

Personality Development Across the Adult Life Span: Subjective Conceptions vs Cross-sectional Contrasts

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This research examined possible contributions of subjective conceptions about development to the study of long-term personality stability and change. Young, middle-aged, and old adult subjects rated 100 trait-descriptive adjectives with respect to perceived stability and change across seven decades of adulthood, their desirability, self-descriptiveness, and personal controllability. Subjective conceptions indicated growth during early and middle adulthood, followed by decline in old age. These conceptions were optimistic. They involved more growth than decline, and desirable traits were seen as more descriptive of self and more controllable than were undesirable traits. Older subjects were more optimistic about late-life development than were young or middle-aged subjects. In contrast, cross-sectional comparisons of self-descriptions indicated stability. Potential threats to the validity of both approaches are discussed, and it is concluded that the use of both measurement procedures will be beneficial for research on personality stability and change.

ACCORDING to the phenomenological approach to life-span development, people's beliefs about the long-term stability and change of their personalities are important psychological data (Ryff & Heinke, 1983). This approach emphasizes the functionality of constructing a coherent and meaningful autobiography (Whitbourne, 1985). Despite the considerable interest the phenomenological approach has generated, agreement on the relevance of these beliefs for the study of personality stability and change has not been reached. Some, most notably Ross and colleagues (Ross, 1989), have argued that to a large extent beliefs about change are theories or stereotypes of limited validity. According to this perspective, subjective conceptions are seen as biased where they exceed change as indicated by traditional cross-sectional and longitudinal comparisons of personality ratings. Much of the research in the traditional psychometric paradigm suggests that personality traits are largely stable beyond the age of 30 (Costa & McCrae, 1980; Costa, McCrae, & Arenberg, 1980; for exceptions, see Haan, Millsap, & Hartka, 1986; Helson & Wink, 1992).

Others (Heckhausen, 1990; Heckhausen, Dixon, & Baltes, 1989) have suggested that subjective conceptions may be more than arbitrary, culturally transmitted theories of change. Rather, according to this functionalistic view, it seems doubtful that consensually held beliefs about age-graded change are altogether unrelated to actual development. Many social beliefs about group characteristics have a basis in reality, although they may exaggerate the differences between groups (Krueger, 1992). It seems reasonable, therefore, to hypothesize that conceptions about intraindividual change reflect, in part, actual age differences. Moreover, unlike stereotypes about social outgroups, conceptions about one's own development involve a knowledge domain of considerable familiarity. Given the large amount of information they accumulate about their own behavior and self-relevant feedback from others, people may develop high levels of expertise (Ericsson & Smith, 1991).

An overreliance on general personality ratings as criteria of actual development poses problems. Data collected in longitudinal or cross-sectional studies on personality development partly reflect people's social comparisons with their age peers (Caspi & Bem, 1990; Festinger, 1954). Inasmuch as subjects compare themselves with people similar in age, changes common to one cohort are obscured. Consider elderly respondents who used to have a better memory than their peers, but over the years have become more forgetful. Whether these elderly people will express their perception of increased forgetfulness in questionnaire responses depends on the kind of comparison they choose to make. If they compare themselves with people of their own age, who have undergone similar age-related changes, they may rate their own forgetfulness as low as they did years earlier. If, however, they compare their present forgetfulness with their own previous state, they provide a higher rating.

In contrast to such interindividual, normative ratings, subjective conceptions about development provide intraindividual, idiothetic data (Lamiell, 1981). People are expected to be able to remember the development of their own personality attributes across different periods of their lives. To the extent that biological, maturational, or culture-specific changes are common to an age group, these changes would be reflected in subjective conceptions about change, but not in general cross-sectional personality ratings. In this article we review some key studies on subjective development and report a study assessing both subjective conceptions about change and cross-sectional comparisons of general personality ratings within the same sample of subjects.

McFarland, Ross, and Giltrow (1992) asked a group of older adults to indicate on a 7-point scale to what extent they believed certain person-descriptors to change between the ages of 38 and 67. Some were associated with expected increases (e.g., independent, understanding), others with expected decreases (e.g., shy, forgetful). A different group of older adults rated their current and recalled standing (at

age 38) on each of the attributes. Finally, a group of young adults rated their current standing on each attribute. Cross-sectional comparisons between the ratings of the younger group and ratings of the older group revealed stability on 35 of the 42 attributes. Recalled standings, however, were related to subjective theories about development. Older adults recalled comparatively low standings on attributes associated with theoretically expected age-related increase, and recalled comparatively high standings on attributes associated with theoretically expected decrease.

