Getting Older, Getting Better? Personal Strivings and Psychological Maturity Across the Life Span

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Measures of psychological maturity based on personal strivings (R. A. Emmons, 1989) were administered to 108 adults aged 17–82. On the basis of organismic-theoretical assumptions regarding maturity, age was hypothesized to be positively associated with K. M. Sheldon and T. Kasser's (1995, 1998) two goal-based measures of personality integration. E. Erikson's (1963) assumptions regarding maturity were the basis for the hypothesis that older people would tend to list more strivings concerning generativity and ego integrity and fewer strivings concerning identity and intimacy. Finally, on the basis of past research findings, maturity and age were hypothesized to be positively associated with subjective well-being. Results supported these hypotheses and also showed that measured maturity mediated the relationship between age and well-being. Thus, older individuals may indeed be more psychologically mature than younger people and may be happier as a result.

Does personality continue to develop in positive ways as people age? That is, do people keep growing psychologically throughout their lives? Some theorists have answered in the negative, emphasizing the shrinking perspective of the elderly (Herzog, Rodgers, & Woodworth, 1982) and the ever-present struggle to cope with new limitations and losses (Pfeiffer, 1977). Indeed, some have suggested the concept of development has little meaning in the context of old age, because any biological push to mature is likely gone. Still, other theories claim that a new sense of completion and ego integrity may be gained during the final part of life (Erikson, 1963), perhaps by positive life review (Butler, 1974), ego transcendence (Peck, 1968), or increasing spirituality (Tornstam, 1994). Some researchers go even further, arguing that positive, lifelong personality maturation is typical or normative, at least in physically healthy individuals (Labouvie-Vief, 1982). For example, Vaillant (1977) claimed that increased wisdom and decreased use of immature defenses typically come with age, Maslow (1968) theorized that lifelong personality growth may occur as people satisfy more and more needs, and Midlarsky and Kahana (1994) proposed that people become more altruistic and prosocial as they age.

Despite the latter theorists' optimism, the question of whether personality growth typically continues in old age remains unanswered (Ruth & Coleman, 1996) and indeed seems to have provided one of the greatest empirical puzzles in the field (Belsky, 1999). Some argue that there are no general trends but instead wide individual differences in aging trajectories (Olbrich, 1994; Thomae, 1990) that obviate any simple correlation of age with personality maturation. For example, Goebel and Brown (1981) found that on average the elderly were no more self-actualized than any other age group, and Gruen (1964) found that older persons were no greater in their concern for the most mature tasks posited by Eriksonian theory (i.e., generativity and ego integrity) than were younger persons. Other researchers find mixed patterns of results, with age trends found for some growth-related constructs but not for others (Ryff, 1995).

As this inconsistent pattern indicates, the answer to whether personality changes and matures throughout the life span might depend in part on how personality is defined and measured. McAdams (1996) has proposed one useful framework for approaching the issue, suggesting that three "tiers" or levels of analysis are necessary to fully describe personality. These three tiers include dispositional traits (e.g., introversion vs. extraversion, neuroticism vs. stability), personal concerns (e.g., the goals, motives, and needs directing a person's behaviors), and life narratives (e.g., a person's global self-concept and the stories a person tells about his or her life).

Past research suggests that constructs at the first tier of personality (i.e., traits) are unlikely to change with age (McCrae & Costa, 1990). In contrast, studies of the third tier (i.e., individuals' narrative self-identities) have found significant potential for change with age (Ruth & Coleman, 1996). However relatively few studies of aging have examined the second level of McAdams's (1996) hierarchy and addressed how individuals' personal concerns or goals might change or mature with age. Other studies have examined related topics, such as the goal characteristics of older persons (Lapierre, Bouffard, & Bastin, 1997; Rapkin & Fischer, 1992a, 1992b); differences between older and younger people in terms of goal characteristics other than maturity (Heckhausen, 1997; Nurmi, Pulliainen, & Salmela-Aro, 1992); and differences between older and younger people in terms of "mature" self-regulation

(Baltes & Mayer, 1999), emotion regulation (Carstensen & Charles, 1999), and meaning-making (Ryff, 1989a). However, none of these studies has combined all three of these issues in one investigation. Thus, in the present study we set out to examine whether older individuals manifest more mature characteristics than younger individuals in regard to their goals and goal systems.

Measuring Maturity Through Goals

We undertook this task by conducting an in-depth, idiographic goal assessment of the sort used in much recent personality research (Cantor & Sanderson, 1999; Emmons, 1986; Emmons, Cheung, & Tehrani, 1998; Little, 1993; Sheldon & Kasser, 1995, 1998). Personal goal methodologies have become popular in recent years (Austin & Vancouver, 1996), both because they provide participants with a way to express their unique interests and concerns and because they provide researchers with a flexible tool for approaching a wide variety of issues. There are several reasons why personal goal assessment may provide a particularly useful way of studying aging and personality. First, idiographic personal goals well represent McAdams's (1996) second tier of personality, which has received relatively little attention from life span researchers. Second, it is presumed that people of all ages strive for goals, although the specific goals they pursue may differ (Emmons, 1989). This fact may help to provide a common metric for comparing people of different ages. Third, personal goals are less stable than personality traits (Emmons, 1989) and often refer to relatively short time spans. Thus, personal goals may be more easily modified by individuals as they age, potentially providing a crucial means by which aging individuals successfully adapt and continue to grow. Finally, personal goal methodologies afford multiple means of approaching important theoretical questions, such as the nature of psychological maturity.

