Longitudinal Predictors of Proactive Goals and Activity Participation at Age 80

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This study investigated longitudinal predictors of proactive goals and activity participation at age 80 among members of the Terman Study of the Gifted. The participants were 242 individuals between the ages of 75 and 84 ($M = 79.53$) who responded to questionnaires in 1992, 1972, and 1950. Proactive goals included goals for involvement and achievement. Activity participation included intellectual, cultural, and social service activities. LISREL 8 was used to test an integrative longitudinal latent variable model of the associations among the variables. The results showed that purposiveness at age 40 predicted proactive goals at age 80 indirectly through satisfaction with cultural life and service to society measured at age 60. Satisfaction with culture and service at age 60 was related to activity participation at age 80 through proactive goals. Women rated proactive goals as more important to them and indicated greater participation in the activities in this study than did men, but the structural equation model was invariant across the two groups. The results are discussed in terms of contemporary research and theory concerning the self-concept and life span development.

The possibilities of positive later aging are now widely acknowledged, and researchers now commonly speak of “successful,” “productive,” and even “robust” aging (Baltes & Baltes, 1990; Garfein & Herzog, 1995; Glass, Seeman, Herzog, Kahn, & Berkman, 1995; Rowe & Kahn, 1998). The purpose of the present study was to examine antecedents of two aspects of positive later aging—the holding of proactive life goals and participation in activities. For this study, proactive goals were defined as those reflecting involvement or achievement motivation (Holahan, 1988). Activity participation was studied in regard to intellectual, cultural, and social service activities. The study was conceptualized within the framework of contemporary research and theory concerning the self-concept and life span development. The sample was drawn from the Terman Study of the Gifted, the longest life cycle study in the social sciences (Holahan & Sears, 1995; Terman et al., 1925).

Previous work with the Terman sample, when the participants were an average age of 70 (Holahan, 1988), found that proactive goals reflecting an involvement with people and activities and goals reflecting achievement motivation were positively related to psychological well-being. In a path analysis, proactive goals predicted psychological well-being both directly and indirectly through activity participation. More recent analyses (Holahan, 1998) conducted when the participants had reached an average age of 80 were consistent with these findings. The present research moves beyond past research to explore the role of two antecedents of proactive goals and activity participation in later aging—midlife purposiveness and satisfaction with richness of cultural life and total service to society as measured in early aging.

Goals in Aging

Commitment to life goals has positive implications for the experience of psychological well-being (Brickman & Coates, 1997; Brunstein, Schultheiss, & Maier, 1999; Emmons, 1986). Personal goal commitment creates a sense of meaning in life (Baumeister, 1991; Reker & Wong, 1988), and commitment to goals leads the individual to enact behavior that will result in desired attainments (Brunstein et al., 1999; Harlow & Cantor, 1996).

The experience of meaning is a particularly important issue in later life (Reker & Wong, 1988). Finding purpose in life may be more challenging for older persons than for younger and middle-aged adults (Dittman-Kohli, 1990; Ryff, 1989, 1991; Van Selm & Dittmann-Kohli, 1998). Furthermore, research has shown that psychological well-being and life satisfaction in aging are related to the expression in behavior of goals that are important to the individual (Manvell, 1993; Payne, Robbins, & Dougherty, 1991; Rapkin & Fischer, 1992).

Findings from the Berlin Aging Study have shown that older persons continue to have dynamic, multifaceted, and future-oriented goals (Smith, 1999). Moreover, the study found that elective selection of goals was important for successful aging, but less important than optimization and compensation. The selection of a few goals on which to concentrate was very adaptive for older persons who had limited resources (Freund, Li, & Baltes, 1999). Similarly, Brandstädter and colleagues have observed processes of assimilation and accommodation in goals across the life span. They have found that accommodative flexible goal adjustment becomes more prominent in later life, whereas assimilative tenacious goal pursuit declines in importance (Brandstädter, Wentura, & Rothermund, 1999).