McFarland et al. (1992) concluded that personal developmental theories predicted intraindividual conceptions of change (i.e., the differences between retrospective and concurrent ratings) better than did cross-sectional data. To the degree that these conceptions differed from cross-sectional data, they were considered inaccurate. We argue, however, that it is problematic to accept cross-sectional comparisons of general personality ratings as the sole criterion of accuracy, because social comparisons with age peers obscure real change. McFarland et al. selected only attributes that did not show cross-sectional differences between age groups. When asked how they evaluated their current standing on an attribute, 28% of the subjects made reference to social comparisons with age peers in their responses to forced-choice questions. This percentage is considerable and may even underestimate the prevalence of such comparisons. Data were only collected from older respondents, who are less likely to engage in social comparisons than younger subjects (Suls & Mullen, 1982). Moreover, evaluations were made *after* subjects had rated both their current and past statuses. That is, they could have been sensitized to the life-span focus of the study. In short, work by McFarland et al. and others (Chaplin & Buckner, 1988) showed that ratings of one's current status at least in part result from social comparisons with age peers.

Assuming that people perceive common age trends in personality development, Heckhausen et al. (1989) investigated normative conceptions about developmental change. Young, middle-aged, and older adults rated expected increases, age-related timing of increases, their desirability, and controllability of 358 trait adjectives. All ratings were made with regard to "most other people." Many (41%) of these attributes were perceived as change-sensitive by more than half of the subjects, and there was a high degree of consensus with regard to the expected age when change would begin and end. These normative conceptions of change were optimistic, overall. Expected gains were greater than expected losses, and change was perceived as highly controllable (Heckhausen & Baltes, 1991). However, for later periods of adulthood, increasing risks for decline and diminishing potential for growth were expected. That is, normative conceptions of development were multidirectional. In line with these findings, Ross (1987, cited in Ross, 1989) reported that students graphically depicted life-span trajectories as curvilinear. The most common trajectories involved either early increases and late decreases, early increases followed by stability, or stability throughout the life span. Similarly, Rubin and Brown (1975) assessed perceptions of intellectual abilities of various target age groups and found inverted-U curves.

The goal of the present research was to systematically assess and compare subjective conceptions about development and general personality ratings. Extending Heckhausen et al.'s paradigm, we (a) collected ratings with respect to the self rather than most other people, (b) sampled personality-descriptive terms from the entire spectrum of individual differences in personality, and (c) had subjects of different ages rate each decade of the adult life span.

METHOD

Overview and Hypotheses

Subjective conceptions were assessed by ratings that could either indicate increases, stability, or decreases in the target trait. Conceptions of developmental growth or decline depended on the combination of the desirability of the trait and the direction of the perceived change (increase vs decrease). Ratings were collected separately for each decade. To fairly represent the range of individual differences in personality, 10 desirable and 10 undesirable traits were selected from each of the Big-Five dimensions of personality (Digman, 1990; John, 1990; Norman, 1963). The five dimensions were Extraversion (vs Introversion), Agreeableness (vs Antagonism), Conscientiousness, Emotional Stability (vs Neuroticism), and Intellect (or Culture, Openness) (Goldberg, 1992). The use of this taxonomy avoided the constraints of theory-driven or random item selection and the unreliability of single-item analyses.

Subjective intraindividual change and cross-sectional stability. — Subjective conceptions of personality development were predicted to involve multidirectional change: increases in desirable traits and decreases in undesirable traits (growth), and increases in undesirable traits and decreases in desirable traits (decline). In contrast, cross-sectional comparisons of self-descriptions of different age groups were predicted to be highly stable.

Optimism. — In accordance with previous research, conceptions of growth were predicted to be more prevalent than conceptions of decline, and a temporal shift was expected from strong perceived growth in early adulthood to moderate decline in late adulthood (Heckhausen et al., 1989). The rated controllability of traits was predicted to be high (Heckhausen & Baltes, 1991).

Consensus and age differences. — Subjective conceptions of men and women, or people of different educational background, were predicted to be similar, reflecting the consensuality of normative change (Heckhausen et al., 1989). Different ages, in contrast, involve different perspectives on the life course. Whereas young adults need to rely largely upon their developmental *expectations* and stereotypes of aging, older adults may draw on a wealth of *experiences*. In line with findings of survey research (Harris & Associates, 1975, 1981), which indicated that older adults perceive themselves favorably, it was predicted that older adults would perceive less decline during old age than would young adults (Heckhausen & Krueger, in press).

Multidimensionality. — The notion of multidimensional development implies that different trait domains may be associated with different degrees of stability and change, and with different types of long-term trajectories (Baltes, 1987). To the degree that (idiotetic) intraindividual conceptions of change and (normative) personality ratings of current standing tap a common source of variance, some correspondence could be expected. Namely, there may be more change on the dimensions of Extraversion and Intellect than on the dimensions of Agreeableness, Conscientiousness, and Emotional Stability (Bengtson, Reedy, & Gordon, 1985; Costa & McCrae, 1980; Costa et al., 1980).

