Personality Development and Growth in Women Across 30 Years: Three Perspectives

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ABSTRACT This article addresses three questions about personality development in a 30-year longitudinal study of women ($N = 78$): (1) To what extent did the women maintain the same position in relation to each other on personality characteristics over the 30 years, and what broad factors were related to the amount of change in their rank order? (2) Did the sample as a whole increase or decrease over time on indices of personality growth, and did they change in ways distinctive to women? (3) Were experiential factors associated with individual differences in the amount of change? Results showed that personality was quite consistent while also showing that time interval was positively related to rank-order change and age was negatively related to rank-order change. Over the period from age 21 to age 52, the women increased on measures of norm-orientation and complexity and showed changes on measures of Dominance and Femininity/Masculinity consistent with the hypothesis that changing

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sex roles would lead to increases in Dominance and increases, then decreases, in Femininity/Masculinity. A third set of results showed that changes in Dominance and Femininity/Masculinity were associated with life circumstances such as marital tension, divorce, and participation in the paid labor force. The implications of the findings for personality development and growth are discussed.

To obtain a sense of how people change and grow, a long-term perspective is important. This article analyzes some main types of change that took place in a longitudinal sample of women between ages 21 and 52. We ask how and why these women changed and to what extent their change represented personal growth.

Personal growth usually refers to change that improves adjustment or that expands, clarifies, or deepens personality. For many psychologists, personality development has the same meanings, but, in a longitudinal context, this term often refers to change that is not for better or for worse but is assumed merely to be linked to, or to have "grown out of," personality at previous times of testing (e.g., Werner, 1957). Personality psychologists tend to emphasize the continuity in personality functioning. In fact, some of them would interpret personality change in adulthood as largely error variance. However, we believe that personality traits in adulthood exhibit both continuity and change. Furthermore, we are interested in both continuity and change, in development in all its meanings, particularly in women, and also in the ways that life experiences may influence personal growth.

We pursue these interests with data obtained from the same 78 women, tested first at age 21, when they were seniors at Mills College, and subsequently at ages 27, 43, and 52. We rely on scores from the California Psychological Inventory (CPI; Gough & Bradley, 1996) to assess personality at each of these times of testing and use demographic or questionnaire information about life events in work and family domains.

In working with the Mills data, we have been impressed with the many ways in which people change and with the need to use multiple approaches to study change in the same individuals over the same period of time. In this article we ask three questions that require different approaches to the measurement of change: (1) To what extent did the women maintain the same position in relation to each other on personality characteristics over the 30 years, and what broad factors were related to the amount of change in their rank order? (2) Did the sample as a whole

increase or decrease over time (show mean-level change) on indices of personal growth, and did they change in ways distinctive to women? (3) Were aspects of life experience associated with individual differences in the amount of change?

The Effects of Length of Interval and Period of Life on Rank-Order Change[1]

Rank-order correlations provide an index of the degree of change in the relative standing of a population of individuals over time. We use this index to show the general change of individual differences in personality over time and to test whether two broad factors—the length of time interval between assessments and the age of participants—are associated with the degree of rank-order change that is taking place. Several quantitative reviews (e.g., Crook, 1941; see also Conley, 1984; Roberts & Delvecchio, 2000; Scheurger, Zarrella, & Hotz, 1989) have demonstrated evidence for substantial rank-order consistency of personality measures over time, while also suggesting a positive relation between length of time interval and change in rank order. To test this relationship within the Mills Longitudinal Study, we compared rank-order change over the longest time period (e.g., age 21 to 52) to the three shorter time periods (ages 21 to 27, 27 to 43, and 43 to 52). We expected to find more rank-order change over the longer time interval. One explanation of this finding has been that unreliability increases over longer time intervals. Without rejecting this idea, we assumed that longer time intervals also increased the probability that people experienced circumstances that affected their personality and thus their relative standing on personality measures. Subsequent analyses concerning individual differences in change will indicate whether this interpretation is justified.

Our second hypothesis is that personality shows less rank-order change in middle age (43 to 52) than in young adulthood (21 to 27).

1. The construct represented by rank-order correlation coefficients can be referred to in multiple ways, such as test-retest stability, dependability coefficient (Cattell, Eber, & Tatsuoka, 1970), stability coefficient, ordering consistency, rank-order consistency, or rank-order change. We see rank-order correlations representing a bipolar construct with rank-order consistency represented by high rank-order correlations and rank-order change being represented by low rank-order correlations. Therefore, we use the terms rank-order consistency and rank-order change interchangeably depending on which end of the bipolar construct we are emphasizing.

Roberts and DelVecchio (2000) conducted a meta-analysis of 152 longitudinal studies to determine the age at which the rank-order consistency of personality dispositions stabilized. Their results showed that estimates of rank-order consistency increased from .31 in childhood, to .64 at age 30, and then reached a plateau around .75 between the ages of 50 and 70 (when time interval was held constant at 7 years).