Activities in Aging

A number of authors have examined the psychological benefits to elders of participation in activities (e.g., Harlow & Cantor, 1996; Holahan, 1988, 1998). For example, Riddick and Daniel (1984) found that, for older women ($M$ age 73), participation in leisure activity was the strongest contributor to life satisfaction when compared with income, health difficulties, and work history. Harlow and Cantor
(1996, p. 1235), using the Terman data, found participation in the “shared tasks of late adulthood” (i.e., community service and social life) to be predictive of overall life satisfaction reported when the participants were in their mid-60s.

Research on activities in aging has found evidence for continuity across the life cycle (e.g., Iso-Ahola, Jackson, & Dunn, 1994). Atchley (1993), in explaining continuity theory, suggested that although activities may change in adapting to changing circumstances throughout the adult life cycle, individuals, in making activity choices, try to maintain continuity with present functioning by using familiar knowledge and skills.

Relations Between Goals, Activities, and Personality

Both goals and activities are strongly related to the individual’s self-concept in aging (Cross & Markus, 1991; Markus & Herzog, 1991). Moreover, stability in the self-concept has been stressed in trait approaches to personality. Costa, Metter, and McCrae (1994) provided two examples of the link between personality traits and happiness through activities. Agreeable people are likely to have more rewarding social activities, and conscientious people are likely to strive for achievement and take pride in their accomplishments.

The sense of self as competent appears to play an important role in the link between activities and demonstrated benefits (McClelland, 1982). For example, Herzog and House (1991) found that in aging, continued activities were chosen more in accordance with preferences, lifestyles, and long-standing patterns to maintain a sense of competence. Moreover, Herzog, Franks, Markus, and Holmberg (1998) showed that the sense of the self as agentic mediated the effects of leisure and productive activities on physical health in a sample of persons aged 65 and older.

The Present Study

The present study investigated antecedents of goals and activities in later aging within the framework of contemporary research and theory concerning the self-concept and life span development. The study was undertaken with the assumption that goals and activities in later aging are influenced by the tendency to be goal directed, as well as previously important goals and their satisfaction.

On the basis of work concerning the essential stability of personality in adulthood (e.g., Costa et al., 1994), it was assumed that adulthood goal directness would be related to the pursuit of proactive goals in later life. Therefore, purposiveness, a trait measured in 1950 (Holahan & Sears, 1995), when the participants were an average age of 40, was included in the study.

The proactive goals measure in the present study was defined as involvement and achievement goals. This measure was chosen because previous work showed that these goals were positively related to activities and psychological well-being in aging (Holahan, 1988, 1998).

On the basis of the extensive literature concerning the self-concept and continuity of goals and activities in aging (e.g., Atchley, 1993; Markus & Herzog, 1991), it was assumed that previous satisfaction with meeting important goals would contribute to later goal pursuit and participation in activities. The Terman Study archives provided the opportunity to study two previously important areas of goal expression that might be characterized by continuity across adulthood and aging—richness of cultural life and total service to society. Both of these areas are relevant across the adult life course, although their mode of expression may be different in adulthood and aging. These goals are not specifically tied to work or home roles, can serve as replacements for work-related endeavors, and can be expressed in later life activity. The participants were asked in 1972, at an average age of 60, to indicate how important these goals had been in their planning in young adulthood and how satisfied the participants were with their experience in these areas.

In 1992, when the participants were an average age of 80, they were asked about their present activities (Holahan, 1998). The list of activities to which they responded contained three types of activities that could logically be expressions of goals for culture and service to society—intellectual, cultural, and social service activities. To control for the effects of health on activity participation in later aging, we used a composite measure of self-reported health and energy and vitality in 1992 as a covariate.

The Terman men and women had very different histories of achievement. Although both the women and men were selected on high intelligence, the women’s career achievements were modest in comparison with the men’s. The women, however, had strong cultural interests and extensive histories of social service in volunteer activities (Holahan & Sears, 1995). Because of the differences in men’s and women’s work and career patterns, gender differences in the levels of study variables and in their overall pattern of relationship were explored in this study.

