the CPI were available for the Mills women at ages 21, 27, 43, and 52.

Besides the Competence scale, described previously under criteria of maturity, this study used CPI measures of ambition, openness, and self-control. Ambition was measured by the Capacity for Status scale. High scorers on this 28-item scale are ambitious and like the idea of being important, whereas low scorers are unsure of themselves and averse to competition (Gough & Bradley, 1996). Factor analyses of items on this scale identify the themes of poise and self-assurance, esthetic and cultural interests, optimism and confidence in ability to cope, and the advantages of status and success. Alpha reliability for a sample of 3,000 women was .74.

Because the standard CPI has no measure of openness, we made an openness index by compositing a special scale, Creative Temperament (Gough, 1992), and two measures of coping and defending, Tolerance of Ambiguity and Repression (reversed), that are scored from the CPI (Joffe & Naditch, 1977). The alpha reliability of the openness index at age 21 in the Mills sample was .81.

The Self-Control scale contains 38 items that include the themes of impulse control, modesty (vs. attention-seeking), and rule-following (Gough & Bradley, 1996). Extreme scores at each end of the scale are undesirable, but moderately high scorers are described as disciplined, stable, planful, and as preferring predictability over change, whereas moderately low scorers are described as spontaneous, adaptable, inclined to show their feelings and trust their intuitions, and as becoming bored with routine (McAllister, 1986). Alpha reliability of this scale for 3,000 women was .82 (Gough & Bradley, 1996).

*Lifestyle descriptors.* We drew on several questionnaire-based measures of adjustment or lifestyle, as follows:

1. Life satisfaction: At age 60, the women rated their life satisfaction on a 4-point scale ranging from 1 (*not so good*) to 4 (*first rate*).

2. Conventional social adjustment: The Index of Adult Adjustment (IAA; Picano, 1989) consists of subscales concerned with real-life indices of women's adjustment in different areas of functioning. To measure conventional social adjustment we used the social scale, which accords points for at least 10 years of intact marriage and experience in child rearing. The IAA was scored from data obtained at age 43.

3. Political attitudes: We used the women's self-rating (5-point scale) on a conservative versus liberal dimension of political attitudes at age 52.

4. Occupational creativity: The Occupational Creativity Scale (Helson, Roberts, & Agronick, 1995) was scored for the Mills sample at age 52. On the basis of the work of Holland (1985), women in conventional or realistic occupations receive a score of 1, those in social or enterprising occupations a score of 2, and those in artistic or intellectual occupations a score of 3–5, depending on the amount of recognition received for original contributions.

5. Satisfaction with aspects of work: At age 52, the women rated their satisfaction with various aspects of work on a 5-point scale. In this study, we used ratings of satisfaction with job security and benefits.

## Analyses

*The joint patterning of EM and PG.* From a conceptual standpoint, we were examining four positive mental health patterns formed by the conjoint patterning of high and low EM and PG. If these were categorical variables, the appropriate analysis would be a 2 (high vs. low EM) by 2 (high vs. low PG) ANOVA with main effects and an interaction. In our data, however, EM and PG were measured as continuous variables, not categorical variables. Although it would be possible to split EM and PG at their medians and use ANOVA, such an approach would entail a substantial and unnecessary loss of power (McClelland & Judd, 1993). A more appropriate strategy was to conduct regressions with EM mean-centered, PG mean-centered, and their cross product as an interaction term; this is a more general approach of which  $2 \times 2$  ANOVA is a special case (Keppel & Zedeck, 1989). Following the conventions for ANOVA and for regression (Aiken & West, 1991), we included main effects and interactions simultaneously in all analyses.

Regressions with interaction terms are not as intuitively interpretable as the cell means of ANOVAs. To facilitate interpretation, we used a modification of Aiken and West's (1991) recommendation in presenting the results of our analyses. To be specific, we used the standardized regression solutions to produce the equivalent of z-scored cell means for the dependent variables. This was done by solving each equation four times, by substituting in values of  $\pm 1$  standard deviation on EM and on PG. These are the values that are graphed in Aiken and West's procedure; our only departure is to present them in tabular form (where they can be evaluated like cell means). Thus, we have scores on the dependent variable for the Achievers, Conservers, Seekers, and Depleted that can be more easily interpreted.

*Modeling change with latent growth curves.* To test our predictions about change on the CPI Self-Control scale, we used latent growth curve modeling. Latent growth models quantify change over multiple assessments and treat it as an individual-difference variable. Similar or equivalent implementations of growth curve modeling are possible under different statistical techniques, such as mixed linear modeling and hierarchical linear modeling. We used a structural equation modeling approach (Muthen & Khoo, 1998) using the Amos 3.61 statistical package (Arbuckle, 1997). In this section, we provide details of how these models were specified.

In the structural equation modeling approach to growth curve modeling, latent variables are specified to represent the parameters of a growth function. Our models used two latent factors, Intercept and Growth. Both latent factors had four indicators, which were the self-control scores at the four assessment ages (21, 27, 43, and 52). The loadings for the latent Intercept factor were fixed at 1. For the latent Growth factor, two loadings were fixed in order to identify the model and two loadings were free; thus, the model estimated the shape of the growth function.<sup>2</sup> These specifications produced the following four equations that comprised the growth-curve part of the model ( $SC_a$  is the self-control score at age  $a$ ;  $\eta_0$  is the latent Intercept factor;  $\eta_1$  is the latent Growth factor;  $x_a$  are free factor loadings at ages  $a$ ; and  $\epsilon_a$  are uncorrelated residuals at ages  $a$ ):

$$SC_{21} = \eta_0 + \epsilon_{21}$$

$$SC_{27} = \eta_0 + \eta_1 + \epsilon_{27}$$

$$SC_{43} = \eta_0 + x_{43}\eta_1 + \epsilon_{43}$$

$$SC_{52} = \eta_0 + x_{52}\eta_1 + \epsilon_{52}$$

<sup>2</sup> In latent growth curve models, the shape of the curve can be estimated from the data or specified a priori. We tested a model that specified linear growth for self-control but found significantly better fit for the model that estimated the shape of the curve from the data. Because linear growth was not implied in our hypothesis, we present the results from the model with estimated growth.

The models also estimated the association between the latent Intercept and Growth factors and EM and PG. These regressions were represented in the model by the following two equations ( $\alpha_0$  is the level of Intercept when EM and PG are at their mean;  $\alpha_1$  represents Growth when EM and PG are at their mean; EM and PG are latent factors representing Environmental Mastery and Personal Growth, each scaled to a mean of 0 and standard deviation of 1;  $\zeta_0$  and  $\zeta_1$  are the residuals of the latent Intercept and Growth factors, which were free to covary in the model):

$$\eta_0 = \alpha_0 + \gamma_{01}EM + \gamma_{02}PG + \zeta_0$$

$$\eta_1 = \alpha_1 + \gamma_{11}EM + \gamma_{12}PG + \zeta_1$$

EM and PG were specified in each model as latent factors in order to increase power by minimizing measurement error. To create the latent factors, we averaged pairs of items into parcels, creating three indicators for each factor. The parceling procedure was Kishton and Widaman's (1994) method for creating domain-representative parcels.

Participants with EM and PG scores were included in the analysis if they had completed the Self-Control scale at two or more ages. Seventy percent of cases had complete data; 24% were missing one time point; 7% were missing two time points. We used full-information maximum likelihood estimation, an approach that is more robust against missing data than maximum likelihood with pairwise or listwise deletion (Wothke, 2000).