Subjects

Ninety men and 90 women were recruited by newspaper advertisements in the city of Berlin. Each sex comprised 30 young (20–35 years, $M = 28.77$), 30 middle-aged (40–55 years, $M = 47.50$), and 30 older adults (65–80 years, $M = 68.55$). Within each group, there were equal numbers of graduates from each of the three kinds of German high schools (Hauptschule, Realschule, and Gymnasium). Subjects participated in three sessions in groups of 5 to 25, and were paid 30 German marks (approximately \$20) per session.

Procedure

One hundred trait adjectives were selected as materials. The criteria for this selection are described below. Subjects rated each trait on 9-point scales (1 = very low, 9 = very high) with respect to three questions: (1) How desirable is it to have the trait? (2) How well does the trait describe you? (3) To what extent can you personally control the trait? Ratings of stability and change were made on a 7-point scale (-3 = strong decrease, -2 = moderate decrease, -1 = small decrease, 0 = stability, $+1$ = small increase, $+2$ = moderate increase, $+3$ = strong increase). Subjects used this scale for each of seven decades of the adult life span (20s, 30s, 40s, . . . , 80s). They were instructed to rate the stability or change in a given decade relative to the preceding decade. A rating of $+3$ followed by a rating of $+1$, for example, signified slowed increase, not decrease. Specifically, instructions explained that

. . . to indicate that an attribute increases, decreases or remains constant, please enter a number between -3 and $+3$ for each decade of the life span. As you can see, a Plus indicates an increase and a Minus indicates a decrease. Judge the expected development of the attribute in comparison to the preceding decade. If, for example, an attribute has already decreased between the ages of 20 and 30, one should then ask whether during the subsequent decade (that is, between the ages of 30 and 40) the attribute further decreases, stays on the same level, or perhaps increases again.

Materials and Analyses

Fifty desirable and 50 undesirable trait-descriptive terms were selected from Goldberg's (1973) list of 1,710 personality descriptors and were translated into German by two bilingual judges. Goldberg's list provides normative social desirability ratings and a classification of each trait into one of the Big Five factors of personality. A positive and a

negative scale of 10 items each were created for each of the five dimensions. Neutral traits, such as "talkative" or "skeptical," were not included. The five dimensions were Extraversion (e.g., assertive vs submissive), Agreeableness (e.g., affectionate vs quarrelsome), Conscientiousness (e.g., conscientious vs irresponsible), Emotional Stability (e.g., self-assured vs insecure), and Intellect (e.g., intelligent vs naive). (See Appendix A, Note 1.)

The desirability ratings resembled Goldberg's data. Ninety-eight traits were rated as either clearly desirable or clearly undesirable. The German translations of "worriless" ($M = 4.49$) and "worrying" ($M = 4.65$) were excluded from further analyses because they were rated as neutral. Using ratings of self-descriptiveness, we then computed internal consistencies (Cronbach's alpha) to assess the homogeneity of the 10 scales. Seven items, whose deletion from the scales increased internal consistency, were omitted from further analyses as well. The corrected item-total correlations of the remaining 91 trait terms ranged from .27 to .73, and internal consistencies for the ten scales ranged from .74 (Emotional Stability, positive) to .87 (Emotional Stability, negative). The 91 traits are presented in Appendix B. They are classified into the Big Five dimensions and within each scale traits are ranked according their part-whole correlation.

Items were aggregated into the 10 scales of 8 to 10 items each, corresponding to the desirable and undesirable poles of the five personality dimensions. A series of analyses of variance (ANOVA) was performed to test the predictions concerning multidirectionality and optimism, consensus and individual differences, and multidimensionality. Subjects' sex, age group (young, middle-aged, old), and educational degree (basic, medium, or advanced high school) were the between-subjects variables, and desirability of attribute and trait dimension were the within-subject variables. Analyses of the change data included the additional within-subject variable of rated decade with seven levels (20s, 30s, 40s, 50s, 60s, 70s, and 80s). Throughout the presentation of results, significance levels were set at .01. Eta square (η^2) presented the effect size. All subsequent tests, performed as planned contrasts or post-hoc analyses, were two-tailed.

RESULTS

To assess the reliability of the measures, 12 women and 10 men were contacted 6 months after the first assessment. The rank orders of the item means at the first and the second assessments were highly stable (self-description = .88, change = .87, controllability = .81, and desirability = .91). Then, means of the 10 scales were computed for every subject and both times of assessment, and for each variable, 22 separate within-subject test-retest correlations were computed across scales. The standardized and averaged stability coefficients were high for self-description ($r = .91$), change ($r = .80$), and desirability ($r = .91$), and intermediate for controllability ($r = .45$).