To test the influence of age in the Mills Study, we compare rank-order change in the young adulthood period (age 21 to 27) to change in mature middle age (age 43 to 52). These two periods, being roughly equivalent in length of time, provide an ideal test of the hypothesis that rank-order change decreases with age. We expect to find less change in the age 43 to 52 period.

How Did the Women Develop Over Young and Middle Adulthood?

Mean-level change refers to how much a sample as a whole increases or decreases on a particular dimension of personality. Many kinds of normative change over the adult years have been described or speculated about. For example, some are attributed to particular "seasons of life," without any implication that winter is best. Here, we focus on two very general ideas about normative growth in adulthood, that is, ways in which people improve with age. One is that, through social experience, sometimes conceptualized as the tasks of adult life (e.g., Havighurst, 1948), a person becomes better adapted to the social world, that is, less impulsive, more adherent to social norms, more skilled in various kinds of social interaction. Evidence for such a trend comes from a number of cross-sectional studies of personality in adulthood (Johnson et al., 1983; McCrae et al., 1999; Yang, McCrae, & Costa, 1998), using different personality inventories and subjects across a variety of cultures or subcultures. Because the findings attributed to age in cross-sectional studies may actually reflect cohort differences, it is important to find out whether the same trends can be demonstrated in longitudinal studies. We hypothesize that Mills women will be found to have increased on CPI indices of normative control of behavior.

A second main idea is that people become more complex in their understanding of themselves and others and in their integration of cognitive and affective components of their personalities (coping skills). Evidence for this kind of development comes from Labouvie-Vief (e.g.,

Labouvie-Vief, DeVoe, & Bulka, 1989), Vaillant (1977), and others. However, inventory studies of large samples show no consistent support for this trend, perhaps because cognitive development is related to initial cognitive abilities, or perhaps because some of the inventory scales do not tap aspects of complexity that change with age. Because the Mills women were all college-educated, we assumed that most of them had the potential for this kind of growth and expected that they would increase on at least some CPI indicators of complexity.

We were particularly interested in an additional set of ideas about adult development, framed in terms of gender roles. Gutmann (1987) said that bio-social imperatives of parenting in young adulthood lead to an exaggeration of personality characteristics associated in men with protecting and providing for the family and in women with dependence and nurturance. These imperatives are relaxed over the adult years, according to Gutmann, so that men become less aggressive and more sensitive, whereas women change in the opposite direction. (An increase in assertiveness between young adulthood and middle age might thus be normative in a sample of women, though not in a sample of men.)

Gender differences in adult development are not always found, and when found, they may be given interpretations other than Gutmann's. However, they have been reported in several longitudinal studies representing different cohorts (for reviews, see Bengston, Reedy, & Gordon, 1985; Helson, Pals, & Solomon, 1997). Bardwick (1980) emphasized the importance of cohort experience in the salience of gender-related personality change. Change in women would be most pronounced, she suggested, when there was a sharp contrast between a primary commitment to the world of rearing young children in young adulthood and a primary commitment to work participation in the adult years.

Because the Mills women were socialized in the conservative gender-role culture of the 1950s but later experienced the changes of the 1960s and 1970s, including the women's movement and increased participation in the labor force, we expect an increase in assertiveness and a decrease in dependence and sense of vulnerability to be salient features in their personality development. We refer to this pattern of change as adult development distinctive to women and assessed it with the CPI scales for Dominance, a measure of confidence and assertiveness, and Femininity/Masculinity, a measure of vulnerability. We expected Femininity/Masculinity to have increased over the period during which child rearing began, between ages 21 to 27, and to have decreased

thereafter. We expected Dominance to have increased sometime after the early child-rearing years, between ages 27 and 43.

Using Individual Differences to Understand Adult Development Distinctive to Women

Attention to individual differences in change, that is, change shown by some members of the sample but not by others, can be highly informative for several reasons: First, it makes us aware that normative change, shared by most members of a sample, represents only a small portion of all the mean-level changes that are taking place. Second, individual differences in change are important for showing the potential influence on development of any social or psychological variables, such as level of education or resilience. For example, Klohnen, Vandewater, and Young (1996) found in two longitudinal studies that women with the personal resource of ego-resilience showed successful adaptation and development during the transitional period of middle age, whereas those more ego-brittle individuals showed a decline in adaptation.

In the present study, we used individual differences in change in a novel way that we hoped would help us understand the normative changes predicted to have taken place in this sample. Our assumption was that one reason why the majority of individuals in a sample showed a particular change in personality might be that they had encountered a common set of life experiences during the same time period, and these common experiences may have had an impact on personality development. Individuals who did not encounter those life experiences, on the other hand, may not have shown the same pattern of change. For example, most women in the Mills sample are hypothesized to have become more assertive between young adulthood and middle age, but those who earned a paycheck at work over many years may have increased more in assertiveness than those who worked less or remained in the family sphere. By testing whether factors such as amount of paid work were linked to differences in personality change, we attempted to demonstrate the relevance of life experiences for change.