*Mediator models.* To test our hypothesis that identity statuses mediate the relation between early adult personality traits and the positive mental health patterns, we followed Baron and Kenny's (1986) procedure for testing mediators. This procedure involves three steps. First, we tested whether the predictor (a personality trait) was related to the outcome (EM or PG). Second, we tested whether the predictor was related to the mediator (identity status). Finally, we ran a multiple regression for EM or PG with both the predictor and the mediator in the equation. If the beta weight of the predictor is near zero, mediation may be inferred. If the beta weight of the predictor is smaller than its zero-order correlation with the outcome but not zero, partial mediation may be inferred. Partial mediation means that some of the effect of the predictor on the outcome is not explained by the mediator variable.

The mediator analyses were complicated by the fact that the positive mental health patterns were defined by two variables. We ran each mediator analyses separately for EM and for PG but interpreted the pair of analyses together. Furthermore, in cases where a personality trait was positively correlated with EM and negatively correlated with PG, we

controlled for PG in the EM analyses (and vice versa) to eliminate any suppressor effects (Cohen & Cohen, 1983).

If a predictor trait was positively associated with EM and negatively associated with PG and if both of those relationships were mediated by the identity status variable, then we concluded that the predictor trait contrasted the Conservers from the Seekers and that the effect of the trait was mediated by identity. If a predictor trait was positively associated with EM and positively associated with PG and the identity status variable mediated both of those relationships, we concluded that the predictor trait contrasted the Achievers from the Depleted and that the effect of the trait was mediated by identity.

## Results

### *Individual Differences on Criteria of Maturity*

A basic idea in this research is that the positive mental health patterns are associated with different kinds of adult development. To test this hypothesis, we examined four criteria of maturity: generativity, competence, wisdom, and ego development. In this and the following sections of the results, the left side of the tables presents the results in terms of the regression analyses with EM, PG, and their interaction. The results can be interpreted using the estimated values, presented on the right, associated with the Achievers, Conservers, Seekers, and Depleted.

Table 2 shows regressions of the criteria of maturity on EM, PG, and their interaction. Note that significant effects in the same direction for the standardized beta weights on EM and PG indicate a contrast between women who scored high and those who scored low on both scales, that is, between Achievers and the Depleted. Significant effects in opposite directions would indicate a contrast between Conservers and Seekers. An interaction between EM and PG indicates unique characteristics of patterning that the estimated values on the right side of the table help to identify.

The estimated values on the right side of the table indicate that the Achievers' distinctive area of development was generativity, which can be conceptualized as the active integration of agentic and communal motives in the service of prosocial goals (Bradley, 1997). The Conservers had their highest scores on the CPI Com-

Table 2  
*Regressions of Three Criteria of Adult Development Onto Environmental Mastery (EM), Personal Growth (PG), and Their Interaction*

Developmental criterion	Standardized regression weight and unstandardized weight (SE)			R	Estimated standard scores			
	EM	PG	EM × PG		Achievers	Conservers	Seekers	Depleted
Generativity (n = 96)	<i>.21*</i> 0.12 (0.06)	<i>.23*</i> 0.15 (0.07)	<i>-.05</i> -0.06 (0.10)	<i>.37*</i>	<b>.39</b>	.03	.07	-.49
CPI Competence Scale (n = 100)	<i>.27*</i> 2.84 (0.98)	<i>.22*</i> 2.81 (1.24)	<i>-.17*</i> -3.99 (1.86)	<i>.50*</i>	<b>.32</b>	<b>.22</b>	.12	-.66
Wisdom (n = 96)	<i>-.20†</i> -0.26 (0.13)	<i>.32*</i> 0.50 (0.16)	<i>-.04</i> -0.12 (0.26)	<i>.36*</i>	.08	-.48	<b>.56</b>	-.16
Ego development (n = 82)	<i>-.11</i> -0.27 (0.24)	<i>.39*</i> 1.09 (0.29)	<i>-.15†</i> -0.77 (0.46)	<i>.46*</i>	.13	-.35	<b>.65</b>	-.43

Note. Standardized regression weights appear in italics, with unstandardized weights below and standard errors in parentheses. Estimated standard scores are computed from the regression equations, using combinations of +/- 1 SD on EM and PG. Predicted high scores are in boldface. CPI = California Psychological Inventory. †  $p < .10$ . \*  $p < .05$ .

petence scale, a measure that addresses interpersonal adjustment, though across groups the main contrast was between the Depleted and all others. The Seekers scored highest on both wisdom and ego development, constructs that involve intrapsychic differentiation and integration. The Seekers' scores contrasted most sharply with those of Conservers on wisdom and with both Conservers and the Depleted on ego development. The Depleted consistently scored low across all criteria.

#### *Emotionality as a Long-Term Component of Positive Mental Health Patterns*

According to our conceptualization, the positive mental health patterns have their roots in long-term individual differences in emotionality. Because individual differences in emotionality in this sample were stable, we examined emotionality averaged across ages 27, 43, and 52.

Table 3 shows that, as predicted, EM was associated negatively with average ACL negative emotionality, and PG was associated with average ACL positive emotionality. Women with the two patterns high on PG, the Achievers and Seekers, were high on positive emotionality throughout young and middle adulthood, as contrasted with the Conservers and Depleted, who showed relatively little positive emotionality; in addition, women with the two patterns high on EM, the Achievers and Conservers, scored low on negative emotionality as contrasted with the Seekers and Depleted.

To ensure that these effects were due to stable individual differences in emotionality, we conducted follow-up analyses for the ACL scales separately at each age. Consistent with the aggregated analysis, negative emotionality had a significant negative association with EM at all three ages and had no association with PG or with the interaction term at any age. Also consistent with our earlier analysis, positive emotionality was positively associated with PG at 27 years of age and at 43 years of age and was unassociated with EM or the interaction term. At age 52, an interaction suggested that the typical positive emotionality results held for all patterns except the Achievers, who were somewhat lower in positive emotionality at 52 than at other ages. This finding was not hypothesized.

Looking at positive and negative emotionality together, the four mental health patterns appeared to be characterized by four distinctly different emotional worlds. The Achievers tended to accentuate positive emotions and minimize negative emotions. The

Conservers were characterized by relatively subdued emotions, consistent with affective dampening. The Seekers showed a much different pattern than the Conservers, reflecting a full range of both positive and negative emotions. Finally, the Depleted experienced relatively little positive emotionality and much negative emotionality.

#### *The Role of Identity in Positive Mental Health Patterns*

According to our hypotheses, identity structure is the basis of the mental health pattern. We first show evidence that the Achievers, Conservers, Seekers, and Depleted have distinct identities. Then we test the hypothesis that personality characteristics influence identity formation but that identity then absorbs and channels the influence of personality.

*Identity dimensions in relation to mental health patterns.* The observer-scored identity dimensions at age 43 were significantly related to EM and PG at age 60. As shown in Table 4, identity integration was related positively to both EM and PG. Identity acceptance (vs. search) was positively related to EM and negatively related to PG.

The estimated scores indicated that, as predicted, the Achievers had the most integrated identities, whereas the Depleted were the least integrated. The Conservers showed the most evidence of having accepted the identity expected of them, whereas the Seekers were the most likely to be searching for resolution of conflicts in identity.

*The influence of personality and the mediating role of identity.* According to our hypothesis, personality characteristics present in early adulthood set in motion different paths of identity formation. Identity then absorbs and channels the influence of personality in its relation to the mental health patterns.