Subjective conceptions of change vs general personality ratings. — To assess the prevalence of ratings of stability and ratings of change per decade, the frequencies of each of the seven response options (-3 to $+3$) were summed and

divided by the total number of responses. This *proportional measure* showed that ratings of small change within a decade (26%) were more frequent than ratings of moderate change (14%) which, in turn, were more frequent than ratings of large change (8%). Stability ratings (change = 0) became more frequent from the 20s to the 50s and then plateaued (20s = 40%, 30s = 39%, 40s = 47%, 50s = 58%, 60s = 59%, 70s = 58%, and 80s = 60%), $F(6,972) = 61.40, p < .001, \eta^2 = .27$. These data show that overall ratings of stability and change were about equally frequent on the level of decades. Data also revealed, however, that only a few attributes were associated with long-term stability. Fifty percent or more of the subjects rated "self-defeating" and "superstitious" as stable on each of the seven decades. When this criterion was relaxed to a majority of stability ratings on four or more decades, 20 attributes were seen as stable.

Next, all ratings of stability and change were averaged across subjects for each scale. Figure 1 shows this measure of *net change* for the seven decades of the adult life span on five separate, dimension-specific panels. Note that the seven consecutive means do not constitute trajectories of mean-level change because ratings were not accumulated. Each value represents the mean rating in comparison with the preceding decade, that is, the rating procedure as performed by the subjects. Overall change ratings above 0 represent conceptions of net increase, and ratings below 0 represent conceptions of net decrease. (See Appendix A, Note 2.)

Desirable traits showed increases in early adulthood (growth) followed by moderate decreases in old age (decline), whereas undesirable traits showed moderate decreases in early adulthood (growth), followed by small increases in old age (decline), $F(6,972) = 173.48, \eta^2 = .52$. That is, the overall desirability of personality was seen to peak during the 60s.

Next, self-descriptions of different age groups were examined. If present-status ratings involve implicit comparisons of different periods of the life span, then we would expect middle-aged adults to describe themselves more positively on desirable traits than young adults. If, however, normative social comparisons with age peers guide present-time self-ratings, there should be no such differences. Indeed, self-descriptions of middle-aged and young adults did not differ from each other or from self-descriptions of older people. Data are presented in Figure 2.

A significant interaction between subjects' age group and trait desirability indicated that there were no age differences for positive traits, but older subjects rated themselves lower on undesirable scales ($M = 2.70$) than did middle-aged ($M = 3.56$) or young subjects ($M = 3.67$), $F(2,162) = 14.62, \eta^2 = .15$. This result contrasted with the ratings of perceived intraindividual change, which implied increase rather than decrease in undesirable attributes during old age.

Optimism. — Analysis of net change revealed developmental optimism. Subjects saw more growth than decline, $F(1,162) = 161.91, \eta^2 = .50$. This prevalence of perceived growth was limited to ratings of desirable traits ($M = .46$), which, on the average, were seen as increasing. As predicted, optimism diminished with increasing target age,

$F(6,972) = 175.18, \eta^2 = .52$. For undesirable traits, conceptions of growth and decline were balanced ($M = -.05$). A significant sex difference indicated greater optimism for desirable traits among men ($M = .54$) than among women ($M = .38$), $F(1,162) = 8.96, \eta^2 = .05$. There was no such difference on undesirable scales.

Ratings on self-descriptiveness and controllability showed similarly optimistic responses. Desirable traits were seen as more descriptive of self ($M = 6.27$) than undesirable traits ($M = 3.31$), $F(1,162) = 767.74, \eta^2 = .83$. The mean rated controllability was well above the midpoint of the scale, and it was higher for desirable traits ($M = 6.30$) than for undesirable traits ($M = 5.57$), $F(1,162) = 84.53, \eta^2 = .34$.

Consensus and age differences. — Older subjects ($M = 53\%$) gave ratings of stability as often as did middle-aged ($M = 51\%$) or young subjects ($M = 51\%$), and overall, mean levels of net change were similar across age groups. However, the trajectories resulting from the ratings made by old subjects differed from those of young and middle-aged subjects, $F(12,972) = 3.73, \eta^2 = .04$. Inspection of the interaction between age, decade, and desirability indicated that older subjects were more optimistic than their younger counterparts with regard to late-life development, $F(12,972) = 3.10, \eta^2 = .04$. To quantify optimism, mean ratings of undesirable traits were subtracted from ratings of desirable attributes. Figure 3 shows the results for the three age groups separately for the seven decades. Positive values on the difference score indicate perceived growth, and negative values indicate perceived decline.

There were no differences between the young and the middle-aged group, but for the 60s, older subjects gave higher ratings for growth than did young or middle-aged subjects, $t(178) = 4.29$. For the 70s, the two younger groups expected decline, whereas for older subjects there was a balance of conceptions of growth and decline, $t(178) = 2.92$. The optimism of older subjects about personality development in late life varied across dimensions, $F(48,3888) = 3.72, \eta^2 = .04$. Optimism was strongest on the dimension of Intellect and weakest for Emotional Stability.