As one means of conceptualizing and measuring maturity via goals, we applied our model of personality integration (Sheldon & Kasser, 1995, 1998, 2001). This model builds from the work of organismic and humanistic theorists (Goldstein, 1939; Rogers, 1961; Ryan, 1995), who have suggested that human beings have inherent psychological needs that may or may not be satisfied by their daily activities and choices. According to this view, integrated people are those who choose and pursue goals that are most likely to satisfy psychological needs, such as those for autonomy, competence, and relatedness (Sheldon & Elliot, 1999; Sheldon, Ryan, & Reis, 1996), rather than select goals that are irrelevant to, or distract from, the satisfaction of needs.

Our model operationalizes organismic personality integration in two different ways (Sheldon & Kasser, 1995, 1998). One way to be self-integrated is to strive "for healthy reasons"—that is because one enjoys the process itself and believes wholeheartedly in the values guiding the process rather than because of external compulsion or introjected guilt. In this view, integrated persons are those who learn to take full responsibility for their goals and who experience little inner division with respect to them. A second way to be an integrated person according to this model, is to strive for "healthy values"—that is, to pursue goals with "intrinsic" values consistent with assumed innate needs to grow, connect with others, and expand into the community rather than to pursue goals with more superficial, "extrinsic" values having to do with approval, status, and material gain (Kasser & Ryan, 1993, 1996). According

to this view, integrated persons are those who learn to pursue growth and prosocial goals rather than seek more transient or less meaningful pleasures. Past work has shown that these reason- and value-based measures of personality integration are associated with each other and are both associated with positive outcomes and personality characteristics, such as need satisfaction, positive mood, empathy, openness to experience, autonomy, life satisfaction, and self-actualization (Kasser & Ryan, 1993, 1996; Sheldon & Kasser, 1995, 1998).

We hypothesized that older individuals would evidence more of both types of personality integration—that is, age should be linearly associated with each of these two measures.[1] We based this hypothesis on our organismic-theoretical assumption that humans have innate and enduring growth propensities that tend to promote positive change over time if environmental circumstances are not too impoverished or overwhelming (Ryan, 1995). In other words, we assume a "positive human nature," which naturally leads people to learn over time, through experience, how to better satisfy their own needs. If this assumption is correct, then older persons should (on average) be higher on both measures of organismic personality integration: They should report more self-determined reasons for pursuing their goals and also pursue goals more focused on intrinsic rather than extrinsic values.

The second major theory of psychological maturity that we applied in our goal assessment was based on Erikson's (1963) psychosocial model of personality development. According to Erikson's model, age-graded changes in social roles cause people to engage in different tasks at different phases of their lives. Each of the four periods of life in adulthood is characterized by a different defining issue, theme, or crisis. Identity, the issue for late adolescence, is often manifested in a search for one's true character and proper role in society (Waterman, 1982). Intimacy, the issue for young adulthood, is typically seen in the search for a life partner or mate (Whitbourne & Tesch, 1985) or for meaningful relations with others. Generativity, the issue for the middle-aged phase of life, is often manifested in helping one's own children or the young in general, seeking to create self-defining works, or leaving public legacies (McAdams & de St. Aubin, 1992). Finally, ego integrity, the issue for the last phase of life, frequently takes the form of a search for ego transcendence or for an understanding of one's place in the ultimate scheme of things (Peck, 1968). According to the Eriksonian model and its epigenetic developmental assumptions, each of these successive task foci (identity, intimacy, generativity, and ego integrity) represents an increased level of maturity, because each is based on successful resolution of the prior tasks.

To assess the Eriksonian perspective on maturation, we analyzed the types of themes that appeared in participants' goal statements. Four thematic categories were used (i.e., identity, intimacy, generativity, and ego integrity) corresponding to the four adult issues or tasks specified by Erikson (1963). This type of content-coding approach, which focused on participants' self-generated personal strivings, afforded a largely unexploited way of

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[1] Admittedly, chronological age is an imperfect indicator of a person's position within his or her unique life course (Neugarten, 1973). Nevertheless, chronological age has cultural meaning and also provides an unambiguous temporal metric upon which to compare different individuals.

measuring individual differences in the task concerns specified by Erikson's theory (but see McAdams & de St. Aubin, 1992). On the basis of the postulate that generativity and ego integrity are more mature concerns, whereas identity and intimacy are less mature concerns (Erikson, 1963), we expected to find positive associations of age with generativity and ego-integrity strivings and negative associations of age with identity and intimacy strivings.

We also tested for quadratic or curvilinear trends in these associations, because Erikson's model implies that once a particular period in life is past, then the concerns of that era tend to fade and be replaced by new concerns. For example, although older persons might in general list more generativity goals than younger persons, one might also expect a curvilinear trend such that the oldest persons, who presumably are more likely to have completed the generativity stage, will list fewer such goals than middle-aged persons. Similar reasoning can be applied for intimacy strivings, which may perhaps peak in young adulthood and then decline afterward. Notably, some have questioned the assumption that concerns for these tasks peak in sequential order, that they peak in this particular order, and that task concerns necessarily subside once a stage is past (see Wrightsman, 1994). Thus, the current study affords an opportunity to test this specific facet of Erikson's stage theory. For the sake of completeness we also tested for curvilinear effects of age on our other two measures of maturity (i.e., the reason-based and value-based measures of personality integration), although we had no hypotheses concerning the latter tests.

Although we derived our hypotheses from two different theoretical traditions (i.e., organismic and Eriksonian), we believe that the two theories are quite compatible, in that both define growth in terms of deepening one's self-knowledge and self-expression while forging stronger connections with others (Ryan, 1995). Both theories assume that personal growth and psychosocial growth tend to occur simultaneously. However the theories differ in their emphases on psychological needs versus psychosocial adaptation. Organismic theory focuses on the unfolding of inner potentials afforded by ongoing need satisfaction, whereas Eriksonian theory focuses on the development of role identifications in response to age-graded social challenges. Consistent with the idea that both theories are tapping issues related to maturity, however, we expected to find substantial, but not large, linear relationships between the organismic and the Eriksonian measures of maturity.