Because of our interest in understanding personality development in women, we focused our analyses on individual differences in change that were hypothesized to be distinctive to women, specifically, changes at particular times on the CPI Dominance and Femininity/Masculinity scales. Change on both of these scales seemed likely to have been related

to women's experiences within the family, work, and culture from 1958 to 1989. To test this hypothesis, we correlated changes on Dominance and Femininity/Masculinity with variables such as marital tension, having children, and years of participation in the paid labor force.

Other Remarks and Overview

We and our colleagues have studied a number of aspects of personality change and development in the Mills sample in previous articles. For example, Helson and Moane (1987) and Helson and Wink (1992) both reported normative change on the CPI over different periods of the study. Influences on personality change or adjustment affecting subgroups of the sample were demonstrated by Agronick and Duncan (1998, women's movement), Klohnen, Vandewater, and Young (1996, ego resilience), Roberts (1997, participation in the labor force), and others. This article builds on the findings gained in these earlier studies, but it covers a longer period of time and takes a broader perspective by (1) testing general factors thought to influence rank-order change, (2) examining personality development across 31 years of adulthood, and (3) identifying life experiences associated with individual differences in normative change.

METHOD

Participants

In 1958, and again in 1960, a representative two-thirds sample ($N = 142$) of the senior class at Mills College in Oakland, California, participated in a study of creativity, leadership, and plans for the future among college women. The sample was predominantly white and middle class. Three follow-ups in 1963–64, 1981, and l989 traced the personality and life events of approximately 100 women for 30 years (Helson, 1967; Helson, Mitchell, & Moane, 1984; Helson & Wink, 1992). The women were 21, 27, 43, and 52 years old on average at the four times of testing. This study focuses on 78 women who completed the CPI at each of the four times of testing. These women did not differ significantly in college-age personality from those who participated at two or three times.

Measures: The California Psychological Inventory (CPI)

The CPI (Gough & Bradley, 1996) consists of 20 folk scales with three main themes: interpersonal assurance, control or normative orientation, and complexity. To test the hypotheses about time and age effects on rank-order change, we computed the average test-retest correlations across all of the 20 CPI scales for each relevant age period (21–27, 27–43, 43–52, and 21–52). To test the hypotheses about mean-level change on norm-orientation and complexity, we identified the relevant CPI scales for each of these domains. Seven scales, measuring various aspects of control or norm-orientation ,were Socialization, Responsibility, Self-control, Good Impression, Well-being, Achievement via Conformance, and Flexibility (negative).[2] Three scales used to measure complexity were Psychological Mindedness, Tolerance, and Achievement via Independence.

Two scales were identified as particularly relevant to hypotheses about adult development distinctive to women: Dominance (Do) and Femininity/Masculinity (F/M). The Do scale is one of the measures of interpersonal assurance. It assesses assertiveness, leadership, and task orientation. The F/M scale is one of several CPI scales that does not fall cleanly within its three main themes. Women with high scores are described as dependent, oversensitive, and as worrying about their own adequacy. Women with low scores are described as skeptical, extrapunitive, aspiring, and autonomy-seeking (Gough & Bradley, 1996). We refer to the pattern of characteristics associated with high scores on F/M as vulnerability.

Measures to Test the Relations of Life Experiences to Changes in Dominance and Femininity

Not all life experience variables were available at each of the times of testing, usually because of developmental or historical constraints. For example, no participant had a first child after age 43.

Marital and family variables. The Marital Tensions score, obtained at ages 27 and 52, consisted of the sum of 3-point ratings of 16 pairs of relational problems, such as "you are not affectionate enough" and "partner is not affectionate enough." Only one woman experienced divorce before age 27, so this variable was scored from ages 27 to 43 and ages 43 to 52. Change in motherhood status,

2. Flexibility has not been considered a measure of control, but its correlates (Gough & Bradley, 1996) indicate that this is an appropriate placement.

which reflected a woman's going from having no children to having children, was available for the age 21 to 27 and age 27 to 43 periods.

Work variables. Amount of participation in the labor force, measured in number of years spent in the labor force, was available for all three periods.

Impact of the women's movement. Ratings on a 3-point scale by psychologists of the personal importance of the women's movement for each participant (Duncan & Agronick, 1995) were available at age 43.

Analyses

To test the hypothesis that length of assessment interval would be related to greater rank-order change, whereas increasing age would be related to less change, we averaged rank-order change for each time interval across the 20 standard scales of the CPI. To compute average rank-order change we averaged the *z*-transformed correlation coefficients for the age 21 to 27, age 27 to 43, age 43 to 52, and the age 21 to 52 periods.