The other between-subjects comparisons indicated the predicted consensus with respect to subjective conceptions. There were no differences between men and women, or between subjects with basic or with higher education. Ratings of trait controllability, however, showed two interaction effects. One involved subjects' sex and trait desirability, $F(1,162) = 11.43, \eta^2 = .07$. Men rated desirable traits ($M = 6.46$) as more controllable than did women ($M = 6.14$), $t(178) = -2.00, p < .05$, but there were no differences for undesirable traits. The other interaction was between educational background and dimension, $F(8,648) = 2.82, \eta^2 = .03$. Subjects with the highest educational degree rated traits related to Intellect as more controllable ($M = 6.12$) than did subjects with one of the two lower degrees ($M = 5.76$), $t(178) = 2.07, p < .04$.

Multidimensionality. — One important question of this study was whether conceptions of continuity and change in development vary across personality dimensions. The proportional measure revealed that there were slightly fewer

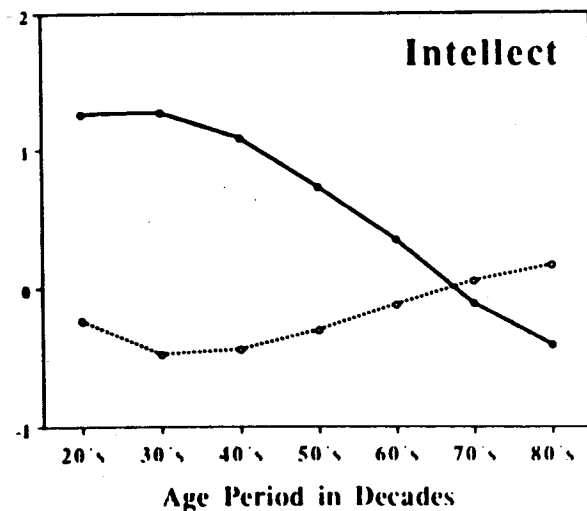
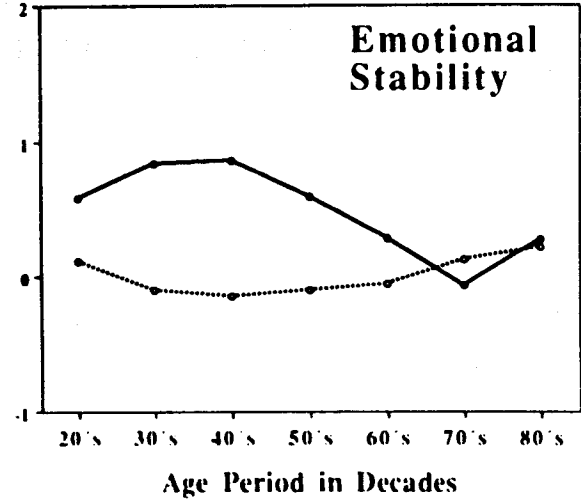
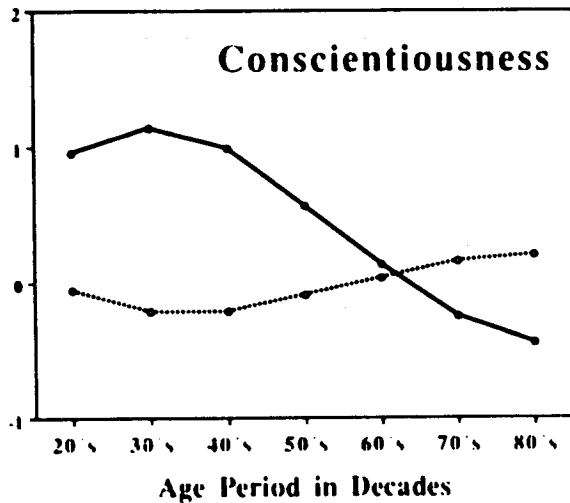
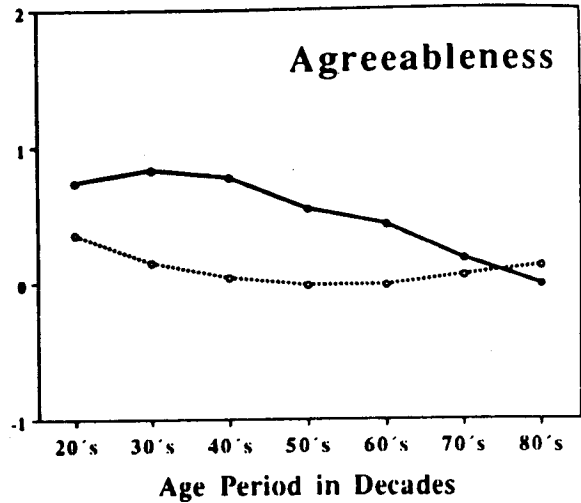
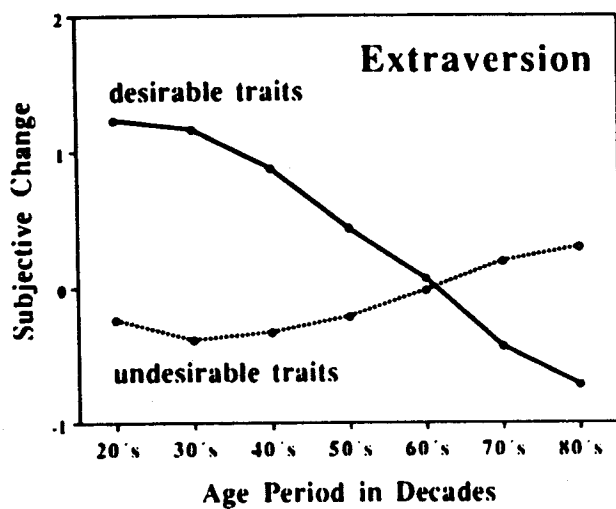