Maturity, Age, and Well-Being

Both the organismic and Eriksonian perspectives discussed previously suggest that when one pursues more mature goals, enhanced well-being or happiness should result. According to the organismic view, more integrated persons should be happier and healthier because they are better following their evolving interests and values (Sheldon & Elliot, 1999) and also because they are better satisfying their needs by means of their striving efforts (Deci & Ryan, 1991; Kasser & Ryan, 1996; Ryan, 1995). According to the Eriksonian view, those pursuing more mature tasks should be happier because they have more successfully resolved important earlier tasks and are better integrated into society (Erikson, 1963; Wrightsman, 1994).

The second primary purpose of this study was to test these ideas by collecting data concerning participants' subjective well-being,

which many believe to be a reasonable criteria for identifying optimal functioning or human flourishing (Baumeister & Leary, 1995; Ryan, 1995). Specifically, we assessed negative mood, positive mood, and life satisfaction, which have received much research attention in the last 15 years and which are considered by some investigators to be the three most important components of well-being (Diener, 1984, 1994; but see Ryff, 1989b). The inclusion of well-being data in this sample also allowed us to examine potential associations between age and well-being. Although findings have been somewhat mixed (Horley & Lavery, 1995; Mroczek & Kolarz, 1998), Argyle's (1999) recent summary of the literature states that there is a strong positive association between age and positive affect, a weak positive association between age and life satisfaction, and a weak negative association between age and negative affect. Thus, we hypothesized that we might find these patterns in our own sample or at least a general trend toward greater well-being aggregated across specific measures of well-being.

If the hypotheses discussed thus far are supported by the data, it raises the interesting possibility that pursuing mature goals mediates any positive relationship between age and well-being. That is, chronological age presumably does not directly bring about greater well-being but instead is a mere proxy representing the higher levels of psychological development that people often achieve with the passage of time. More specifically, it may be that mature goals and the satisfactions they afford, rather than age itself, foster maximal well-being. To examine this possibility, we used the procedures specified by Baron and Kenny (1986) for testing potential mediational models. Although we do not believe that our goal-based measures tap all of the ways in which people mature as they age, we did predict that partialing these maturity measures out of the relationship between age and well-being would significantly weaken that relationship, indicating partial mediation at least.

Summary and Hypotheses

We explored these issues in a cross-sectional study of the personal strivings of 108 adults ranging in age from 17 to 82. Consistent with our organismic assumptions regarding the inherent and enduring propensities for growth and development found in human beings (Rogers, 1961), we hypothesized that chronological age would be associated with organismic personality integration. On the basis of Erikson's (1963) stage model, we hypothesized that age would be positively associated with generativity and transcendence strivings and negatively associated with identity and intimacy strivings. Given our own and others' past work, we predicted that personality integration and psychosocial maturity would be associated with well-being (Deci & Ryan, 1991). We also predicted, on the basis of Argyle's (1999) review that age would be associated with greater well-being. Finally, assuming that all of these hypotheses received support, we also intended to examine whether goal maturity mediates between age and enhanced well-being.

Method

Participants and Procedure

Participants were 108 adults residing in Columbia, Missouri. These included 36 men and 72 women, of whom 99 were Caucasian, 5 were

African American, 3 were Hispanic, and one was "other." In order to keep the sample balanced and to assess the "quartiles" of the typical life span, we attempted to recruit equally from four age ranges: 20 years or less, 21–39 years, 40–59 years, and 60 years or more (mean age = 41.97 years, $SD = 19.36$).

The youngest participants ($n = 26$) were members of an introductory psychology class at the University of Missouri—Columbia who were administered the questionnaire in a single group session run by a trained research assistant. They received course credit for taking part in the study. The rest of the participants were recruited by means of a random dialing procedure and were offered two free movie tickets for their participation. Those who agreed to participate (approximately half of those contacted) were mailed the questionnaire. Sixty-three percent of these individuals eventually returned the questionnaire packet.

Notably, the sample was rather homogeneous both in ethnicity and in that the majority of Columbia residents work in the health care, educational, or insurance industries. It is worth pointing out, however, that the ethnic composition of the sample mirrored the ethnic composition of the Columbia community as a whole, which is 85% Caucasian, 9.9% African American, and 4.9% Hispanic/other (based on 1990 Census data). Twenty-seven of the community participants were in the 21–39 age range, 32 were in the 40–59 age range, and 23 were in the 60+ age range. Although we present some variable means broken down by these four age groups, we used chronological age as a continuous predictor in the tests of the hypotheses discussed below in order to avoid sacrificing statistical power.

The questionnaire packet contained the measures in the following order: mood, life satisfaction, striving elicitation, and striving ratings relevant to personality integration. Later, strivings were coded by research assistants for various content categories (as described in detail below).

Measures

Well-being.   First, participants completed the 20-item Positive and Negative Affect Schedule (Watson, Tellegen & Clark, 1988), which has been shown to be a valid measure for older as well as younger populations (Kercher, 1992). This measure asks participants to rate how much they had felt 10 positive (e.g., "happy"), and 10 negative (e.g., "upset") moods "during the past month or so," using a 1 (*not at all*) to 7 (*frequently*) scale. Coefficient alpha for both negative affect and positive affect variables was .88. Next, participants completed the 5-item Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), which has also been shown to be appropriate for both younger and older participants (Pavot, Diener, Colvin, & Sandvik, 1991). This measure contains statements such as, "In most ways, my life is close to my ideal." Participants responded on a 7-point scale (1 = *no agreement*, 7 = *very much agreement*); the coefficient alpha for the life-satisfaction variable was .82. Because these three variables have been shown to load on the same higher order factor (Diener, 1994; Sheldon & Elliot, 1999) and were also found to do so in the current data (variance accounted for = 62.7%, all three variables loading .60 or more), we thought it worthwhile to represent them as a single overall composite. Thus we also computed an aggregate well-being variable by standardizing and summing the three variables, after recording negative affect.