We tested mediator models that would be consistent with this hypothesized process. To be specific, we examined the age-21 personality antecedents of two characteristics distinguishing the mental health patterns: capacity for status as a characteristic differentiating Achievers and the Depleted and openness as a characteristic differentiating Seekers and Conservers. We expected that the relations of these scales with EM and PG would be mediated by the identity dimensions.

As shown in Figures 2 and 3, the predicted pattern of mediation was obtained fully or partially in all analyses. Capacity for status at 21 was significantly related to EM and PG measured almost 40

Table 3  
*Regressions of Average Emotionality Across Three Ages Onto Environmental Mastery (EM), Personal Growth (PG), and Their Interaction*

Emotionality dimension	Standardized regression weight and unstandardized weight ( <i>SE</i> )			<i>R</i>	Estimated standard scores			
	EM	PG	EM × PG		Achievers	Conservers	Seekers	Depleted
Positive emotionality	<i>-.07</i> -0.47 (0.78)	<i>.26*</i> 2.51 (1.09)	<i>-.06</i> -0.96 (1.70)	.29†	.13	-.27	.39	-.25
Negative emotionality	<i>-.48*</i> -3.31 (0.73)	<i>.17</i> 1.58 (1.02)	<i>.09</i> 1.57 (1.59)	.50*	-.22	-.74	.56	.40

Note. *N* = 76. Standardized regression weights appear in italics, with unstandardized weights below and standard errors in parentheses. Estimated standard scores are computed from the regression equations, using combinations of +/- 1 *SD* on EM and PG.

† *p* < .10. \* *p* < .05.



Table 4  
*Regressions of Identity Status Dimensions Onto Environmental Mastery (EM), Personal Growth (PG), and Their Interaction*

Identity dimension	Standardized regression weight and unstandardized weight (SE)			R	Estimated standard scores			
	EM	PG	EM × PG		Achievers	Conservers	Seekers	Depleted
Integration	<i>.22*</i> 0.13 (0.06)	<i>.27*</i> 0.18 (0.07)	<i>-.04</i> -0.04 (0.11)	<i>.39*</i>	<b>.45</b>	-.01	.09	<b>-.53</b>
Acceptance	<i>.31*</i> 0.15 (0.05)	<i>-.44*</i> -0.26 (0.06)	<i>-.13</i> -0.13 (0.09)	<i>.50*</i>	-.26	<b>.88</b>	<b>-.62</b>	.00

Note. *N* = 96. Standardized regression weights appear in italics, with unstandardized weights below and standard errors in parentheses. Estimated standard scores are computed from the regression equations, using combinations of  $\pm 1$  SD on EM and PG. Estimated values that show the high and low values of a predicted effect are in boldface.  
 \*  $p < .05$ .

years later and to the mediator, identity integration, at age 43. The path coefficients suggest that identity integration almost fully mediates the long-term relationship between Capacity for Status scale scores and EM, and it partially mediates the relationship between Capacity for Status scale scores and PG.

We expected that the Openness index at age 21 would negatively predict later EM (after controlling for PG to eliminate a possible suppressor effect) and positively predict later PG (after controlling for EM). These relationships should be mediated by

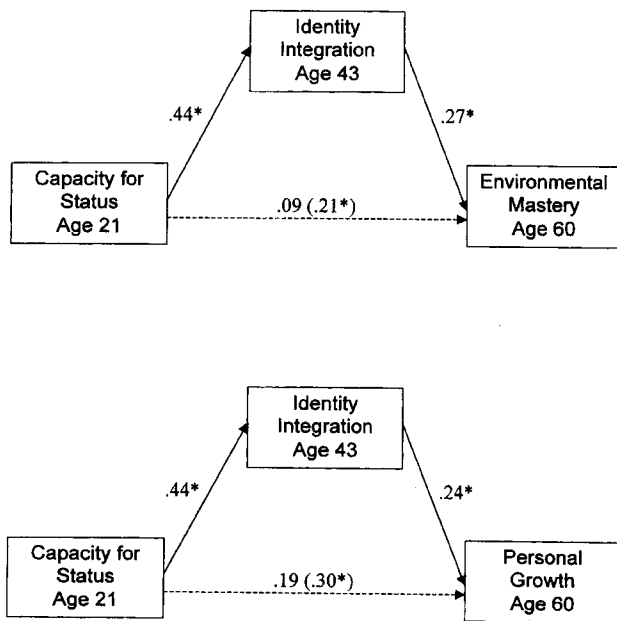


Figure 2. Two mediated path models (*N* = 94) when considered concurrently contrast the Achievers from the Depleted. The numbers next to the arrows are standardized path coefficients from the final regression model, and the numbers in parentheses are zero-order correlations. Dashed lines indicate the mediated effect. \*  $p < .05$ .

identity acceptance at age 43. These results (Figure 3) were basically consistent with our predictions. The relationship between the Openness index at 21 and EM at 60 was almost fully mediated by identity acceptance, whereas the relationship between

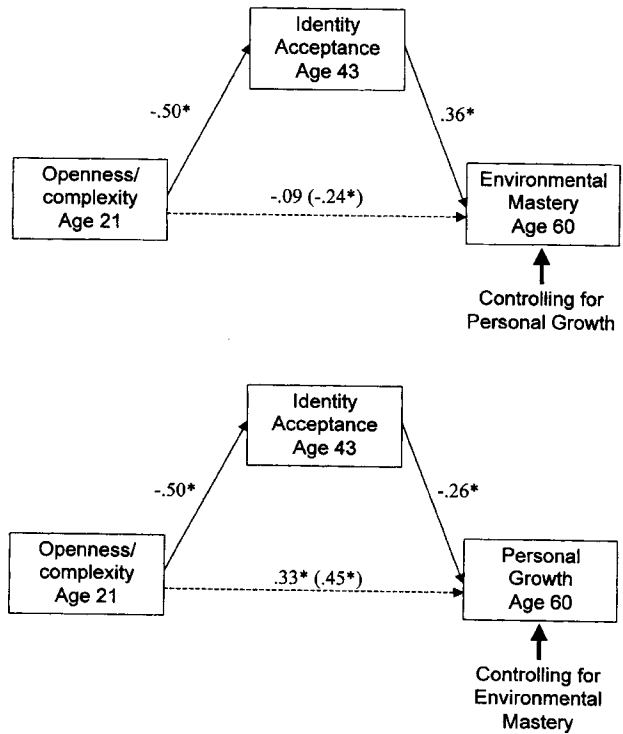


Figure 3. Two mediated path models (*N* = 94) when considered concurrently contrast the Conservers from the Seekers. The numbers next to the arrows are standardized path coefficients from the final regression model, and the numbers in parentheses are standardized coefficients after controlling for Personal Growth (top panel) or Environmental Mastery (bottom panel). Dashed lines indicate the mediated effect. \*  $p < .05$ .