Figure 1. Perceived change on Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Intellect across seven decades of the adult life span. Solid line represents desirable traits, dashed line represents undesirable traits.

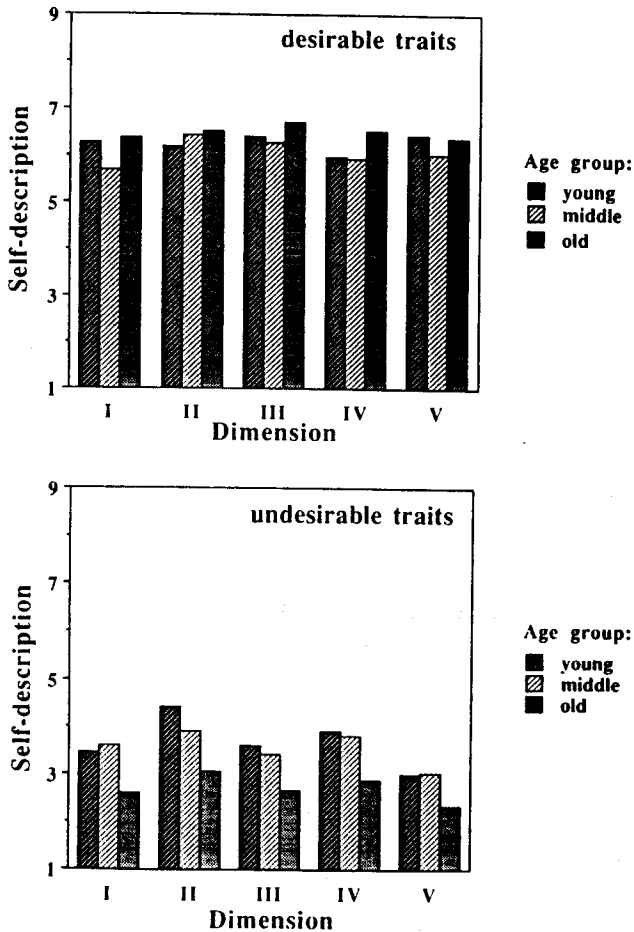


Figure 2. Average ratings of self-descriptiveness on desirable (top) and undesirable (bottom) attributes for the dimensions Extraversion (I), Agreeableness (II), Conscientiousness (III), Emotional Stability (IV), and Intellect (V).

ratings of stability for traits related to Extraversion (49%), Emotional Stability (50%), and Intellect (51%) than for traits related to Agreeableness (53%) and Conscientiousness (54%), $F(4,648) = 13.18$, $\eta^2 = .08$. Differences between the frequency of stability ratings for desirable and undesirable traits were smaller for Agreeableness than for the other four dimensions, $F(4,648) = 27.21$, $\eta^2 = .14$.

Similarly, for the measure of net change (Figure 1), the five dimensions showed different degrees of net increase, $F(4,648) = 32.44$, $\eta^2 = .17$. The interaction between dimensions and desirability indicated differences in optimism between dimensions, $F(4,648) = 42.28$, $\eta^2 = .21$. Subjects were most optimistic about long-term development in Intellect. Rated increases on desirable traits of this dimension ($M = .59$) were greater than the average increases on the other dimensions ($M = .43$), $t(179) = 9.36$. Rated decreases on undesirable traits of Intellectual Functioning ($M = -.20$) were greater than average decreases on the other dimensions ($M = -.01$), $t(179) = -10.39$.