Personal strivings assessment.   We followed Emmons's (1986) procedures to elicit a set of personal strivings from each participant. Strivings were defined as "things that you typically or characteristically are trying to do in your everyday behavior," which, as was then explained, one may or may not be successful at. Examples were provided, such as "trying to be physically attractive to others," "trying to help others in need of help," and "trying to avoid feeling inferior to others." Participants then wrote down at least 10 typical strivings of their own on a blank sheet of paper. Those who wrote more than 10 were asked on the next page to select their 10 most important strivings for further ratings.

As one way of measuring personality integration, we asked participants to rate the extent to which they pursue each striving for each of four

different reasons, using a 1 (*not at all*) to 7 (*completely*) scale. These four reasons were the same ones used in prior self-determination theory research (Deci & Ryan, 1985, 1991) concerning the perceived locus of causality for behavior (Ryan & Connell, 1989; Sheldon & Kasser, 1995, 1998) and were conceived of as being located on a continuum ranging from not at all internalized to partially internalized to fully internalized: *external* reasons (somebody else or your situation seems to demand it), *introjected* reasons (you would feel ashamed, guilty, or anxious if you did not), *identified* reasons (you endorse it freely and value it for personal reasons), and *intrinsic* reasons (you pursue it because of the fun and enjoyment it provides you). As in past research, an aggregate variable called *striving self-determination* was computed by summing the 10 identified and the 10 intrinsic ratings and subtracting the 10 introjected and the 10 external ratings.[2] Coefficient alpha for this 40-item composite (computed after recoding the external and introjected motive ratings) was .89.

As a second way of measuring organismic personality integration, we asked participants to rate the extent to which each of their 10 strivings helped them move toward each of six "possible futures," using a 1 (*no help*) to 7 (*very much help*) scale. As in past research (Sheldon & Kasser, 1995, 1998), three of these possible futures (self-acceptance, emotional intimacy, and community contribution) concerned intrinsic value domains, which are assumed to be most consistent with inherent needs and growth tendencies, and three concerned extrinsic value domains (financial success, physical attractiveness, and fame/popularity), which focus on rewards or the opinions of others and are typically less directly relevant to intrinsic needs. We computed an *intrinsic value orientation* variable by summing the 30 intrinsic ratings and subtracting the 30 extrinsic ratings (see Sheldon & Kasser, 1998). This variable indexes the relative extent to which participants' strivings are oriented toward the optimal values specified by the organismic values model (Kasser & Ryan, 1993, 1996) more so than toward less directly satisfying values. Supporting the a priori distinction between intrinsic and extrinsic values, a factor analysis of the six subscale scores revealed a two-factor solution, just as in past research (Kasser & Ryan, 1996). Coefficient alpha for this 60-item composite (computed after recoding the extrinsic value ratings) was .82.

Procedure for coding striving content.   Content-coding protocols were created or adopted from past literature to represent each of the four adult task concerns posited by Eriksonian theory: identity, intimacy, generativity, and ego integrity. The identity protocol was created specifically for the purposes of this study and was based on Erikson's (1963) writings. Identity strivings were defined as those in which the person seeks greater self-understanding or self-knowledge ("Understand myself better"), seeks to resolve role conflicts or confusions ("Balance my femininity with the demands of work"), or seeks greater autonomy and self-sufficiency ("Don't let others decide things for me").

The other three protocols were taken from Emmons's (2000) *Striving Coding Manual.* Intimacy strivings were defined as those in which the person seeks commitment to and concern for another person ("Be an understanding friend"), seeks warm, close and communicative exchange with another person or persons ("Express my affection more"), wants to help significant others or be loyal and responsible to them ("Be there for my wife"), or focuses on the quality more so than the quantity of interpersonal relationships ("Really listen to people"). Generativity strivings were defined as those concerned with creating something ("Write the book I've been thinking of for years"), giving of oneself to others ("Help those in need of help"), purposive and positive interaction with the younger generation ("Be a good role model for my daughters"), or symbolic

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[2] This variable has been called *self-concordance* (Sheldon & Elliot, 1999) in recent work that uses the personal project construct (Little, 1993), but here we refer to it as *striving self-determination,* consistent with the terminology we used in our striving-based studies of personality integration (Sheldon & Kasser, 1995).

Table 1
Descriptive Statistics for Primary Study Variables

Primary study variable	Grand mean	Age ranges (in years)			
		≤20	21–39	40–59	60+
Personality integration					
Striving self-determination	4.09	3.62	3.39	4.17	5.32
Striving intrinsic orientation	3.74	2.05	4.10	5.16	3.73
Striving content (number of)					
Identity strivings	0.32	0.39	0.56	0.22	0.14
Intimacy strivings	3.09	2.89	3.37	3.18	2.84
Generativity strivings	0.96	0.31	0.89	1.28	1.46
Ego-integrity strivings	0.50	0.27	0.52	0.63	0.59
Well-being					
Positive affect	4.99	5.02	5.00	4.99	4.96
Negative affect	2.88	3.39	3.17	2.72	2.20
Life satisfaction	4.81	4.79	4.64	4.73	5.17
Aggregate well-being	0.00	−0.45	−0.37	0.11	0.92

immortality ("Make a lasting contribution to society"). Finally, ego integrity (or spiritual) strivings concerned divine awareness or religious practice ("Acknowledge God's presence within my life"), or seeking oneness/unity with some cosmic order ("Immerse myself in nature and be a part of it").[3] (See Emmons et al., 1998, for a more detailed discussion of these dimensions and of striving content analysis more generally.)