Hypotheses

On the basis of the assumption of relative stability in personality, it was hypothesized that purposiveness, as measured in 1950 at age 40, would be positively related to proactive goals in later aging and to reported satisfaction with goals for culture and service in early aging. Purposiveness was hypothesized to be associated with proactive goals through satisfaction with culture and service. In addition, purposiveness was hypothesized to be related to later life activities indirectly through its relation with proactive goals. Moreover, on the basis of the assumption that earlier satisfaction of important goals would facilitate the maintenance of meaningful related goals and activities in later aging, it was hypothesized that previous satisfaction with cultural and service goal pursuit would be positively related to proactive goals and activities in later aging, and that part of the relation of previous satisfaction to activities would be indirect, through later life proactive goals. A structural equation model with latent variables was constructed to examine the pattern of interrelations among the variables. This model is presented graphically in Figure 1. Gender differences in the overall pattern of relationships were explored in a two-group structural equation.

With respect to gender differences in goals, previous analyses had shown that the Terman men rated achievement goals as more important than did the women, whereas women rated involvement in relationships as more important than did the men (Holahan & Sears, 1995). With the
expectation that later aging would be characterized by a lesser emphasis on achievement and competition, whereas relationships would continue to be important, it was hypothesized that gender differences on proactive goals would favor women. In previous analyses, women’s participation in cultural and social service activities was higher than men’s, but there was no difference in participation in intellectual activities (Holahan & Sears, 1995), leading to the hypothesis of greater overall participation in these activities for women at age 80. Because goal success was weighted by importance, no hypothesis was advanced concerning satisfaction with culture and service at age 60.

**METHODS**

**Participants**

The present study uses data from the 1992 Terman Study survey, in which 488 questionnaires (76% based on participants believed to be living as of 1986) were returned. To ensure a more homogeneous age sample of older adults, we restricted the participants in the present study to those respondents who were between the ages of 75 and 84 as reported on the 1992 questionnaire, and who responded to measures of the independent, dependent, and control variables in 1992 and to earlier measures obtained from the Terman archives. This resulted in a sample size of 242 (120 men and 122 women). The mean age of participants in the present study was 79.53 (SD = 2.47), with 63% of the sample between the ages of 78 and 82.

The continuing Terman sample is a relatively advantaged group of older persons. The Terman sample was originally selected on the basis of high IQ; they all had an IQ of 135 or higher, placing them in the top 1% of the population with respect to intellectual ability. Among participants in the present study, 80.6% earned at least a bachelor’s degree and 41.7% earned a degree beyond the bachelors. This contrasts dramatically with the educational preparation of the general population for this cohort, only 8% of whom obtained as much as a bachelor’s degree (Terman & Oden, 1947). Although the men’s level of occupational achievement has been higher than the women’s, both men and women have indicated in the past that their financial situation has been satisfactory in aging (Holahan & Sears, 1995). In 1992, 90% of the participants indicated that their financial resources were “quite adequate” or “more than enough.” Comparison of the activity participation of the Terman participants in their later 60s with that of other samples showed them to have higher levels of participation in both intellectual and nonintellectual activities. The sample also appears to be longer lived than the general population (Holahan & Sears, 1995).

**Measures**

The measures for this study include questionnaire data from 1992, 1972, and 1950 from the Terman archives. The measures include items on proactive goals and activities in 1992, self-reported health and energy and vitality in 1992, purposiveness in 1950, and a retrospective self-assessment in 1972 of culture and service goals in young adulthood and their satisfaction.

**Proactive goals.**—An eight-item measure of proactive goals in 1992 was included in the study. This measure was...
derived from a list of goals and purposes for life on the 1992 questionnaire. The participants were asked to check important goals and to check twice the three goals that were most important to them. Not checking a goal was scored as 0, and important and most important were scored as 1 and 2, respectively. On the basis of previous item and factor analyses (Holahan, 1988), a proactive goals scale was constructed, and was composed of two subscales—perseverance and achievement motivation. The three-item involvement subscale contained the items to have many personal relationships, to enjoy intimacy with others, and to enjoy a hobby or other activities. The five-item achievement motivation scale contained the items to continue to grow personally, to be creative and productive; to have opportunities for achievement or competition; to make a contribution to society; to continue to work; and to produce social change. Cronbach’s alpha for the eight-item scale was .63.