To test hypotheses concerning mean-level change over time we used Analysis of Variance models. Specifically, a within-subjects MANOVA was conducted to test the hypothesis that the Mills sample would increase in normative orientation and complexity across the 30 years of the study. Results are reported for all scales that showed an influence of time that was significant at the .01 level of statistical significance.

To test the relevance of life experience for adult development distinctive to women, we computed correlation coefficients between individual differences in change on Do and F/M with the three categories of life experience variables. There are three primary approaches to estimating individual differences in change: difference scores, residualized change scores (sometimes called base-free measures of change), or growth curve modeling (Willett, Ayoub, & Robinson, 1991). The latter is inappropriate for the present study because growth models require that change be computed across at least three waves of data. In the present case, we examined change across specific time and age intervals, which only covered two waves of assessment. Both difference scores and residualized change scores may be used to estimate change scores in a two-wave design. Because neither approach is ideal (e.g., Cronbach & Furby, 1970), we report results that replicated, using both difference scores and residualized change scores. This standard of inclusion is rather strict and increases the likelihood that our results do not depend on the method used to compute change.

RESULTS

Rank-Order Change

Table 1 shows the average test-retest correlation of the 20 standard CPI scales across the three periods of the Mills Longitudinal Study and across the entire 30-year span of the study. The first finding to note is the relatively high levels of rank-order consistency demonstrated across these periods supporting the general conclusion that personality traits are enduring. Our first expectation was that the rank-order correlation would be lowest between ages 21 and 52, indicating the most change, because this period represented the longest time between assessments. Statistical tests supported this hypothesis. The average rank-order change for the age 21 to 52 period was significantly lower than the average rank-order change from age 21 to 27, from age 27 to 43, and from age 43 to 52.

Our second hypothesis was that the Mills women would change more in relation to each other in young adulthood, from ages 21–27, than over a period of comparable length in middle age, ages 43–52. Estimates of rank-order consistency from age 43 to 52 were one full standard deviation higher than from age 21 to 27.

Mean-Level Personality Change

Our hypotheses were that the Mills women would show two general developmental trends from young adulthood to middle age: they would increase on the CPI scales assessing control of behavior or norm-orientation, and they would increase on scales assessing complexity. A third hypothesis was that they would show adult development distinctive to women. For this hypothesis, expectations were more specific: the women were expected to increase on F/M from 21 to 27, a period during which child rearing began for most participants, and to decrease

Table 1
Average Rank-Order Change From Ages 21 to 52

	Age 21–27	Age 27–43	Age 43–52	Age 21–52
Rank-order change	.55 $(.13)_b$	.56 $(.14)_b$	.68 $(.21)_a$	.42 $(.11)_c$

Note. N = 20 CPI scales. If two means share the same subscript they do not differ significantly.

on F/M and increase on Do sometime between age 27 and the next time of testing at age 43.

Table 2 shows the results for all the relevant scales. Ten of the 12 CPI scales showed change with age over the 31-year period that

Table 2
Mean Level Change on Select Scales From the California Psychological Inventory

			Means			
CPI scales	Eta^2	*F*	Age 21	Age 27	Age 43	Age 52
Control/Norm-orientation						
Flexibility	.08	6.7*	57.8ab (8.9)	57.7cd (10.4)	54.6ac (9.6)	54.1bd (9.5)
Self control	.08	6.5*	49.6abc (8.8)	51.5ad (8.2)	51.8b (9.0)	53.1cd (8.7)
Socialization	.06	5.1*	53.7abc (7.0)	52.1a (7.1)	51.3b (6.7)	50.8c (6.7)
Good impression	.06	5.1*	48.9a (8.3)	48.2b (8.6)	49.4c (9.1)	51.4abc (8.5)
Achievement via conformance	.06	4.6*	53.9a (5.9)	53.7bc (6.0)	55.1b (6.5)	56.2ac (6.3)
Responsibility	.05	3.9*	55.7a (5.4)	55.9b (7.1)	53.8abc (7.1)	55.5c (5.8)
Well-being	.01	1.1	32.6 (3.7)	33.1 (3.7)	32.4 (3.2)	32.9 (3.1)
Complexity						
Psychological mindedness	.10	8.2*	55.9abc (6.8)	57.5ad (6.7)	58.9b (7.1)	59.5cd (7.0)
Tolerance	.05	4.4*	56.5abc (5.4)	58.5a (5.1)	57.9b (5.6)	58.4c (5.8)
Achievement via independence	.02	2.0	27.5 (3.7)	27.4 (3.5)	28.0 (3.7)	28.2 (3.9)
Adult Development Distinctive to Women						
Dominance	.18	17.4*	57.0ab (10.9)	56.2cd (11.5)	62.4ac (10.8)	61.6bd (10.9)
Femininity	.16	14.4*	52.4ab (10.5)	55.7acd (10.1)	52.3ce (9.1)	48.5bde (8.7)