Two undergraduate research assistants were trained in the four coding protocols by means of assignment of practice strivings drawn from other samples and weekly meetings concerning these. Afterward each assistant coded all 1,080 strivings (108 participants × 10 strivings/participant) independently. Notably, particular strivings could be coded into more than one category; for example, a striving could be coded as representing both intimacy and generativity concerns (i.e., "Give love and support to my children"). The coefficient kappa, which ranges between −1 and +1 and measures interrater agreement correcting for chance agreement (Cohen, 1960), was computed for each content category. Kappa coefficients for identity, intimacy, generativity, and ego integrity, based on the sample of 1,080 strivings, were .79, .77, .68, and .88, respectively, indicating good initial agreement between coders. Disagreements were resolved through discussion. Afterward, identity, intimacy, generativity, and ego-integrity scores were computed for each participant, based on a count of how many strivings of each type the participant listed. These scores could range from 0 to 10.

Results

Descriptive Statistics

No significant gender or ethnic differences were found for any of the goal variables, and thus we ignore ethnicity and gender below. Means for all study variables are presented in Table 1, which also displays means by age category (age differences are discussed below). Notably, most participants listed few identity, generativity, and ego-integrity strivings (all three means < 1), and together the four Eriksonian coding categories accounted for only 4.87 (on average) of participants' 10 strivings. However, this was to be expected, as personal strivings typically represent a wide variety of concerns (Emmons, 1989). For example, participants also listed strivings concerning career achievement, physical health and appearance, personal finances, self-regulation of emotions, and interpersonal influence, none of which is encompassed by Erikson's theory.

Although the identity, generativity, and ego-integrity variables all evidenced some skewness (0 was the modal score for each), a pronounced positive skew emerged only for the ego-integrity variable (skewness = 2.48). To normalize the distribution of this variable, we performed a square root transformation, which reduced the skewness to 1.11 (Cohen & Cohen, 1983). Although the correlational and regression results reported below used the transformed ego-integrity variable, results were essentially the same when the untransformed variable was used.

Intercorrelations of Maturity Measures

We first examined the intercorrelations between the measures of maturity to evaluate our assumption that striving self-determination, striving intrinsic orientation, generativity strivings, and ego-integrity strivings are valid and perhaps complementary indices of a high level of maturity. Consistent with this hypothesis, these four constructs were significantly positively associated in five out of six cases (correlations ranged between .22 and .48, all $ps < .05$; ego-integrity strivings and generativity strivings were not correlated). Notably, intimacy strivings were associated with three of the four designated measures of maturity (specifically, self-determination, striving intrinsic orientation, and generativity strivings; correlations ranged between .21 and .36, all $ps < .05$), suggesting that those who strive for close interpersonal relationships may also have attained a higher level of development. Finally, identity strivings were uncorrelated with the two measures of personality integration and with ego-integrity strivings and were negatively associated with intimacy and generativity strivings ($r = -.18$, $p < .10$, and $r = -.20$, $p < .05$, respectively).

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[3] Notably, spirituality is only one aspect of Erikson's concept of ego integrity; we did not code for strivings concerning other aspects of ego integrity, such as accepting one's mistakes and faults or feeling a sense of self-completion, because initial scrutiny suggested that the base rates for these strivings were extremely low. However Tornstam (1994) has argued that spirituality or transcendence striving is the most important facet of the ego-integrity task concept, in line with Erikson's claim that integrity is most manifest when fears of death have been mastered. Accordingly, we refer to this variable as *ego integrity* throughout this article.

Associations of Age With Maturity

Next we used regression analyses to test the primary hypothesis of the study that chronological age is linearly associated with our measures of maturity. Specifically, we conducted a separate analysis for each maturity variable, in which maturity was predicted by age. Age was centered in these analyses—that is, the sample mean was subtracted from each participant's age score. To uncover any potential quadratic effects, we also entered a second predictor variable into these regressions by squaring the centered age variable (Aiken & West, 1991). Both the linear and curvilinear coefficients are presented in Table 2 (see the means reported in Table 1 to gain a more concrete sense of these patterns).

As can be seen in Table 2, age was found to be positively associated with striving self-determination, our first measure of personality integration ($\beta = .23$, $p < .01$). A separate analysis of each of the four reasons that make up the striving self-determination composite indicated that the effect was mostly due to older people's striving less for introjected reasons ($\beta = -.27$, $p < .01$) and more for identified reasons ($\beta = .22$, $p < .05$). These associations are notable because introjected and identified motivation lie on either side of the conceptual "boundary" between noninternalized and internalized motivation, according to self-determination theory (Deci & Ryan, 1985). Older people did not differ from younger people in their levels of external ($\beta = -.08$, ns) or intrinsic ($\beta = -.02$, ns) motivation, the two ends of the perceived locus of the causality continuum (Ryan & Connell, 1989). No curvilinear effects emerged in any of these analyses.

Also presented in Table 2 is a significant linear association between age and our second measure of organismic personality integration, the striving intrinsic orientation variable ($\beta = .27$, $p < .01$; again, this variable indexes the relative strength of intrinsic vs. extrinsic value linkages within the person's goal system). Interestingly, a curvilinear effect emerged in this analysis such that the oldest persons in our sample manifested less of this second measure of organismic integration, compared with middle-aged persons (see Table 1 for relevant means). This effect is examined in the Discussion section.

To further test our "with age comes maturity" hypothesis, we examined the associations between chronological age and the four Eriksonian stage measures, which were derived from content anal-

ysis of the themes that spontaneously emerged in participants' lists of strivings. These standardized coefficients are shown in Table 2. As expected, age was significantly positively associated with the number of generativity strivings listed and marginally significantly positively associated with ego-integrity strivings. In addition, as hypothesized, age was negatively associated with identity strivings. However there was no association between age and intimacy strivings. Also, as can be seen in Table 2, no curvilinear effects of age were found for any of the four Eriksonian measures.