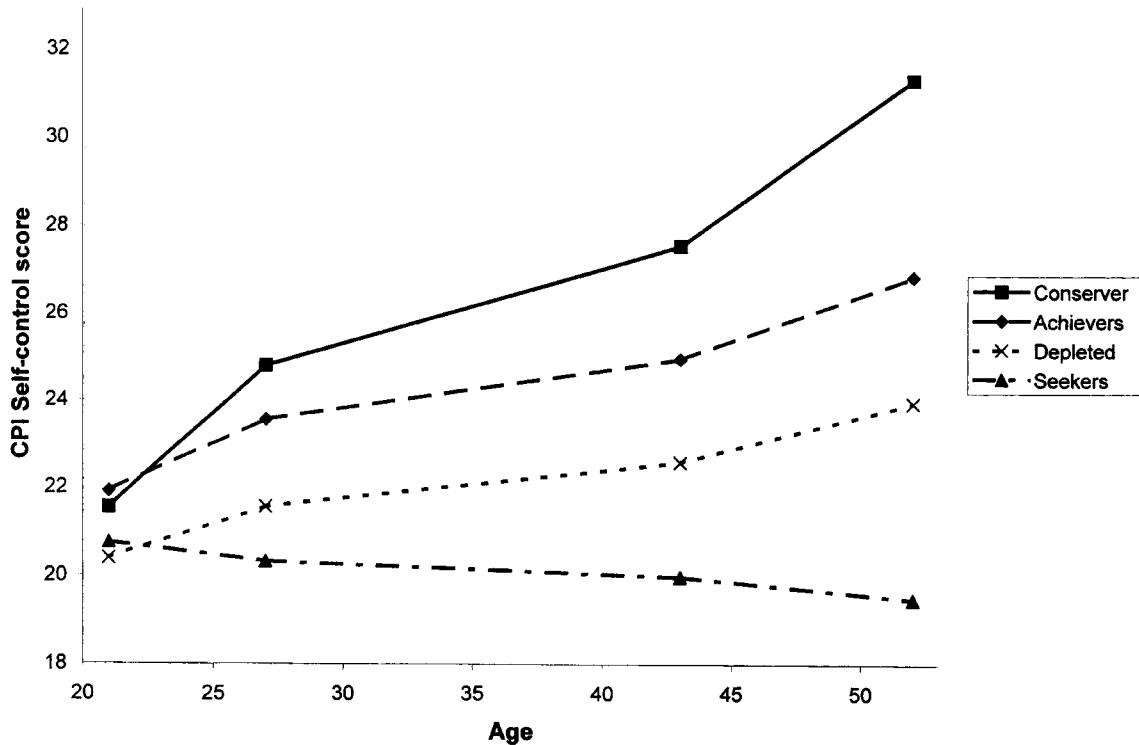


Figure 4. Growth curves for Achievers, Conservers, Seekers, and the Depleted. Values are estimated from the growth curve equations using combinations of  $\pm 1$  SD on Environmental Mastery and Personal Growth. CPI = California Psychological Inventory.

tween Openness and PG was partially mediated by identity acceptance.<sup>3</sup>

#### *Change in Self-Control Related to Positive Mental Health Pattern*

We expected that Achievers and Conservers, whose maturity is most evident in the area of social and interpersonal competence, would show increasing effectiveness within social norms and increasing scores on the Self-Control scale over time. The Seekers, whose maturity was most evident in intrapsychic development, were expected to show increasing independence of social norms and decreasing scores on the Self-Control scale over time. We used a growth curve model to examine EM, PG, and change on the Self-Control scale of the CPI. Overall model fit was excellent,  $\chi^2(31, N = 106) = 26.08, p = .71$ , indicating that our growth model was a good representation of the data. (Other fit statistics, as well as model parameter estimates, are in the Appendix.)

On average, the full sample significantly increased in self-control ( $p < .05$ ), but the mental health patterns varied in how close they were to the average. Figure 4 shows self-control growth curves for Achievers, Conservers, Seekers, and Depleted. Nonsignificant regressions of the Intercept factor onto EM (standardized weight of .11) and PG (.03) reflect the fact that at age 21, the mental health patterns were not distinct from each other. However, they spread apart over time. Across the 31-year span of the model,

both EM and PG were significantly associated with the Growth factor (.37 for EM and  $-.29$  for PG).

The figure illustrates the different directions and magnitudes of these effects for the mental health patterns. The Conservers increased the most sharply over time. Gough and Bradley (1996) indicated that high Self-Control scale scores (around 32 and above) are characteristic of maladaptive overcontrol; the Conservers approached (but did not on average reach) the level where this becomes an issue, suggesting that most of them were highly controlled but still quite functional. The Achievers also increased in self-control over time, though less sharply than the Conservers. The Seekers decreased slightly over time. Like the Conservers, the Seekers did not reach levels where the scores typically indicate

<sup>3</sup> One potential criticism of this analysis is that identity might have appeared to play a mediating role only because it was measured closer in time to EM and PG than were the personality dimensions. We re-ran the analyses using scores from the Capacity for Status and Openness Scales from age 43 and obtained a similar pattern of full and partial mediation. However, both the zero-order correlations between age-43 personality scales and EM were only marginally significant ( $p < .10$ ). This finding is inconsistent with our results being an artifact of age of measurement and may further support the idea that identity formation and development in young adulthood is important for the later development of the positive mental health patterns.

poor functioning. The Depleted hovered between the other groups, increasing slightly over time.

### *Lifestyle Descriptors of the Positive Mental Health Patterns*

The constructs that we examined in relation to positive mental health (maturity, emotionality, identity, personality traits) represent important structures and processes in personality. In this section, we report on lifestyle descriptors to help illustrate the contexts in which these structures and processes are embedded.

Analyses of lifestyle descriptors are reported in Table 5. Life satisfaction at age 60 was associated with EM, and there was a significant interaction between EM and PG. Conservers scored highest, and the Depleted scored much lower than any other pattern. The Depleted were also the only pattern to score below the mean, suggesting that to have any of the positive mental health patterns is sufficient to feel at least moderately satisfied with life.

On conventional social adjustment at age 43, the interaction between EM and PG reflected a different pattern, with Conservers scoring highest and Achievers lowest. The coding system for conventional social adjustment required women who scored high to have had at least 10 years of intact marriage by age 43 and experience with child rearing, suggesting that the Achievers might have made sacrifices in their family lives for their careers.

On political liberalism, beta weights significant in opposite directions on EM and PG indicated a contrast between Seekers (high) and Conservers (low). Seekers were most politically liberal and Conservers most conservative, consistent with their high and low openness, and the Achievers and Depleted fell in between.

On occupational creativity, the same pattern of beta weights made a similar distinction. Both Seekers and Achievers scored relatively high, but the marked contrast was between Seekers and Conservers. Satisfaction with job security and benefits, however, was associated with EM, with Achievers feeling most secure and Seekers least secure. These findings reflect the preference of

Seekers for stimulation and self-exploration (creative expression) at the cost of security.

### Discussion

We started out with the aim of studying people whose motivations and skills led them to develop in different but equally positive ways. We thought that one promising basis for constituting such groupings might be the relative emphasis on effective behavior in the outer world versus differentiated intrapsychic processes. Two of Ryff's (1989) positive mental health scales, Environmental Mastery (EM) and Sense of Personal Growth (PG), seemed to offer good measures of these two constructs. Using the personality correlates of EM and PG reported by Schmutte and Ryff (1997) as guides, we labeled patterns of high and low scores on these scales as those of Conservers, Seekers, Achievers, and (low scores on both scales) the Depleted. Before proceeding further, it may be helpful to provide an abbreviated sketch of a woman with each of the three positive mental health patterns. Of course, no case is typical in all respects.