Note. $N = 78$. Standard deviations are shown in parentheses. If two means share the same subscript they do not differ significantly; * $p < .01$.

was significant at the .01 level, with effect sizes ranging from .05 to .18. With respect to the first hypothesis, six of the seven measures of norm-orientation and control showed significant change, and on five of the six (Self-control, Good Impression, Responsibility, Achievement via Conformance, and Flexibility) change was in the predicted direction, indicating increase of control with age. However, scores on Socialization significantly decreased with age, and the increase on the Responsibility scale was merely recovery from a previous drop. Although these findings indicate that the simple hypothesis of increasing control with age is not fully adequate, four of the six scales show significantly more control at age 52 than at age 21.

With respect to the second hypothesis, two of the three measures of Complexity (Psychological Mindedness and Tolerance) showed the predicted increases with age. The Achievement via Independence scales did not show statistically significant mean-level change.

With respect to our hypotheses about adult development distinctive to women, Do and F/M both showed change with age at the predicted times and in the predicted direction. Figure 1 graphs change on these scales.

Figure 1
Mean-level change in Dominance and Femininity/Masculinity from age 21 to age 52.

These two scales, both with non-linear patterns of change, had the largest effect sizes among the CPI scales (Table 2). Such patterns suggest that experiential factors particular to certain periods of life may have influenced personality change.

The only significant change ($p < .01$) other than those described above was that Independence, like Do, a measure of interpersonal assurance, increased from ages 27 to 43 ($eta^2 = .10$). The change on Independence can be considered further support for the hypothesis that the women became more assertive and less vulnerable during this time period.

Correlates of Individual Differences on Do and F/M

To test whether experiential factors may have contributed to the observed patterns of change constituting adult development distinctive to women, we correlated individual differences in change on the Do and F/M scales with experiential factors drawn from work, family, and historical context, such as participating in the paid labor force, marital tensions, and the experience of the women's movement. Because the meaning of the correlations depends on the patterns of normative change, it will be useful to refer back to Figure 1 when interpreting these findings.

Table 3 shows the correlates of change scores on Do and F/M across the three periods of the Mills study. Over the young adult period, there was a positive correlation between marital tensions and changes in F/M. Over the period from 27 to 43, changes in Do were correlated positively with number of years in the paid labor force and negatively correlated with having experienced a divorce. Changes in F/M were correlated positively with becoming a first-time mother during this period. Over the period from ages 43 to 52, change on F/M was negatively related to appraising the women's movement as having had a large personal impact.

To illustrate the meaning of these correlates, we plotted Do and F/M scores for different levels of each of the relevant life experience variables that were significantly correlated with the Do and F/M scales. For dichotomous variables, plotting scores at each time of testing is a simple matter of computing the means for the two groups. For example, the effect of whether a woman experienced divorce or not can easily be seen by plotting Do scores at ages 27 and 43 for women who did or did not experience divorce. For continuous life experience variables, the plotting procedure is somewhat more complicated. For example, to plot F/M

Table 3
Correlates of Individual Differences in Change on the CPI Dominance and Femininity/Masculinity Scales

	Change in:		
	Dominance	Femininity/Masculinity	*N*
Age 21–27			
Number of years in labor force	.03	.04	78
Marital tensions	.09	**.31***	59
Change in motherhood status	–.06	.05	78
Age 27–43			
Number of years in labor force	**.32***	–.12	77
Divorce	**-.27***	–.06	77
Change in motherhood status	–.10	**.24***	78
Impact of the women's movement	.12	.17	62
Age 43–52			
Number of years in labor force	–.08	.18	75
Divorce	–.09	–.10	78
Marital tensions	.05	–.13	53
Impact of the women's movement	.06	**.28***	62

Note. Statistically significant correlations are shown in bold; correlations shown are based on difference scores. * $p < .05$.

scores at ages 21 and 27 for those women who were experiencing much, as opposed to very little, marital tension, we first needed to estimate F/M scores for each group. To accomplish this, we regressed F/M at age 21 and separately at age 27 on the marital tensions variable. The resulting two regression equations were used to derive F/M scores for women one standard deviation above and below the mean on marital tensions. This technique is similar to procedures for plotting interactions developed by Aiken and West (1991). We repeated this procedure for all continuous variables that were significantly correlated with change on Do and F/M. The results for all significant correlates are graphed in Figures 2 and 3.