Activities.—A six-item measure of activity participation was derived from a list of activities on the 1992 questionnaire. The participants were asked to check or double check those activities that occupied them occasionally or frequently. Items were scored as 1 (occasionally) and 2 (frequently). Items not checked were scored as 0. The items were chosen on the basis of content to reflect activities that could logically be expressions of goals for culture and service to society. For the LISREL analysis, the items were grouped into three subscales. The intellectual activity items included nonfiction or professional or avocational publications and continuing education, increasing knowledge or skills. The cultural items included going to concerts, plays, lectures, museums, and so forth and serious practice on arts (music, art, writing, dramatics, etc.). The social service activities included community service with organizations and helping others (friends, neighbors, children). The Cronbach’s alpha for the six-item scale was .63.

Purposiveness.—On the basis of item and factor analyses (Holahan & Sears, 1995), two 11-point items assessing perseverance and purpose in life in 1950 were combined to form a midlife assessment of purposiveness. The perseverance item was worded, “How persistent are you in the accomplishment of your ends?” The item was scaled from 1 (Very easily deterred by obstacles; give up in the face of even trivial difficulties) to 11 (I won’t give up; I persevere in the face of every difficulty). The purpose in life item was worded, “Do you have a program with definite purposes in terms of which you apportion your time and energy?” The item was scaled from 1 (Drift entirely; no definite life plan; leave everything to chance) to 11 (My life is completely integrated toward a definite goal). The Cronbach’s alpha for the two-item scale was .71.

Satisfaction with cultural and social service goals.—In 1972, when the participants were an average age of 60, they were asked about their goals for richness of cultural life and total service to society. Participants were asked to rate the importance of each of these goals in the plans they made for themselves in early adulthood. They were also asked how satisfied they were with their experience in each of these respects.

In the present study, satisfaction with cultural and social service was obtained by weighting the satisfaction with experience in each of these areas by their importance to the individual to provide a satisfaction score that reflected each individual’s emphasis on each goal. The importance ratings were scaled from 1 (Less important to me than to most people) to 4 (Of prime importance to me; was prepared to sacrifice other things for this). The satisfaction ratings were scaled from 1 (Found little satisfaction in this area) to 5 (Had excellent fortune in this respect). In the present study, each satisfaction score was multiplied by its importance rating, and the two products were summed to form a satisfaction with cultural and service goals scale. Cronbach’s alpha for the two-item scale was .38.

Perceived health.—The respondents were asked to indicate their general health since 1986 on a 5-point scale ranging from 1 (very poor) to 5 (very good). The respondents were also asked to indicate their level of energy and vitality on a 4-point scale ranging from 1 (Lack of energy very much limits my activities) to 4 (Vigorous, have considerable endurance). The energy and vitality scores were converted to a 5-point scale and averaged with the general health rating to form a composite measure of perceived health (Cronbach’s α = .74). Self-ratings of health have shown good construct validity in research with other samples (Idler & Kasl, 1991; LaRue, Bank, Jarvik, & Hetland, 1979).

Results

Gender Differences in Means

Gender differences in the study variables were investigated in a multivariate analysis of covariance in which perceived health in 1992 was used as the covariate to control for the influence of declining health on activity participation in later life. The analysis was significant, Wilks’ Λ = .94, $F(4,236) = 3.61, p = .007$. Table 1 presents the means, standard deviations, and significance levels of post hoc one-way analyses of variance (ANOVA). As predicted, women scored higher on both proactive goals and productive activities. However, the means for the weighted satisfaction with culture and service score were not significantly different for men and women.