In sum, we found considerable support for our first set of hypotheses concerning the relationship between age and maturity. Age was positively associated with both of our personality integration measures and with generativity and ego-integrity strivings; it was negatively associated with identity strivings. However age was not negatively associated with intimacy strivings, as we had hypothesized. Thus, it appears from an assessment of these data that people of all ages are equally interested in interpersonal closeness. This finding is consistent with Deci and Ryan's (2000) organismically based assumption that relatedness is a lifelong need.

Associations of Age With Well-Being

Next we examined the association of chronological age with well-being. Age was not associated with positive affect ($r = .01$, $p > .05$), was weakly positively associated with life satisfaction ($r = .16$, $p = .10$), and was strongly associated with negative affect ($r = -.43$, $p < .01$). Age was also significantly positively associated with the aggregate well-being variable ($r = .24$, $p = .01$). Supplementary regressions revealed no curvilinear effects qualifying these patterns.

Associations of Maturity With Well-Being

To test our hypotheses concerning the relationships between mature goal striving and well-being, we conducted correlational and regression analyses that examined both the zero-order and the unique effects of the maturity-related predictors upon each of the well-being variables. In the regression analyses, each well-being variable was regressed in turn upon either the two personality integration measures or the four Eriksonian task measures.[4] The results are shown in Table 3.

The correlation coefficients reveal that both measures of personality integration were associated with aggregate well-being. The simultaneous coefficients indicate that self-determination was more uniquely predictive of well-being than was the intrinsic orientation variable. In terms of the Eriksonian task concerns, the two most "mature" concerns, generativity and ego integrity, both predicted aggregate well-being at the correlational level. Intimacy concerns were also positively correlated with well-being, whereas identity concerns were negatively correlated with well-being. The simultaneous regressions revealed that identity and ego-integrity strivings (the least and most mature concerns, according to theory)

Table 2
Standardized Regression Coefficients Representing Linear and Curvilinear Associations of Age and Measures of Maturity

	Age	
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Maturity measure	Linear coefficient	Curvilinear coefficient
Personality integration		
Striving self-determination	.23**	.00
Striving intrinsic orientation	.27**	−.27**
Striving content (number of)		
Identity strivings	−.20*	.01
Intimacy strivings	.00	−.10
Generativity strivings	.39**	−.08
Ego-integrity strivings	.19†	−.03

† $p \le .10$. * $p \le .05$. ** $p \le .01$. (All were two-tailed.)

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[4] We conducted separate analyses for the maturity variables derived from organismic theory and the maturity variables derived from Eriksonian theory because we wanted to clearly compare the different variables within each theoretically derived set; also, because we had a sample of 108, we also lacked the power to adequately evaluate a six-predictor model.

Table 3

Associations of Measures of Maturity With Measures of Well-Being: Zero-Order and Simultaneous Effects

| | Well-being measures | | | | | | | |
| | Positive affect | | Negative affect | | Life satisfaction | | Aggregate well-being | |
Maturity measure	r	β	r	β	r	β	r	β
Personality integration								
Striving self-determination	.24*	.19†	−.29**	−.28**	.23*	.13	.30**	.25*
Striving intrinsic orientation	.19*	.12	−.12	−.02	.21*	.15	.22*	.12
Striving content								
Identity	−.13	−.12	.20*	.17†	−.23*	−.19*	−.23*	−.20*
Intimacy	.16†	.14	−.15	−.06	.22*	.14	.23*	.14
Generativity	.10	.02	−.24*	−.11	.26**	.15	.25**	.15
Ego integrity	.15	.17†	−.09	−.16†	.16†	.18*	.17†	.19*

† $p \leq .01$.   * $p \leq .05$.   ** $p \leq .01$. (All were two-tailed.)

were the strongest unique predictors of well-being (negatively and positively, respectively). The former finding suggests, as in other recent work, that self-focused (i.e., identity) goals may sometimes be problematic for individuals' well-being (Salmela-Aro, Pennanen, & Nurmi, in press).

Next, we conducted supplementary regressions examining whether age and maturity interacted in the prediction of well-being. For example, it may be that the Eriksonian themes differentially affect well-being, depending on the age appropriateness of a particular theme. Age and the maturity variables were first centered; then interaction product terms were computed for each of the six maturity variables; each well-being outcome was then regressed upon age, a given maturity variable, and the product of the two (Aiken & West, 1991). In these analyses no significant interaction effects were found, a finding consistent with our organismically based assumption that personality integration and mature task concerns are equally beneficial no matter what one's age.

Mediational Analyses

In the analyses reported previously, chronological age was found to be associated with the goal-based measures of maturity. In addition, age was associated with aggregate well-being. Finally, the maturity measures themselves were generally associated with aggregate well-being. These results set the stage for evaluating our hypothesis that psychological maturity may mediate between age and well-being (Baron & Kenny, 1986).

To test this hypothesis we focused on the measures of maturity that were linearly related to age: striving self-determination, intrinsic orientation, generativity strivings, ego-integrity strivings, and identity strivings (the latter was considered to be a measure of relative immaturity and was reverse-scored). To simplify the analysis, we standardized and summed these measures in order to create an aggregate maturity measure (this variable was correlated with age, $r = .41$, $p < .01$). Next, following Baron and Kenny's (1986) logic, we regressed the aggregate well-being variable upon age and the maturity variable simultaneously in order to examine whether the association of age with well-being would be reduced with the potential mediator in the equation. In this analysis the effect of age on well-being was indeed reduced (from $\beta = .24$ to

$\beta = .09$). The maturity effect upon well-being was highly significant ($\beta = .38$, $p < .01$) and was little reduced from its simple bivariate association with well-being ($r = .41$). To test the significance of the mediational relationship, we used the formula given by Sobel (1982). This analysis yielded a significant effect ($z = 3.19$, $p < .01$), supporting the hypothesized mediational relationship. Thus, it appears that mature striving characteristics largely account for the relationship between age and well-being.