Figure 2 shows three patterns of change on F/M: for women high and low in marital conflict (age 21 to 27), for those who changed in motherhood status (age 27 to 43), and for those high and low in the importance they attributed to the women's movement (age 43 to 52). Women who experienced high levels of marital tensions in young adulthood increased more on F/M than women who experienced low levels of marital tensions (Figure 2, panel A). Panel B shows that women who became mothers between age 27 and 43 did not decrease on F/M as much as the remaining

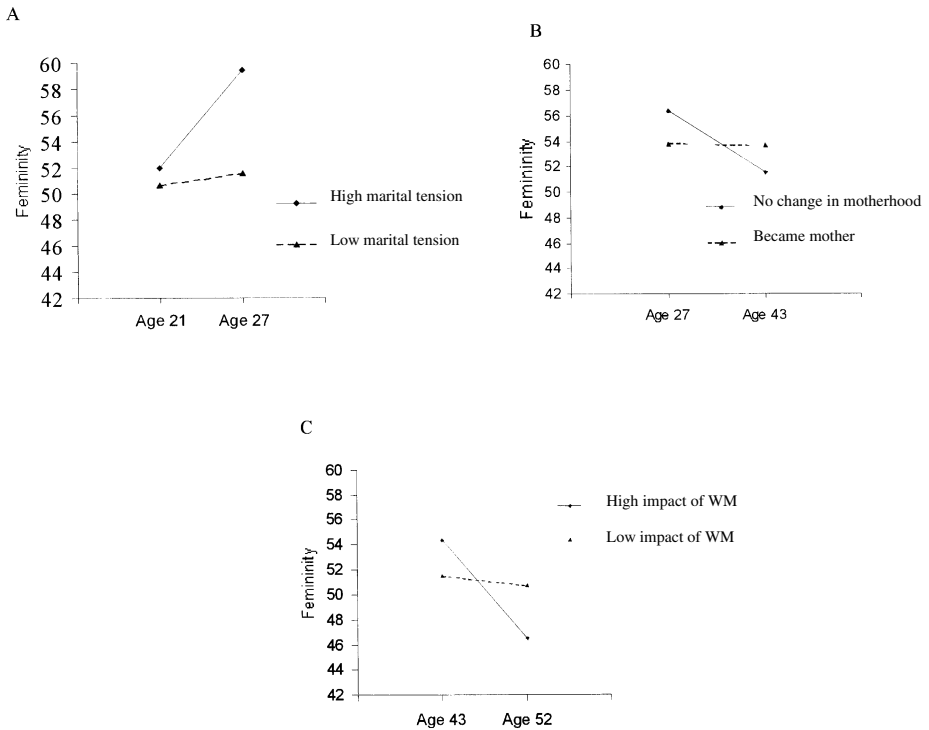

Figure 2

Patterns of change on Femininity/Masculinity associated with marital tensions (Panel A), becoming a mother (Panel B), and impact of the women's movement (WM; Panel C).

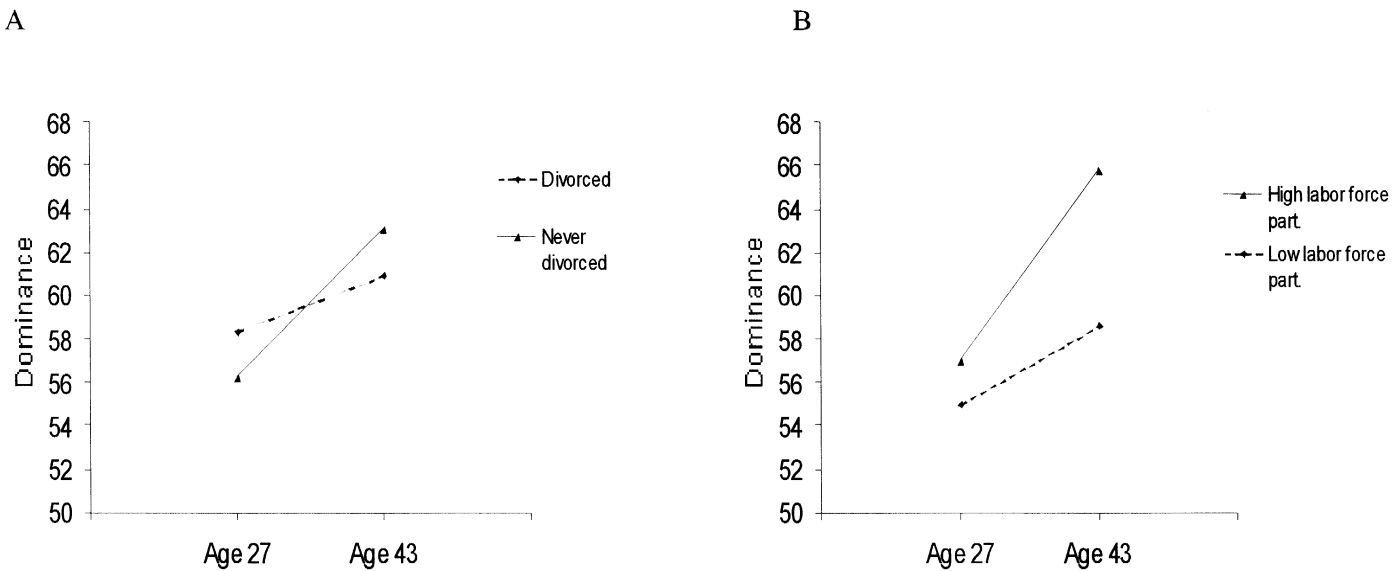

Figure 3

Patterns of change on Dominance associated with divorce (Panel A) and participation in the labor force (Panel B).