#### *Sketches of a Conserver, a Seeker, and an Achiever*

*Cathy, a Conserver.* After graduation from college, Cathy chose to marry a young man approved of by her family over another who was not. As was expected in the late 1950s, she soon became a mother. After a few years, the husband came into professional difficulties. Cathy felt that the family's status in the community and the security of her children were at risk; she went to work to help to ensure their future. She worked in a people-oriented field at a high level of competence for 20 years, retiring, in part, because she felt that with changing times the people with whom she dealt had become increasingly antagonistic and disrespectful. Since her retirement, her organizational skills have been much sought out by volunteer groups, including her church. Cathy's view is that "God gave me talents, and when I succeed it is God working through me." She and her husband are now devoted to each other and live in a beautiful community.

**Table 5**  
*Regressions of Lifestyle Descriptors Onto Environmental Mastery (EM), Personal Growth (PG), and Their Interaction*

Life style descriptor	Standardized regression weight and unstandardized weight (SE)			R	Estimated standard scores			
	EM	PG	EM × PG		Achievers	Conservers	Seekers	Depleted
Life satisfaction ( <i>n</i> = 106)	<i>.26*</i> 0.32 (0.11)	<i>.10</i> 0.14 (0.13)	<i>-.25*</i> -0.64 (0.21)	<i>.47*</i>	.11	.41	.09	-.61
Conventional social adjustment ( <i>n</i> = 71)	<i>-.04</i> -0.08 (0.25)	<i>-.17</i> -0.43 (0.31)	<i>-.32*</i> -1.52 (0.49)	<i>.36*</i>	-.53	.45	.19	-.11
Political liberalism ( <i>n</i> = 90)	<i>-.31*</i> -0.73 (0.24)	<i>.35*</i> 1.01 (0.30)	<i>-.08</i> -0.40 (0.44)	<i>.44*</i>	-.04	-.58	.74	-.12
Occupational creativity ( <i>n</i> = 109)	<i>-.18†</i> -0.35 (0.18)	<i>.37*</i> 0.84 (0.22)	<i>.03</i> 0.12 (0.34)	<i>.38*</i>	.22	-.58	.52	-.16
Satisfaction with job security and benefits ( <i>n</i> = 78)	<i>.27*</i> 0.70 (0.29)	<i>-.06</i> -0.20 (0.43)	<i>.13</i> 0.75 (0.65)	<i>.29</i>	.34	.20	-.46	-.08

*Note.* Standardized regression weights appear in italics, with unstandardized weights below and standard errors in parentheses. Estimated standard scores are computed from the regression equations, using combinations of  $\pm 1$  SD on EM and PG.

†  $p < .10$ . \*  $p < .05$ .

*Sarah, a Seeker.* As a college senior, Sarah was described by an interviewer as unusually perceptive but as having an awkward social tendency to disengage abruptly. She did very well in graduate school but dropped out when she unexpectedly became pregnant and had to accommodate to the pressures of marriage, family, and her husband's moves. As her children grew older, she resumed her professional training. A discovery she made about herself was that she had been disengaging from others to maintain autonomy and the illusion of uniqueness. She worked at changing her interpersonal style and becoming more sociable. In her present position, Sarah persists through much negative emotionality in the individuals with whom she deals "to see the good and the promising in all individuals." She finds the conditions in which she employs her skills far from optimal, but she tries to work around bureaucratic regulations and limited financial resources. She would like to find better work circumstances, but she does not put out sustained effort to do this. Her personal life is "quietly non-conforming," and someday "I'm going to write the great American novel."

*Andrea, an Achiever.* Unlike most of her classmates, Andrea did not want to marry or have children. She went straight from college to professional school, where she was in a beauty pageant as well as being an academic star. She continued her career progress after leaving school but began to drink heavily. With great determination she overcame this problem and at age 40, when she had attained the position she wanted and had her life under control, she married a charming and successful man. They had no children but she maintained good relations with his children. The couple retired from their careers early, went on to second careers at least as interesting as the first, then each became active in volunteer work. Andrea relates the intensity of her early achievement strivings to severe problems of her childhood, which she has overcome to an impressive degree.

### *Limitations and Strengths of the Study*

This study has its limitations. It is based on one longitudinal sample consisting entirely of women. Several important measures were available at only one time of testing, so hypotheses about continuity and change could not always be tested directly. On the other hand, it reports quantitative data from more than 100 women at up to five times in their adult lives. Most of the data come from well-known instruments of different kinds: an inventory and checklist, standardized observer ratings, and free responses coded in standardized ways. It includes measures of emotionality, personality, identity, and several criteria of adult development as well as hypotheses about how all of these are related to the positive mental health patterns over 40 years.

These findings are clear: The three patterns of positive mental health, identified in the participants of the Mills Longitudinal Study at age 60, were preceded by distinct configurations of emotionality, identity, and personality through time and were associated with different patterns of performance on criteria of maturity. We comment first on the role of emotionality, identity, and personality change in the development of the mental health patterns, then turn to general issues and implications.

### *Developmental Topics*

*Emotionality.* The four mental health patterns showed all four possible configurations of high and low scores on positive emotionality and negative emotionality, and these were largely consistent over three times of testing. This finding suggests that we are dealing with basic elements in strategies for mental health. The findings fit the hypotheses that Achievers would be characterized by resilient emotional regulation and generally positive affect, Conservers by a strategy of affect dampening, and Seekers by a strategy of deviation amplification.

Labouvie-Vief, Romano, Diehl, Nanos-Nigro, and Bourbeau (2000) suggested that the affect-dampening and deviation amplification strategies of emotional regulation are basic in self-organization (e.g., the differentiation of the positively valenced self and the dreaded self). Thus, one may speculate that security is valued by the Conservers because it represents protection against an unintegrated dreaded self, and the sense of personal growth is valued by Seekers because it represents an integration of their continual experience of mixed affects, such as anxiety or resentment along with interest and positive self-regard. Conceptualized in this way, the strategies of emotion regulation and the organization of the self would seem to be related to the open-closed dimension of personality, perhaps through the coping techniques of tolerance of ambiguity versus repression (included in our Openness index, which we found to have a long-term relation to identity status and to positive mental health pattern). Individual differences in the developing relations between emotionality, emotional regulation, and personality in life span context is an area of research that should lead to important new perspectives (e.g., Magai & McFadden, 1996).

*Identity.* In our conceptualization, identity as it is consolidated becomes a key feature of the positive mental health pattern. We found, as predicted, that by age 43 Achievers had integrated identities, Conservers were characterized by identity acceptance, and Seekers were distinguished by identity searching. We hypothesized that personality characteristics influence the formation of identity, and that identity processes then absorb the influence of personality. To test this idea, we showed that identity processes at age 43 mediated the relationship between personality characteristics at age 21 and EM and PG at age 60. Thus, early adult personality characteristics may be seen as exerting much of their influence on the positive mental health patterns by encouraging or inhibiting the formation of different identity structures. These findings make a contribution to addressing the important and neglected question of the relation between personality traits and identity, and they support the view that identity is a major integrative factor in adult development (Roberts & Caspi, in press; Whitbourne, 1996).

*Change in personality.* Our general belief is that personality change accompanies and contributes to the increasing coherence of positive mental health patterns. In particular, we hypothesized that Conservers and Achievers would increase in effectiveness within the structure of social norms, whereas Seekers would become more independent of social norms. To test this idea, we examined change on the CPI Self-Control scale. Growth curve analyses supported our hypotheses.