Supplementary Analyses Assessing Possible Cohort Effects

Our cross-sectional study design was limited by its inability to detect cohort effects. Such effects, if they are present, may masquerade as developmental effects and render firm conclusions problematic. For example, it has been shown that contemporary youths have more acquisitive and achievement-oriented values than did the cohort that came of age in the 1960s (Sax, Astin, Korn, & Mahoney, 1998). In our sample, this group was represented by college undergraduates, who might thus be expected to manifest extrinsic values. In contrast, youths of the 1960s were well-known for their liberal and egalitarian ideals (Lavin & Prull, 1989). In our sample, this group was represented by the middle-aged group, who might be expected to manifest intrinsic values. As another example, participants over 60 within our sample were reared in what some consider to be a more "restrictive" era (Felton, 1987), and this might influence the apparent maturity of this group. In short, the confounding of distinctive cohort characteristics with particular age groups may have biased our estimates of developmental effects.

To examine whether the age effects reported here might be reducible to cohort effects, we conducted a set of supplementary analyses. Specifically, we examined the correlation between age and both aggregate well-being and aggregate maturity within four subsamples derived by systematically excluding each of the four age groups in turn. That is, we recomputed the zero-order correlations of age with maturity and well-being in a sample that excluded the people under 20 years of age, and we recomputed the correlations again in a sample that excluded only people between 20 and 40 years of age, and so on. We reasoned that any undue or exaggerated influence on effects by a particular cohort

might thus be removed from the mix, helping to rule out distinctive cohort effects as alternative explanations. To find that the same pattern of effects continues to emerge across these supplementary analyses would support our primary hypothesis that age and maturity tend to be linearly related.

In fact, age continued to be positively associated with the summary measure of maturity in all four supplementary analyses (correlations ranged from .32 to .48, sample sizes ranged from 76 to 85, all $ps < .01$). This indicates that the finding was not dependent on the inclusion of any one cohort. In addition, age continued to be positively associated with the summary measure of well-being in three of four supplementary analyses (correlations ranged from .23 to .30, all $ps < .05$). The only analysis in which age was no longer associated with well-being occurred when the oldest group was excluded ($r = .13, p < .25$). This suggests that researchers' ability to detect a positive association between age and well-being may depend on the inclusion of a cohort raised in the 1930s and 1940s, and/or the inclusion of elderly participants. Unfortunately these two possibilities cannot be untangled in our data. Notably, other studies have also found somewhat inconsistent relations between age and well-being (Horley & Lavery, 1995; Lawrence & Liang, 1989), and the two possibilities mentioned above suggest potential reasons for this inconsistency.

Discussion

In this study we used a detailed personal strivings assessment (Emmons, 1989) and drew from two distinct theoretical perspectives to examine anew the question of whether people continue to grow throughout the life span. Although idiographic personal goal constructs have infrequently been applied in the comparative study of older and younger individuals, we reasoned that such constructs might yield substantial insight into the means by which adults may organize and reorganize their lives, coping with declines and perhaps continuing to grow as persons during the aging process. In addition to illuminating these developmental questions, a study of this kind might also extend the understanding of important goal constructs—for example, revealing whether our own past findings regarding personality integration and well-being (Sheldon & Kasser, 1995, 1998) differ as a function of the age of the participant.

Results were generally consistent with our organismic-theoretical assumption that, on average, older individuals' goal systems are characterized by increased maturity and personality integration. First, analysis of Likert-type rating data indicated that older persons strive for more self-determined reasons (our first measure of personality integration). Specifically, older persons demonstrated stronger identified motivation (i.e., they strove more with a sense of choice and authentic self-expression) and weaker introjected motivation (i.e., they strove less with a sense of guilt or internal pressure). Because introjected and identified motivation lie on opposite sides of the conceptual boundary between behavior that is self-determined and not self-determined (Deci & Ryan, 1991), this pattern of results suggests that older people have achieved significantly greater internalization of the motives behind their strivings. Humanistic and organismic theorists have long suggested that increasing one's sense of "ownership" of one's behavior is an important and life-long developmental task (Rogers, 1961; Ryan, 1995), and the current data suggest that older people may better accomplish this task.

Second, older people's strivings were more linked with intrinsic values concerning self-acceptance, emotional intimacy, and community contribution, rather than extrinsic values concerning money, physical attractiveness, and popularity (our second measure of personality integration). This suggests that as people grow older, they may be more able to orient toward issues that will satisfy their deeper psychological needs (Kasser & Ryan, 1993, 1996) and less interested in superficial or materialistic issues. Notably, this linear trend was qualified by a curvilinear effect, such that the oldest members of our sample were somewhat lower than the middle-aged participants in this value-based measure of personality integration. This finding is considered in more detail below.

Third, analyses of the thematic content of strivings (derived through content-coding procedures) showed that older persons were more concerned than younger persons with generativity and ego integrity and less concerned with identity. Such results are consistent with Erikson's (1963) assumption that most people continue to grow throughout their lives, first by completing the task of consolidating their identities and then by taking on the task of providing for future generations. However, older persons were not significantly lower in intimacy strivings, suggesting that this type of striving is equally salient across the life span. Also, there were no curvilinear associations between age and any of these four striving content variables, indicating that there are no age-related peaks in individuals' strivings for these types of goals, as is suggested by Erikson's stage model (see McAdams & de St. Aubin, 1992, for a similar result).

The lack of curvilinear effects raises the possibility that once mature psychosocial themes become salient within a person's life, they tend to remain important rather than fade away, to be replaced by new themes. This makes sense from our organismic perspective, in which people are viewed as having inherent psychological needs to connect with others and with the community, needs which are important for people of every age. For example, once a person develops the ability to have warm and close relations with others, then such experiences should continue to be important for that person.