Follow-up analyses of single items on the proactive goals and productive activities measures were conducted to clarify the gender findings. Follow-up ANOVAs on the items com-

<table>
<thead>
<tr>
<th>Measure</th>
<th>Men (n = 120)</th>
<th>Women (n = 122)</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>F</th>
<th>df</th>
<th>p</th>
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</thead>
<tbody>
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<td>Purposiveness (1950)</td>
<td>14.12</td>
<td>2.66</td>
<td>13.51</td>
<td>2.71</td>
<td>3.11</td>
<td>(1,240)</td>
<td>.079</td>
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<tr>
<td>Satisfaction with Culture and Service (1972)</td>
<td>4.73</td>
<td>1.39</td>
<td>4.84</td>
<td>1.18</td>
<td>0.45</td>
<td>(1,240)</td>
<td>.503</td>
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<tr>
<td>Proactive Goals (1992)</td>
<td>3.81</td>
<td>2.76</td>
<td>4.68</td>
<td>2.28</td>
<td>7.17</td>
<td>(1,240)</td>
<td>.008</td>
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<tr>
<td>Productive Activities (1992)</td>
<td>4.11</td>
<td>2.43</td>
<td>5.21</td>
<td>2.50</td>
<td>12.15</td>
<td>(1,240)</td>
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Note: Year measure was administered appears in parentheses.
posing the proactive goals scales showed that whereas men scored significantly higher than women on the goal to continue to work \((p < .01)\), women scored higher on the goals to have many pleasant personal relationships \((p < .001)\) and to enjoy intimacy with others \((p < .05)\). No gender differences were found on the goals to make a contribution to society, to enjoy a hobby or other activities, to continue to grow personally, to be creative and productive, to produce social change, and to have opportunities for achievement or competition. In follow-up ANOVAs of individual activity scale items, women scored significantly higher than men did on going to concerts, plays, lectures, and museums \((p < .01)\); community service with organizations \((p < .01)\); and helping others \((p < .001)\). There were no gender differences on the remaining activity items: reading nonfiction or professional or avocational publications; continuing education, increasing knowledge or skills; and serious practice on arts (music, art, writing, dramatics, etc.).

**An Integrative Longitudinal Model**

We tested an integrative longitudinal path model of the associations among purposiveness in 1950, importance of cultural and social service goals in 1972, proactive goals in 1992, and productive activities in 1992 as a latent variable SEM using LISREL 8 (Jöreskog & Sörbom, 1993). The initial model contained four latent variables. Purposiveness was an exogenous variable and satisfaction with culture and service, proactive goals, and productive activities were outcome variables. An exogenous variable for 1950 purposiveness was measured by two indicators: perseverance and definite purpose in life. An endogenous variable, satisfaction with cultural and social service goals, was measured by satisfaction with each area in 1972 weighted by its importance. A second endogenous variable, proactive goals, was measured with two indicators (involvement and achievement motivation). A third endogenous variable, activities, was measured with three indicators (intellectual, cultural, and service activities). Residualized activities scores, controlled for self-reported health, were used in the analysis. To provide a metric for the latent constructs and to identify the measurement model, the first indicator loading for each latent construct was set to 1.0 in the unstandardized solution for each model. Variance–covariance matrices were used in the LISREL analyses. Zero-order correlations, means, and standard deviations for the study variables are presented in Table 2. Listwise deletion of missing values was used for all analyses \((N = 242)\).

The hypothesized model is presented graphically in Figure 1. The initial test of this model resulted in a significant chi-square, indicating that its fit to the data could be improved, \(\chi^2(22, N = 242) = 57.60, p = .00\). The direct paths from purposiveness to proactive goals and from satisfaction with culture and service to activities were not significant and were not retained in the model. This resulted in the completely mediational model depicted graphically in Figure 2, which includes standardized estimates of parameters in the measurement and structural models. Delta and epsilon represent unique variance in the observed X and Y variables, respectively. The unlabeled arrows pointing to the three endogenous latent variables show the residual (unaccounted for) variance for each of these variables. The model provides a good fit to the data, overall \(\chi^2(21, N = 242) = 28.32, p = .13\); goodness-of-fit index = .97, adjusted goodness-of-fit index = .95 (see Appendix, Note 1). All parameter estimates in the measurement model were significant at the .01 level for all four latent variables. In addition, the parameter estimates in the structural model were significant at the .01 level. Purposiveness in 1950 was significantly related to satisfaction with culture and service in 1972, which was significantly related to proactive goals in 1992. In turn, proactive goals were significantly associated with activities in 1992. To explore possible gender differences in these relationships, we ran a two-groups model with equivalent paths. The results, overall \(\chi^2(49, N = 242) = 65.26, p = .06\), indicated a good fit to the data.