Mills women. Panel C shows that women who felt the women's movement had a big influence on their lives decreased on F/M from ages 43 to 52 more than women who felt it had little influence.

Figure 3 shows changes in Do for women with high and low levels of participation in the labor force between ages 27–43 and for women who experienced divorce over the same period. Women who participated more in the paid labor force increased more on Do than other women did. Women who experienced divorce increased less than most women did.

DISCUSSION

In this article we asked three questions about personality development and answered them by using three different approaches to the measurement of change: (1) To what extent did the Mills women maintain the same position in relation to each other on personality characteristics over the 30 years, and how did time interval and age relate to the extent of change in their rank order? (2) Did the sample as a whole increase or decrease over time on indices of personal growth, and did they change in ways distinctive to women? (3) What factors influenced how individual women changed? In particular, were experiential factors associated with individual differences in change on the Do and F/M scales? We will address each of these questions in turn.

What Factors Influence How Much Individuals Change Relative to Each Other?

We found that the rank ordering of individuals across all CPI scales tended to persist over time, supporting the widespread claim of personality psychologists that personality is enduring. Nevertheless, some change in rank order took place. More change took place over the entire 30 years of the study than over any of the testing periods within this time. We also found that there was less consistency in rank ordering over young adulthood (ages 21–27) than over middle age (ages 43–52). Both of these findings are consistent with results of large meta-analyses (e.g., Roberts & DelVecchio, 2000; Schueger et al., 1989).

Presumably, people change more in relation to each other as the length of the interval between assessments increases because there is a higher probability that events or circumstances that affect individuals differently will occur over longer time periods. Another interpretation of this finding

has been that the effect of unreliability is compounded with time. If so, the greater rank-order change we observed over longer time intervals might be mostly noise rather than systematic change. It is likely that both interpretations hold some truth. However, our examination of the relationships between life experiences and individual differences in personality change suggests the existence of systematic changes rather than unreliability in measurement alone.

Why is there more change in rank order in young adulthood than in middle age? Young adulthood is a time of exploration (Levinson, 1978). One's identity is not fully formed, and one's environment changes more than it is likely to do in later years. In the Mills Study, for example, moves of more than 1,000 miles, as well as lesser moves, peaked in the women's early 20s and declined consistently to age 43 (Helson, 1983). People experience more novel and challenging events when they are young (e.g., Tyler & Schuller, 1991), and, of critical importance for change in rank order, young people are affected in diverse ways by the new challenges they face. A study by Pals (1999) shows how marriage affected the self-concepts of the young Mills women in different ways over the period from ages 21 to 27. As a clear, coherent sense of self is achieved in response to the young adult tasks and challenges, personality becomes more consistent. And, as proposed by Glenn (1980), people become less sensitive to change in their behaviors as they age because they hold on to crystallized self-perceptions. Alternatively, one might say that making and carrying out the commitments of adulthood leads to increased integration and a greater capacity to handle life's adversity (Helson, Stewart, & Ostrove, 1995; Neugarten, 1968; Roberts & Caspi, in press).

What Mean Level Changes Have Taken Place?

How the members of a sample change relative to one another is one question. Quite another is whether the sample as a whole showed personality growth. We used ANOVA designs to show that mean levels for the sample as a whole increased over time on indices of two kinds of growth, norm-orientation and complexity. We found that the women increased on most measures of norm-orientation, that is, they became less impulsive, more considerate of others, more organized, and better able to adapt to institutional settings. In all of these ways, they were better adjusted at 52 than at 21. The finding that they decreased on the Socialization scale may reflect the fact that they started out with moderately

high scores and lived through a period of questioning of social norms and institutions.

We found also that the women increased significantly on two of three scales chosen as indices of differentiation and integration (complexity). They showed more tolerance for human diversity and fallibility over time, and they showed increasing understanding for the reasons behind people's behavior.

However, becoming increasingly adjusted in social life may not be an altogether favorable outcome. It interferes with personal growth to the extent that it precludes self-expression and complexity of outlook, and it sometimes leads to tolerating abusive work situations and putting up with dictators. Nevertheless, increases on indices of both adjustment and complexity offer evidence that most members of the Mills sample did show personal growth from ages 21 to 52.