We link these differences in change in self-control to the idea that individuals who form integrated or acceptant (foreclosed)

identities make commitments to goals such as success in family or work that are facilitated and rewarded by adherence to social and interpersonal norms. Women with acceptant identities in particular may try to maintain stability and predictability through control of their own feelings and behavior. In support of this idea is the fact that Mills women who maintained the traditional homemaker role had increased in self-control more than other groups of women between the ages of 21 and 43 (Helson & Picano, 1990). However, increases on this scale are associated with work commitments also: For example, a sample of women physicians studied first as medical students at age 24 and later as successful physicians at age 46 (Cartwright & Wink, 1994) had increased in self-control.

As compared with the Conservers and Achievers, Seekers were less concerned with social goals and more concerned with self-exploration. They were often engaged in artistic or intellectual work that rewards spontaneity or making connections that are out of ordinary awareness. Over time they became less motivated to control themselves according to conventional standards and became more tolerant or trustful of their own feelings and intuitions.

The idea that adult personality does not change after age 30 in more than a minimal way (e.g., Costa & McCrae, 1997) is contradicted by much cross-sectional and longitudinal evidence obtained with Big Five and other personality inventories (see reviews by Helson & Kwan, 2000, and Helson, Kwan, John, & Jones, 2000). Studies using the CPI consistently report that scores on the Self-Control scale increase with age, as we found in this study. What is new in this study is our use of growth curve modeling to demonstrate individual differences in change on this scale. Figure 4 shows the insufficiency of attending to normative change alone. The fact that these individual differences in change were not best fit by a linear model is further evidence that much current investigation of personality change is too simple.

### *Issues and Implications for the Study of Adult Development*

In this section, we discuss the consistency of positive mental health patterns and the generality of our findings, then summarize what we see as implications for the study of positive adult development.

*The consistency of positive mental health scales and patterns.* Ryff (Schmutte & Ryff, 1997) described the scales of positive well-being as more sensitive to environmental factors and less stable than personality traits. Because the Ryff scales were developed recently, they are available in the Mills sample only at age 60, so we cannot address the question of the long-term consistency of EM and PG and their patterning. We have no doubt that Ryff is correct in her view that life situation (see Ryff & Essex, 1992) affects appraisals of one's positive mental health. Integration through achievement goals occurred in some Mills women in adolescence but was a relatively late development in the lives of others. Mood states (such as depression after bereavement) must have affected scores. Because there are many reasons for change or perturbations on the Ryff scales, it is all the more impressive that this study shows a coherent body of longitudinal findings predicting the positive mental health patterns at age 60. We believe that

large permanent changes are rare because identity patterns maintain consistency and monitor change.

*Values and the conceptualization of the positive mental health patterns.* Future research might profitably examine the Conservers, Seekers, and Achievers explicitly in terms of values. Values are a part of one's identity (Erikson, 1964). They are diverse and often incompatible (Allport & Vernon, 1931; Schwartz, 1992). Theorists typically consider them to be evaluatively equal. Thus, the idea of incompatible but equally mature paths of development becomes even more compelling if one thinks in terms of different individuals moving toward different goals in accord with different values.

Our terms, Conserver, Seeker, and Achiever, have connotations of values along with motivations and skills, and they map well on Schwartz's (1992) framework of universal values. One dimension of this framework is open-closed. People at the open pole value change, stimulation, and self-directedness, as our Seekers do. People at the closed pole value conservation, tradition, conformity, and security, as our Conservers do. The other dimension of Schwartz's framework is self-enhancing versus self-transcending. People at the self-enhancing pole value achievement or power, as our Achievers do. Thus, our three positive well-being groups all map on to the Schwartz framework. We have no direct match for Schwartz's self-transcending pole, with its values of universalism and benevolence. The Depleted group, of course, does not fit; one could not expect low scores on two measures of mental health to describe individuals with self-transcending values. Nevertheless, the extent to which our groups match this framework of universal values provides evidence for the generality and importance of the patterns we have described.

*Other evidence for generality of findings.* Ideas and findings similar to various parts of ours have been reported in other samples. For example, using the intergenerational samples of men and women originally studied at the IHD, Dillon and Wink (2000) and Wink and Dillon (in press) contrasted highly religious and highly spiritual individuals in the extent to which they emphasized outer-directed effectiveness (good deeds, maintaining positive relations with others) or the inner-directed process of self-exploration and personal growth over the course of their lives. Labouvie-Vief and Medler (1998), using a Detroit community sample of men and women over a wide age range, reported correlates of patterns of positive and negative affect that are similar to our findings and that they themselves described as parallel to the Marcia identity status patterns. Our findings about identity are consistent with studies of identity status prototypes in IHD and Radcliffe samples (Helson, Stewart, & Ostrove, 1995; Mallory, 1989). Josselson (1978, 1996) gave an identity status interview to a sample of women who graduated from one of four nonelite colleges or universities in the Midwest in 1972. She interviewed them in college and at ages 33 and 43. Her descriptions of Pathmakers, Guardians, Searchers, and Drifters are quite similar to our Achievers, Conservers, Seekers, and Depleted.

*The challenge of gender and cohort.* We identified our positive mental health patterns among educated women of a particular sample and cohort, and we have tried to interpret the findings within the context of being a woman of this cohort. The heterogeneity of personality and lifestyle in the Mills sample was certainly advantageous for the demonstration of a variety of positive developmental paths. Though we believe that these positive mental

health patterns can be found across cohort and gender and have given some evidence for this belief, it would be interesting to explore how the development of the patterns is affected by social contexts. For example, we would not expect a male achiever to have the low conventional social adjustment of many of the female achievers in the Mills sample, though he might similarly devote less energy to personal relationships.

*The many individual differences in development.* Others have laid out important individual differences in life paths from childhood to adulthood. Block (1971) pioneered this line of personality research, describing what were predominantly ineffective types, and Caspi, Bem, and Elder (1989) showed the lifelong influence of shyness and bad temper. Our attention has been devoted to positive adult development, but even within this domain we make no claim to have described all of the important individual differences. For example, the contrast between agentic and communal and the mitigation of each with the other (Bakan, 1966) is important in McAdams's work (1988) and resonates with current interest in communal and relational alternatives to the excesses of individualism (e.g., Markus & Kitayama, 1991; Ryff & Singer, 1998). Perhaps others can apply some of our procedures to study what might be construed as the development of self-enhancing versus self-transcendent values.

*Attaining the good life.* We have laid out an important set of multiple paths in positive adult development, and the question now is whether the evidence supports the premise that no one of these is best. One may protest that the Achievers were closer to the ideal than the Conservers and Seekers: They had integrated identities, they were the most generative and scored as high as the Conservers on competence, and they combined many of the advantages of both EM and PG. Of course, achievement is one of the strongest values in the United States. The overcoming of obstacles and persistence in striving toward goals is admirable to members of our culture, and people who have taken this path receive social support. This is somewhat less the case with women, and applause for the Achievers may be checked a bit by their relational histories. It seems that there are, indeed, some trade-offs. In attaining their goals, some Achievers made sacrifices in the area of intimacy, and some had not spent the time in reflection that is necessary for high levels of ego development and wisdom. In a similar manner, in building a secure world for themselves many Conservers shut out too much, and in focusing on individual development many Seekers achieved less than they would have liked and often lacked the sense of living with others comfortably.

The findings of this article suggest that positive mental health patterns develop through the meshing of processes of emotion regulation, personality, identity, and life experience. If so, strategies for getting the most out of life have deep roots. This is not to say that changes in mental health pattern do not occur, but other studies may be better able to make that point than ours. That there is considerable consistency, increasing over time, in what people value and work to attain is one important point of our study, and another is that none of the positive mental health patterns has a unique relation to adult development.