The scale for the negative pole of Agreeableness yielded unexpected results, as traits reflecting Antagonism (John, 1990) were seen as increasing continuously across decades. Compared with the results for the other four dimensions, this

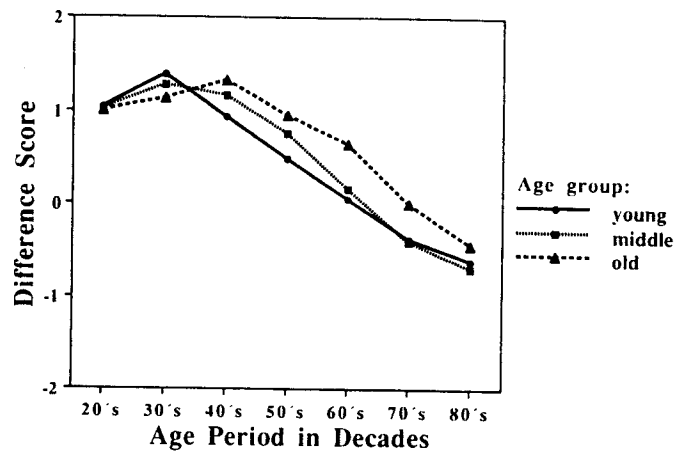


Figure 3. Relative positivity of perceived change (increases in desirable attributes minus increases in undesirable attributes).

finding was anomalous, and may have contributed to the significant interactions between dimension and decade, $F(24,3888) = 8.84$, $\eta^2 = .08$, and between dimension, decade, and desirability, $F(24,3888) = 57.88$, $\eta^2 = .26$. There were differences, however, between dimensions beyond the unique contribution of Agreeableness. As shown in Figure 1, Extraversion and Intellect showed greater variability across the rated life span than Agreeableness and Emotional Stability. Rated growth was stronger for both of these dimensions and decline was more severe, particularly for Extraversion. The perceived onset of losses in Extraversion preceded the onset of losses in Intellect. For the decade of the 60s, Extraversion was expected to diminish, whereas Intellectual Functioning was seen as still improving.

Between-dimensions differences also emerged in self-descriptions, $F(4,648) = 34.80$, $\eta^2 = .18$, and interacted with desirability, $F(4,648) = 14.16$, $\eta^2 = .08$. Undesirable traits related to Agreeableness were seen as more self-descriptive ($M = 3.78$) than other undesirable traits ($M = 3.19$), $t(179) = -6.65$. Between-dimension differences in personal controllability were considerable, $F(4,648) = 46.80$, $\eta^2 = .20$. Conscientiousness was perceived as more controllable ($M = 6.42$) than attributes of the other dimensions ($M = 5.82$), $t(179) = 11.88$. This effect was qualified by a two-way interaction between dimensions and desirability, $F(4,648) = 11.12$, $\eta^2 = .06$. The lowest perceived controllability emerged for traits related to Neuroticism (i.e., the negative pole of Emotional Stability) ($M = 5.06$), and the difference between the rated controllability of Emotional Stability and Neuroticism was larger ($M = 1.15$) than the differences between desirable and undesirable traits on the other dimensions ($M = .62$), $t(179) = 5.61$.

DISCUSSION

The findings of this research supported predictions derived from earlier theoretical and empirical work on developmental beliefs. There were conceptions of stability as well as change, and change was seen as multidirectional. Growth and decline were perceived to occur on desirable traits and, to a lesser degree, on undesirable traits. Both types of change covered distinguishable, yet overlapping periods of

the life span. The predominance of perceived increases in desirable traits during young and middle adulthood revealed developmental optimism, which was underscored by high levels of perceived controllability. Negative images of old age, however, constrained the range of optimism. Expecting some decline for the final two decades of life, subjects did not expect immunity from the setbacks of old age.

A central objective of this research was to compare subjective conceptions of development with cross-sectional data on general personality ratings. As expected, cross-sectional personality ratings of young and middle-aged subjects did not differ. In contrast, subjective conceptions showed increases in desirable traits for the same period. Moreover, general personality ratings of older adults were largely congruent with those of young and middle-aged adults. The exception to this pattern of stability was the tendency of older adults to judge negative attributes as less self-descriptive.

These results are consistent with the view that intraindividual, idiographic procedures may uncover personality change that remains undetected in psychometric approaches using comparisons of present-status self-descriptions. As noted above, there is evidence that people do engage in social comparisons when answering personality inventories (Chaplin & Buckner, 1988; McFarland et al., 1992). Whereas it is clear that psychometric and phenomenological approaches suggest divergent perspectives on personality development, the present results do not imply that one approach represents "real" development more accurately than the other.

The finding that subjective changes are highly consensual may indicate that people indeed expect and experience similar kinds of change. On the other hand, it has been argued that subjective intraindividual conceptions of change are theories, susceptible to self-enhancing and self-confirmatory biases (Ross, 1989). It is conceivable that people overestimate desirable change in order to boost self-esteem. McFarland and Ross (1987) found that university students erroneously perceived favorable changes in their attitudes toward their dating partners in the course of one semester. Similarly, Conway and Ross (1984) conducted (ineffective) courses on study skills and found that participants (but not waiting-list controls) exaggerated how poorly off they were before the program began.