To further test the fit of the final model, we made systematic comparisons between the final model and alternative models, which included each of the paths not included in the

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<th>Variable</th>
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<tr>
<td>Purposiveness (1950)</td>
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<td>1. Perseverance</td>
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<td>2. Purpose in life</td>
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<td>3. Culture</td>
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<td>4. Service</td>
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<td>Proactive Goals (1992)</td>
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<td>Activities (1992)</td>
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<td>7. Intellectual</td>
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<td>8. Cultural</td>
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<td>9. Social service</td>
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</table>

| M            | 7.41 | 6.40 | 9.06 | 8.16 | 2.07 | 2.18 | 2.02 | 1.28 | 1.36 |
| SD           | 1.59 | 1.45 | 4.55 | 4.67 | 1.27 | 1.90 | 1.10 | 1.05 | 1.13 |

*Note:* Year measure was administered appears in parentheses.
The results of these tests are summarized in Table 3. The results showed that the addition of direct paths from purposiveness to activities, from purposiveness to proactive goals, or from satisfaction to activities, added inconsequentially to the final model and failed to improve model fit.

**DISCUSSION**

The present study explored longitudinal determinants of proactive goals and activity participation at age 80 in the Terman Study of the Gifted through a structural equation model linking purposiveness at age 40, lifetime satisfaction with richness of cultural life and total service to society weighted by importance in early adulthood and measured at an average age of 60, and proactive goals and activities at age 80. Proactive goals reflected interests in involvement in relationships and activities, personal growth, and achievement. Activities included intellectual, cultural, and social service activities.

The results showed that the personality trait of purposiveness at age 40 predicted proactive goals at age 80 indirectly through lifetime satisfaction with richness of cultural life and total service to society as measured 20 years earlier. Previous satisfaction with goals for culture and service was related to activity participation in later aging through later life proactive goals. To remove the influence of health on activities in later aging, we adjusted scores on activity participation in 1992 by covarying for perceived health in 1992.

The present results significantly expand previous research with the Terman Study that has shown the importance of goals and activities in psychological well-being in aging (Holahan, 1988, 1998; Holahan & Sears, 1995). The present study moves beyond the description of goals and activity patterns with the sample to examine antecedent variables involving personality and life satisfaction that predict a greater emphasis on proactive goals and activities in later aging.

The present findings support current research and theory concerning the self-concept across the life span. They illustrate the influence of one aspect of personality—the tendency to actively pursue goals. These findings suggest that

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Table 3. Tests of Alternative Models

<table>
<thead>
<tr>
<th>Additional Structural Path</th>
<th>Δχ²</th>
<th>n</th>
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<tbody>
<tr>
<td>Purposiveness (1950) to Activities (1992)</td>
<td>0.01</td>
<td>242</td>
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<tr>
<td>Purposiveness (1950) to Proactive Goals (1992)</td>
<td>0.01</td>
<td>242</td>
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<tr>
<td>Satisfaction (1972) to Activities (1992)</td>
<td>0.00</td>
<td>242</td>
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*Notes: Year measure was administered appears in parentheses. For all tests, df = 1, nonsignificant.*
individuals who were goal directed in midlife will tend to carry proactive goals into aging, even into the later parts of the life cycle.

The findings also speak to continuity of the self-concept through the relation of lifetime satisfaction in richness of cultural life and total service to society, as measured in early aging, to activities in later aging. The findings thus support the substantial evidence that activities in aging tend to grow out of interests earlier in the life cycle. Interestingly, an earlier analysis (Holahan & Sears, 1995), in which measures of cultural activities differed from survey to survey, had shown evidence for moderate continuity of cultural interest and participation across the life cycle to aging in the mid-70s, particularly for young adulthood and midlife measures.