## References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

- Allport, G. W. (1961). *Pattern and growth in personality*. New York: Holt, Reinhart & Winston.
- Allport, G. W., & Vernon, P. E. (1931). *A study of values: A scale for measuring the dominant interests in personality, manual of directions*. New York: Houghton Mifflin.
- Arbuckle, J. L. (1997). Amos 3.61 [Computer software]. Chicago: Smallwaters.
- Bakan, D. (1966). *The duality of human existence*. Chicago: Rand McNally.
- Baltes, P. B., Staudinger, U. M., Maercker, A., & Smith, J. (1995). People nominated as wise: A comparative study of wisdom-related knowledge. *Psychology and Aging, 10*, 155–166.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182.
- Baumeister, R. F. (1986). *Identity: Cultural change and the struggle for self*. New York: Oxford University Press.
- Block, J. (1971). *Lives through time*. Berkeley, CA: Bancroft.
- Block, J. (1978). *The Q-sort method in personality assessment and psychiatric research*. Palo Alto, CA: Consulting Psychologists Press.
- Block, J. H., & Block, J. (1980). The role of ego-control and ego-resiliency in the organization of behavior. In W. A. Collins (Ed.), *Minnesota symposia on child psychology* (Vol. 13, pp. 39–101). Hillsdale, NJ: Erlbaum.
- Bradley, C. L. (1997). Generativity–stagnation: Development of a status model. *Developmental Review, 17*, 262–290.
- Buehler, C., & Massarik, F. (1968). *The course of human life: A study of goals in the humanistic perspective*. New York: Springer-Verlag.
- Cartwright, L. K., & Wink, P. (1994). Personality change in women physicians from medical student years to mid-40s. *Psychology of Women Quarterly, 18*, 291–308.
- Carver, C. S., & Scheier, M. F. (1990). Origins and functions of positive and negative affect: A control-process view. *Psychological Review, 97*, 19–35.
- Caspi, A., Bem, D. J., & Elder, G. H., Jr. (1989). Continuities and consequences of interactional styles across the life course. *Journal of Personality, 57*, 375–406.
- Clausen, J. A. (1993). *American lives: Looking back at children of the Great Depression*. Chicago: University of Chicago Press.
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum.
- Costa, P. T., & McCrae, R. R. (1980). Influence of extraversion and neuroticism on subjective well-being: Happy and unhappy people. *Journal of Personality and Social Psychology, 38*, 668–678.
- Costa, P. T., & McCrae, R. R. (1992). *NEO-PI-R professional manual*. Odessa, FL: Psychological Assessment Resources.
- Costa, P. T., Jr., & McCrae, R. R. (1997). Longitudinal stability of adult personality. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* (pp. 269–290). San Diego: Academic Press.
- Dillon, M., & Wink, P. (2000). *The differential effects of religiosity and spirituality on self- and other-orientation: Findings from a longitudinal study*. Unpublished manuscript.
- Eisenberg, N., Fabes, R. A., Guthrie, I. K., & Reiser, M. (2000). Dispositional emotionality and regulation: Their role in predicting quality of social functioning. *Journal of Personality and Social Psychology, 78*, 136–157.
- Erikson, E. H. (1964). *Childhood and society*. New York: Norton.
- Gough, H. G. (1992). Assessment of creative potential in psychology and the development of a creative temperament scale for the CPI. In J. C. Rosen & P. McReynolds (Eds.), *Advances in psychological assessment* (Vol. 8, pp. 225–257). New York: Plenum.
- Gough, H. G., & Bradley, P. (1996). *California Psychological Inventory manual* (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.

- Gough, H. G., Bradley, P., & Bedeian, A. G. (1996). *ACL scales for Tellegen's three higher-order traits*. Unpublished manuscript.
- Gough, H. G., & Heilbrun, A. B., Jr. (1983). *The Adjective Check List manual*. Palo Alto, CA: Consulting Psychologists Press.
- Helson, R. (1967). Personality characteristics and developmental history of creative college women. *Genetic Psychology Monographs*, 76, 205–256.
- Helson, R. (1992). Women's difficult times and the rewriting of the life story. *Psychology of Women Quarterly*, 16, 331–347.
- Helson, R., & Klohnen, E. C. (1998). Affective coloring of personality from young adulthood to midlife. *Personality and Social Psychology Bulletin*, 24, 241–252.
- Helson, R., & Kwan, V. (2000). Personality change in adulthood: The broad picture and processes in one longitudinal study. In S. Hampson (Ed.), *Advances in personality psychology* (Vol. 1, pp. 77–106). Hove, England: Psychology Press.
- Helson, R., Kwan, V., John, O. P., & Jones, C. (2000). *Growing evidence for personality change in adulthood: Findings from research with inventories*. Manuscript submitted for publication.
- Helson, R., & Picano, J. (1990). Is the traditional role bad for women? *Journal of Personality and Social Psychology*, 59, 311–320.
- Helson, R., Roberts, B. W., & Agronick, G. S. (1995). Enduringness and change in creative personality and the prediction of occupational creativity. *Journal of Personality and Social Psychology*, 69, 1173–1183.
- Helson, R., & Srivastava, S. (2001). *Creative and wise people: Similarities, differences, and how they develop*. Unpublished manuscript.
- Helson, R., Stewart, A. J., & Ostrove, J. (1995). Identity in three cohorts of midlife women. *Journal of Personality and Social Psychology*, 69, 544–557.
- Helson, R., & Wink, P. (1987). Two conceptions of maturity examined in the findings of a longitudinal study. *Journal of Personality and Social Psychology*, 53, 531–541.
- Holland, J. L. (1985). *Making vocational choices: A theory of vocational personalities and work environments*. Englewood Cliffs, NJ: Prentice Hall.
- Joffe, P., & Naditch, M. (1977). Paper and pencil measures of coping and defending processes. In N. Haan (Ed.), *Coping and defending* (pp. 280–298). New York: Academic Press.
- John, O. P., & Benet-Martinez, V. (2000). Measurement: Reliability, construct validation, and scale construction. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 339–369). New York: Cambridge University Press.
- Josselson, R. (1978). *Finding herself: Pathways to identity development in women*. San Francisco: Jossey-Bass.
- Josselson, R. (1996). *Revising herself: The story of women's identity from college to midlife*. New York: Oxford.
- Jung, C. G. (1971). Psychological types. In H. Read, M. Fordham, G. Adler, & W. McGuire (Series Eds.), *Collected works* (Vol. 6). Princeton, NJ: Princeton University Press.
- Keppel, G., & Zedeck, S. (1989). *Data analysis for research designs: Analysis of variance and multiple regression/correlation approaches*. New York: Freeman.
- Kishton, J. M., & Widaman, K. F. (1994). Unidimensional versus domain representative parceling of questionnaire items: An empirical example. *Educational and Psychological Measurement*, 54, 757–765.
- Labouvie-Vief, G., & Medler, S. M. (1998, November). *Positive, negative, and complex affect: Their roles in life span development*. Paper presented at the annual meeting of the Gerontological Society of America, Philadelphia, PA.
- Labouvie-Vief, G., Romano, E. H., Diehl, M., Nanos-Nigro, E., & Bourbeau, L. (2000). *Differentiation and affective valence of self-facets: A life-span developmental study*. Manuscript submitted for publication.
- Loevinger, J. (1976). *Ego development*. San Francisco: Jossey-Bass.
- Loevinger, J., & Wessler, R. (1970). *Measuring ego development* (Vol. 1). San Francisco: Jossey-Bass.
- Magai, C., & McFadden, S. H. (Eds.). (1996). *Handbook of emotion, adult development, and aging*. San Diego: Academic Press.
- Mallory, M. E. (1989). Q-sort definition of ego identity status. *Journal of Youth and Adolescence*, 18, 399–412.
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology*, 3, 551–558.
- Marcia, J. E. (1980). Ego identity development. In J. Adelson (Ed.), *Handbook of adolescent psychology* (pp. 159–187). New York: Wiley.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224–253.
- McAdams, D. P. (1988). *Power, intimacy, and the life story*. Homewood, IL: Dorsey Press.
- McAllister, L. W. (1986). *A practical guide to CPI interpretation*. Palo Alto, CA: Consulting Psychologists Press.
- McClelland, G. H., & Judd, C. M. (1993). Statistical difficulties of detecting interactions and moderator effects. *Psychological Bulletin*, 114, 376–390.
- Muthen, B. O., & Khoo, S. T. (1998). Longitudinal studies of achievement growth using latent variable modeling. *Learning and Individual Differences*, 10, 73–101.
- Myers, D. G., & Diener, E. (1995). Who is happy? *Psychological Science*, 6, 10–19.
- Peterson, B. E., & Klohnen, E. C. (1995). The realization of generativity in two samples of midlife women. *Psychology and Aging*, 10, 20–29.
- Picano, J. J. (1984). *Ego development and adaptation in middle-aged women*. Unpublished doctoral dissertation, University of California, Berkeley.
- Picano, J. J. (1989). Development and validation of a life history index of adult adjustment for women. *Journal of Personality Assessment*, 53, 308–318.
- Roberts, B. W., & Caspi, A. (in press). The cumulative continuity model of personality development: Striking a balance between continuity and change in personality traits across the life course. In R. M. Staudinger & U. Lindenberger (Eds.), *Understanding human development: Lifespan psychology in exchange with other disciplines*. Dordrecht, The Netherlands: Kluwer Academic.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069–1081.
- Ryff, C. D., & Essex, M. J. (1992). The interpretation of life experience and well-being: The sample case of relocation. *Psychology and Aging*, 7, 507–517.
- Ryff, C. D., & Singer, B. (1998). The contours of positive human health. *Psychological Inquiry*, 9, 1–28.
- Schmutte, P. S., & Ryff, C. D. (1997). Personality and well-being: Reexamining methods and meanings. *Journal of Personality and Social Psychology*, 73, 549–559.
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, 25, 1–65.
- Tellegen, A. (1985). Structures of mood and personality and their relevance to assessing anxiety, with an emphasis on self-report. In A. H. Tuma & J. D. Maser (Eds.), *Anxiety and the anxiety disorders* (pp. 681–706). Hillsdale, NJ: Erlbaum.
- Watson, D., & Walker, L. M. (1996). The long-term stability and predictive validity of trait measures of affect. *Journal of Personality and Social Psychology*, 70, 567–577.
- Weiser, N. L., & Meyers, L. S. (1993). Validity and reliability of the revised California Psychological Inventory's Vector 3 Scale. *Educational and Psychological Measurement*, 53, 1045–1054.
- Whitbourne, S. K. (1996). Psychosocial perspectives on emotions: The role of identity in the aging process. In C. Magai & S. H. McFadden (Eds.),