We also examined mean-level change concerning adult development distinctive to women. We tested the idea that, in the Mills sample, the women's personality development would show the effects of their distinctive role experience: they took on the role of giving birth to and caring for young children in their 20s, then entered the labor force as opportunities became available in their 30s. Consistent with expectation, the women increased on F/M from ages 21–27 and then decreased over each of the two subsequent periods. They showed no change on Do from 21 to 27, increased from 27–43, then leveled off. The Independence scale showed the same pattern as Do. There was more change on these three scales than on any others.

Did these changes represent personal growth? Too much decrease on F/M could signify a tough, extrapunitive attitude, and too much increase on Do might overorganize one's life and be a handicap in interpersonal relationships. Nevertheless, change on these scales for the sample as a whole seems to show the development of agentic characteristics between young adulthood and middle age, and thus movement toward a fuller (more androgynous) development of personality than is shown by the sex-typed individual. Although this kind of change has been reported in other cohorts, it may have been a particularly adaptive pattern for women of the Mills sample's era, helping them to make the big changes in life style that occurred in the 1970s.

Why Did the Mills Women Change on Dominance and Femininity/Masculinity?

The nonlinear pattern of change on Do and F/M led to the hypothesis that role experiences may have contributed to this personality development. Our examination of the association between individual differences in change and role experiences supported this idea.

From ages 21 to 27, increase on F/M was associated with marital tension. This is the time, according to Gutmann (1987), when sex differences are exaggerated in the interests of carrying out parental roles. These years may have been particularly stressful for young couples in the early 1960s, just before the women's movement articulated the pain in the inequality of gender roles.

From ages 27 to 43, most women declined on F/M, but those who were having their first child during these years declined less, indicating again the vulnerability associated with marriage and child rearing. Over this same period women began entering the labor force, and years of participation were related to amount of increase on Do. Women who divorced, however, increased less. In part, this failure to increase on Do would seem to reflect the disruption of divorce.

From ages 43 to 52,women who regarded the women's movement as an important influence on their lives decreased on F/M more than women who regarded it as having had little influence. We speculate that this variable may have been significantly related to change from 43 to 52 and not from 27 to 43 because many factors, such as the growth of children and increasing participation in adult life, contributed to decrease on F/M from its peak at age 27. However, a woman's midlife decision to change or continue her lifestyle in a nontraditional direction was sometimes made with explicit reference to the women's movement (Agronick & Duncan, 1998). Her appraisal of the women's movement at age 43 predicted how much she would decrease on F/M from ages 43–52.

One implication of these results is that the individual differences in change we observed were not simply due to unreliability of measurement. Rather, some change on these personality measures appears to be systematic. Our findings that distinct sets of life experiences were related to distinct patterns of change are particularly impressive because the odds were not in favor of finding such results. Not only do change scores tend to be unreliable, but individual differences in change on scales that show normative change tend to be restricted in range, and our criterion that

correlates of change had to be significant on both types of change scores (difference and residualized change score) was strict.

Three Faces of Change: A Multiple-Perspective Approach

We chose to study the issues of personality development and growth using three distinct approaches: rank-order change, mean-level change, and individual differences in change. The finding that overall levels of rank-order consistency were moderately high adds to existing evidence that people tend to keep the same rank order over time. On the other hand, the fact that the average rank-order correlation over 30 years was only .42 indicates that people also change in relation to each other. Rank-order change does not provide an index of growth, because the change it captures is relative. That is, the change could be either large or small, and could go up or down. These changes are greater in young adulthood than in middle age, though even then some movement continues. The finding that rank-order change is greater in young adulthood presents an interesting developmental question, as we have discussed above.

Because rank-order change is independent of normative change—that is, how the sample as a whole changes—we also assessed mean-level change. These analyses showed that the Mills women increased in adjustment and complexity, two aspects of development that suggest growth. Similar analyses showed evidence for adult development distinctive to women, which we believe to have contributed to breadth of personality and to the ability of the sample to adjust to changing times.

We used individual differences in change to help us elucidate why the normative changes may have taken place. By using individual differences in change in this somewhat unorthodox fashion, we showed that individual differences in the amount of normative change were systematically related to life experiences, suggesting one avenue for how these changes may have come about. To clarify these correlates of change, we developed a way to illustrate and understand the observed effects. We hope this technique can be used in studies of other samples and cohorts.

We believe that focusing on more than one approach to the measurement and understanding of change in longitudinal data helps to capture the richness and complexity of personality development. To invoke a well-worn metaphor, by using more than one approach to assessing change, we have been able to touch the trunk, the leg, and the ear of the

proverbial elephant that represents personality change, development, and growth. By using all three approaches to tracking change over a 30-year period we were able to glimpse not only individual parts of personality development but also its broader shape and content across the period from young adulthood to middle age. This broader pattern reveals that personality is both consistent and changeable, and that personal growth is demonstrated in normative changes and in relation to life circumstances.

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