The findings of this study are consistent with contemporary work linking traditional trait approaches to personality with social–cognitive approaches (Cantor, 1990). The results of the present study suggest that the trait of purposiveness is translated into goals and associated activities across the life cycle, from early adulthood to later aging. Thus, using Cantor’s distinction of “having” and “doing” in personality, we see the expression of purposiveness across the life cycle in the pursuit of richness of cultural life and service to society until early aging, and in the pursuit of meaningful life goals and their expression in activities in later aging.

The areas of cultural life and service to society investigated in the present study also suggest that a rich cultural life earlier in the life cycle may reap benefits in later aging when most of the tasks associated with formal work roles have disappeared. Likewise, an orientation of service to society may be translated into goals and activities in aging that are available and distinct from earlier modes of expression in work or family life in adulthood. Cultural and service activities outside of work and family may be continued into aging, when they can provide considerable meaning. In the Terman sample, women’s interests were somewhat more congruent with these areas (Holahan & Sears, 1995), and women tended to show a continuing greater emphasis on them in later aging. However, the integrative structural equation analysis worked similarly for men and women, demonstrating a similar pattern of predictive relationships among personality, satisfaction, and later life goals and activity participation.

The fact that pursuit of goals and meaning in life may be linked to earlier goals and activities does not imply that older persons’ goals and goal pursuit will be identical to those of younger persons. Processes of accommodation noted by Brandstätter and colleagues (Brandstätter & Renner, 1990; Brandstätter et al., 1999) and observed in the Berlin Study of Aging (Freund et al., 1999) may help individuals adjust goals in aging. General goals may be transformed into new goals and activities, which, though associated with earlier self-conceptions, are adaptive to the unique demands and opportunities of the life cycle in aging. There has been a tendency for the Terman participants to move from more to less demanding activities in aging (Holahan, 1998; Holahan & Sears, 1995). It is possible that rescaling of goals has taken place within the relatively broad goal and activity categories, allowing for the transformation of expression of goals and activities to those that are more possible in the later part of the life cycle, when health and energy are declining.

This study demonstrated continuities that help explain activity participation in aging. The Terman Study database is rich, and variables such as personality, career patterns, and hobbies and interests may provide other opportunities to examine antecedent factors in functioning in aging (see for example, Harlow & Cantor, 1996).

The present findings have two applied implications. First, the findings suggest that directing older persons toward areas that offer a sense of continuity with areas of past satisfaction may increase the likelihood of their participation in activities. In addition, to increase the likelihood of activity in aging, individuals in midlife might consider developing interests in areas that can be continued into aging.

An inevitable limitation of a study covering a 42-year time period is that measures change as new indexes become available and as new theoretical interests shape measure selection. In the case of the present study, the goals measure used in 1992 was not administered in 1950 or 1972. For this reason, the longitudinal findings cannot exclude the possibility that some unmeasured component of goals in 1950 or 1972 may remain stable over time and may underlie part of the predictive relationships.

It must be remembered that the Terman participants are unique in their selection on high intelligence. Both the men and the women were more highly achieving than comparable others in their cohort. Culture and service may be particularly salient to this group. The findings of the present study may thus be most generalizable to those with similar intellectual and socioeconomic backgrounds. It may be also that certain types of early interests translate more easily into later life goals and activities than others. It is possible, however, that the general notion of the expression of earlier personality tendencies in subsequent goal expression in later aging may apply to others, though the specific content may differ.

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Appendix

Note

1. On the basis of examination of the modification indexes, parameters reflecting correlation between the unique variances for the measures of satisfaction with cultural life in 1960 and achievement goals in 1992, correlation between the unique variances for the measures of involvement and achievement goals in 1992, and correlation between the unique variances for the measures of satisfaction with service in 1972 and social service activities in 1992, were included in the model.