*Handbook of emotion, adult development, and aging* (pp. 83–98). San Diego: Academic Press.

Wink, P., & Dillon, M. (in press). Religious involvement and health outcomes in late adulthood: Findings from a longitudinal study of women and men. In T. Plante & A. Sherman (Eds.), *Faith and health*. New York: Guilford Press.

Wink, P., & Helson, R. (1997). Practical and transcendent wisdom: Their nature and some longitudinal findings. *Journal of Adult Development*, 4, 1–15.

Wothke, W. (2000). Longitudinal and multi-group modeling with missing data. In T. D. Little, K. U. Schnabel, & J. Baumert (Eds.), *Modeling longitudinal and multiple group data: Practical issues, applied approaches and specific examples* (pp. 219–240). Mahwah, NJ: Erlbaum.

York, K. L., & John, O. P. (1992). The four faces of Eve: A typological analysis of women's personality at midlife. *Journal of Personality and Social Psychology*, 63, 494–508.

## Appendix

## Latent Growth Curve Analysis of Self-Control, With Environmental Mastery and Personal Growth as Exogenous Latent Predictors of the Growth Parameters

Parameter	Estimate	SE	Standardized estimate	Critical ratio
Intercept	21.16	0.54		39.54
<b>Growth</b>	<b>1.40</b>	<b>0.37</b>		<b>3.76</b>
Growth factor loadings onto:				
Age 21 CPI Self-Control	0.00 <sup>a</sup>		0.00	
Age 27 CPI Self-Control	1.00 <sup>a</sup>		0.54	
Age 43 CPI Self-Control	1.42	0.20	0.73	7.01
Age 52 CPI Self-Control	1.98	0.34	1.00	5.88
Regression of intercept onto:				
<b>Environmental Mastery</b>	<b>0.58</b>	<b>0.66</b>	<b>0.11</b>	<b>0.88</b>
<b>Personal Growth</b>	<b>0.18</b>	<b>0.62</b>	<b>0.03</b>	<b>0.29</b>
Regression of growth onto:				
<b>Environmental Mastery</b>	<b>1.03</b>	<b>0.39</b>	<b>0.37</b>	<b>2.62</b>
<b>Personal Growth</b>	<b>-0.80</b>	<b>0.36</b>	<b>-0.29</b>	<b>-2.20</b>
Covariance between Intercept residual and Growth residual	-8.37	3.74	-0.63	-2.24
Covariance between Environmental Mastery and Personal Growth	0.24	0.12	0.24	1.93
Factor loadings of Environmental Mastery (EM) parcels				
EM1	0.47	0.07	0.76	7.12
EM2	0.46	0.08	0.59	5.60
EM3	0.43	0.08	0.81	5.75
Factor loadings of Personal Growth (PG) parcels				
PG1	0.45	0.06	0.85	7.92
PG2	0.40	0.06	0.71	6.78
PG3	0.33	0.07	0.51	4.96
Variances				
Intercept residual	27.31	5.67		4.81
Growth residual	6.53	3.13		2.08
Age 21 CPI Self-Control residual	2.27	4.15		0.55
Age 27 CPI Self-Control residual	7.32	1.54		4.77
Age 43 CPI Self-Control residual	8.70	1.62		5.36
Age 52 CPI Self-Control residual	2.98	2.12		1.41
EM1 residual	0.16	0.05		3.53
EM2 residual	0.38	0.07		5.72
EM3 residual	0.31	0.06		5.57
PG1 residual	0.08	0.04		2.16
PG2 residual	0.16	0.04		4.43
PG3 residual	0.32	0.05		6.51

*Note.*  $N = 106$ . Seventy percent of cases had complete data; 24% were missing a self-control score at one time point; 7% were missing self-control scores at two time points. Critical ratios with an absolute value greater than 1.96 are significant at  $p < .05$ . Overall model fit was  $\chi^2(31) = 26.08$ ,  $p = .71$ ; normed fit index = .93; comparative fit index = 1.00; Tucker–Lewis Index = 1.01. Variables in boldface are those discussed in the text. CPI = California Psychological Inventory.

<sup>a</sup> Fixed parameter.

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