A study by Woodruff and Birren (1972) has often been cited as evidence that subjective conceptions of development reflect self-enhancement biases rather than actual development. Subjects in that study had filled out the California Test of Personality twice in 25 years, and, at the second time of testing, they were asked to recall the responses they had given the first time. Whereas comparisons between the two assessment times revealed stable scores of psychological adjustment, subjects underestimated their earlier scores. The authors suggested that subjects inferred comparatively low on adolescent adjustment from the low adjustment observed among contemporary adolescents. Although perceptions of improvement may have been inflated, the possibility remains that the longitudinal comparison of self-ratings produced only apparent stability if subjects compared themselves with cohort members whose adjustment increased at the same rate

as their own. That is, inasmuch as cross-sectional and longitudinal studies rely on the same testing procedures, both may elicit social comparison processes that mask real change.

Although self-enhancement biases may inflate subjective conceptions of desirable change, such biases cannot account for expectations of decline during old age, as found in this study and earlier work (Heckhausen et al., 1989; Williams, Denney, & Schadler, 1983). Thus, it would seem premature to dismiss subjective conceptions of favorable change as erroneous. The role of self-enhancement is complex. Indeed, this bias may not be limited to subjective conceptions, but affect ratings of current status as well. If self-descriptions to some extent rely on comparisons with age peers, unfavorably viewed age groups will facilitate favorable contrasts of the self. The decline expected in old age may lead those who are directly facing it to seek favorable comparisons with others. Increases in unfavorable attributes in particular might be seen as the kind of threat that sets self-enhancing comparisons in motion (Heckhausen, 1990; Heckhausen & Krueger, in press; Taylor & Lobel, 1989). Such processes could account for the findings of this study that older subjects rated their current standing on negative attributes more favorably than did young or middle-aged subjects, and that older subjects perceived a less steep decline during old age.

Differences in change ratings between age groups were relatively small. The similarity of responses across age groups invites the interpretation that developmental beliefs are indeed "theoretical." After all, the young adults' ratings were a forecast of their own developments based on expectations, not recollections based on experience. We would like to suggest, however, that the responses of older subjects need not necessarily differ from those of younger subjects in order to permit the conclusion that older subjects report on actual development. Instead, people of both age groups may be accurately aware of general patterns of maturation and aging. Knowledge gathered from observing and communicating with others would be sufficient to guide judgments about one's own development. Finally, the notion that subjective conceptions are mere theories is problematic, because it fails to account for the formation and maintenance of specific theories. With such accounts lacking, the present functionalistic perspective considers the possibility that subjective conceptions veridically reflect elements of actual development.

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Appendix A — Notes

1. The high poles of the five dimensions tend to be positively valued and the low poles tend to be negatively valued. However, the high pole of Extraversion comprises negative (e.g., big-mouthed, boastful), as well as positive items and the low pole comprises positive traits (e.g., humble, inexhaustible) in addition to negative traits. To enhance comparability across dimensions, we chose only positive traits for the high pole and only negative traits for the low pole. Our selection put a premium on clarity of trait meaning and unambiguous translatability. Factor loadings were not available in Goldberg's 1,710

- list, and therefore we could not be sure whether we had selected marker items that correlated highly with one dimension and were unrelated to any other dimension. Hence, some traits in the present pool may correlate with dimensions other than the one in which they were classified.
2. The option of adding and subtracting consecutive change scores in order to create mean-level trajectories was not chosen. Such a procedure would have yielded an artificial trend of increasing variance across decades.

Appendix B

Personality-Descriptive Adjectives Used as Stimulus Materials

Within each scale, items are rank-ordered according to their correlation with the scale mean of self-descriptiveness.

Extraversion (positive)	Extraversion (negative)	dependable thorough ambitious persevering foresighted rational	lazy fickle distractible extravagant forgetful slovenly rude
energetic active assertive adventurous brave sociable persuasive courageous	discourageable inhibited weak melancholic submissive dependent cowardly apathetic pessimistic	Emotional Stability (positive)	Emotional Stability (negative)
Agreeableness (positive)	Agreeableness (negative)	realistic independent self-controlled self-assured level-headed decisive judicious confident calm	nervous self-pitying fussy self-doubting weepy squeamish insecure self-defeating exhaustible
good-natured affectionate helpful obliging sympathetic forgiving soft-hearted cheerful tolerant	quarrelsome obstinate headstrong aggressive irritable domineering vindictive distrustful bitter biased	Intellect (positive)	Intellect (negative)
Conscientiousness (positive)	Conscientiousness (negative)	intelligent knowledgeable educated clever versatile ingenious inquisitive creative wise	blunt-witted muddle-headed clumsy naive uncultured superstitious inexperienced superficial credulous
purposeful conscientious industrious	irresponsible absent-minded noisy		