We also examined the association between chronological age and subjective well-being and found a significant correlation between age and the aggregate well-being variable. In addition, our two measures of organismic personality integration predicted well-being (Sheldon & Kasser, 1995, 1998); these relationships were not moderated by age. Thus, the current study extends and generalizes previous findings derived from samples of college students (Kasser & Ryan, 1993, 1996; Sheldon & Elliot, 1999; Sheldon & Kasser, 1995, 1998). Finally, the measures of psychosocial maturity derived from Eriksonian theory—namely, generativity and ego-integrity strivings—were themselves associated with well-being.

Because all of the preconditions for testing mediation had been met (Baron & Kenny, 1986), we evaluated a model in which age was associated with greater well-being because of its association with more mature goal systems. The mediational model received significant support, suggesting that chronological age is to some extent a proxy variable representing the advances in psychological maturity that often occur with time. Thus, although other factors must doubtless be considered to fully understand the multiply determined relationship between age and well-being (Carstensen & Charles, 1999), the current data suggest that positive changes in

older persons' goals and goal appraisals might provide a significant part of the explanation. In other words, it appears that people tend to become happier over time when they succeed in adopting more intrinsically satisfying and psychosocially mature goals and when they also develop more self-determined motives for pursuing those goals. Notably, these findings are consistent with those of Ryff and her colleagues (Keyes, 1998; Ryff, 1995; Ryff & Singer, 1998), who have emphasized the major role that purpose, autonomy, growth, and meaning play in older adults' ability not only to adapt but also to thrive in later life.

An important issue that was not addressed by the current data but that is worthy of discussion nonetheless concerns the question of why older persons have more integrated personalities. One answer is suggested by organismic metatheory, which maintains that growth and self-elaboration are enduring tendencies built into all living things (Deci & Ryan, 1991; Glansdorff & Prigogine, 1971). As noted above, this perspective suggests that there should tend to be a cumulative growth effect over time, just as a tree evidences cumulative growth over time (Ryan, 1995). A different but perhaps complementary perspective is that older persons have (on average) been through more crises and traumas, experiences which often bring about changes in self-concept as well as new self-organization (Tedeschi & Calhoun, 1995). Another possibility is that aging provides people with a wealth of experience (i.e., "wisdom"; Staudinger, Maciel, Smith, & Baltes, 1998), which teaches them that overconcern with other people's opinions and approval is not satisfying in the long run; aging may also teach people to better regulate their moods and emotions (Carstensen & Charles, 1999). A final possibility is that the normative psychosocial tasks that older people face, such as generativity and ego integrity, are ones that result in greater integration by their very nature or content. That is, these particular tasks may be the most satisfying of inherent psychological needs. Although we cannot distinguish between these potential explanations at present, they provide intriguing directions for future research.

Future research could also attempt to replicate and explain the curvilinear relationship observed between age and intrinsic value pursuit (i.e., community, intimacy, growth); in the present study, the oldest members of the sample evidenced somewhat fewer strivings of this type than the middle-aged members. One possible explanation for this is that older individuals may become focused on compensating for physical declines (Heckhausen & Schulz, 1998) and feel that they have less energy to devote to others and the community (Carstensen & Charles, 1999). Another hypothesis is that older individuals are more engaged in life review or in facing their own death, occupations which may tend to supplant communal and interpersonal involvements (Erikson, 1963). Nevertheless, our data suggested that older persons who do manage to adopt an intrinsic value focus are also the happiest within their cohort. Thus future research might attempt to help aging adults retain their focus on personal growth, connections with others, and service to the community (LaPierre et al., 1997; Midlarsky & Kahana, 1994) rather than withdraw energy from such pursuits. Organismic theory suggests that such interventions might help elderly individuals to maximize their personal happiness.

Finally, future research might also attempt to bridge the life-narrative and personal concern levels of McAdams's (1996) proposed hierarchy of constructs. Do the more mature strivings apparently pursued by older people help give rise to new self-narratives

that accommodate to the new limitations and opportunities associated with aging? Or might the reverse be true, as shifts in the life story lead to the adoption of new task concerns? Also, might particular types of life-story or striving changes perhaps be associated with rank-order shifts at the first level of the hierarchy (i.e., habitual traits)? These fascinating questions await empirical scrutiny.

Conclusion

In sum, although old age has historically been seen as a time of decline and degeneration (Herzog et al., 1982; Pfeiffer, 1977), the current results accord with more recent and positive views of the aging process, which emphasize the remarkable resilience of the human personality (Baltes & Mayer, 1999). Specifically, our results indicate that older persons clearly know what values are most important in life and that they pursue such objectives with a more mature sense of purpose and ownership than younger people do. In contrast, the younger persons in our sample were more likely to strive out of a sense of guilt or self-division and were more likely to pursue more superficial values concerning money and popularity. Thus, these findings suggest that a return to the "fountain of youth" might not be so desirable after all (Ryff, 1989a) and that most people may instead look forward to greater meaning and satisfaction later in life.

This positive conclusion must be tempered by several caveats, however. First, this study used a relatively small sample from a single geographical region, and results remain to be replicated in other regions with larger, more heterogeneous samples. Further, our well-being measures were all self-report and were limited in scope and variety (Ryff, 1989b). Most important, as discussed previously, the study was purely cross-sectional in design, assessing adults of different ages at the same point in time. Although our approach of systematically excluding different cohorts from the analysis offered some reassurance that the age effects are not reducible to distinctive cohort effects, longitudinal studies of multiple cohorts (i.e., cross-sequential studies) will need to be conducted before researchers can confidently conclude that our maturational interpretation of the data is correct (Hertzog, 1996).

Despite these caveats, we believe that the data's general consistency with our hypothesis of lifelong growth and maturation is cause for some optimism. It appears that, like fine wine, many continue to "get better" as they get older.

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