

Social Role and Birth Cohort Influences on Gender-Linked Personality Traits in Women: A 20-Year Longitudinal Analysis

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Growth curve modeling was used to examine the impact of social role experiences (e.g., marital support, occupational prestige) and birth cohort on mean-level differences and age-related changes in positive personality traits indicative of either femininity or masculinity in 758 mothers heterogeneous in age, assessed 4 times over 2 decades. Both femininity and masculinity increased significantly from mean ages 39 through 59; each was predictive of an age change in the other. Low masculinity was associated with a more rapid increase in femininity, whereas high occupational prestige decreased the magnitude of association between masculinity and femininity. Femininity increased with more marital support but decreased with unmarried status, more children at home, and working full or part time; among full-time workers, that effect was modified by marital support. Masculinity increased with full-time work and high occupational prestige. A trend for differing levels of femininity, and contrasting associations of masculinity with femininity and marital conflict in women born after 1944 compared with those born earlier, suggests shifting social norms and gender relations in the marital role.

Keywords: middle age, women, femininity, masculinity, marital role

Nearly four decades ago, Neugarten (1968) argued that the manner in which the female personality unfolds is, to a substantial extent, contingent on existing societal demands for labor. That perspective is compatible with recent assertions (and empirical evidence; e.g., see Twenge, 1997, 2001b) that socially determined roles continue to influence the rise and fall of self-reported gender-linked personality traits in women (Barnett & Hyde, 2001; Eagly, Wood, & Diekmann, 2000). An explicit or implicit assumption underlying this position is that work roles promote traits thought to be more characteristic of men than women, whereas family roles foster traits thought to be more characteristic of women than men. Nonetheless, support for that hypothesis is based primarily on research related to work role experiences, with surprisingly limited evidence of family role influences. Further, how roles are defined and appraised may vary as a function of historical shifts in social

norms (Baltes, 1987): For example, compared with their counterparts in past cohorts, modern wives hold more sway in the marital relationship, whereas modern husbands are more invested in family roles (Amato & Booth, 1995; Rogers & Amato, 2000). Consequently, the notion that work roles and family roles each contribute exclusively to masculine- and feminine-linked traits, respectively, in recent cohorts of women (and men) may be outdated. Finally, findings that support role associations with gender-linked traits often are based on nonrepresentative samples, many of which are college samples, thus limiting their generalizability to women of varying ages, socioeconomic positions, or both.

Here we attempt to address those issues by examining normative age changes in gender-linked traits and estimating the potential influence of social role experiences and birth cohort membership on mean trait levels and age-related changes in a community sample of 758 mothers, assessed four times between 1983 and 2003. We focus on socially desirable characteristics that denote positive communal traits thought to be primarily feminine in nature and thus more typical of women, and on positive agentic traits thought to be primarily masculine in nature and thus more typical of men. Use of longitudinal data to investigate age-related change in personality minimizes the risk of confounding generational differences and maturational change, as may happen when conclusions regarding change are based on cross-sectional comparisons of different age groups. This is especially important in the immediate aftermath of a historical period of rapid and related social change such as occurred for the current study with regard to the contemporaneous decline in gender-role restrictions.

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Evidence of Longitudinal Change in Gender-Linked Traits

The most noteworthy evidence of longitudinal change in gender-linked personality traits in women has come from the Mills College Longitudinal Study sample, born in 1936 and 1939 and followed since their undergraduate years by Helson and her colleagues: Significant shifts in femininity and masculinity were reported between the ages of 27 and 43 (Helson & Moane, 1987), 43 and 52 (Helson & Wink, 1992), 21 and 52 (Roberts, Helson, & Klohnen, 2002), and 21 and 61 (Helson, Jones, & Kwan, 2002). Findings, based on the Femininity/Masculinity scale of the California Personality Inventory (CPI; Gough, 1987), suggest that masculinity tends to increase in the middle adult years whereas femininity tends to decline. On the CPI, however, femininity and masculinity traits are at opposite poles of a unidimensional continuum; thus, high scores on one pole necessarily constrain high scores on the other. Further, extreme scores at either end reflect relatively negative traits, such as overly sensitive and dependent on the feminine pole versus skeptical and extrapunitive on the masculine pole (Gough & Bradley, 1996); consequently, it often is considered to be a measure of emotional vulnerability.

Femininity and Masculinity: Independent but Related Constructs

Alternatively, femininity and masculinity also have been conceptualized as related but distinct constructs, both of which reflect characteristics basic to the healthy development of human personality (Bakan, 1966). One of two widely used self-report measures of gender-linked traits, the Personal Attributes Questionnaire (PAQ; Spence, Helmreich, & Stapp, 1974, 1975), provides an index of relatively positive traits thought to be more typical of women (e.g., understanding of others) and an index of relatively positive traits thought to be more typical of men (e.g., independent). Similarly, the Bem Sex-Role Inventory (BSRI; Bem, 1974), the other widely used self-report measure, has separate indexes of feminine- and masculine-linked traits, many of which overlap with the PAQ and thus are positive; however, the BSRI also has been criticized for its inclusion of socially undesirable items (e.g., childlike and gullible on the Femininity Scale; Pedhazur & Tetenbaum, 1979). The considerable and distinct overlap of those indexes with the broader dimensions of the five-factor personality model proposed by McCrae and Costa (1987) attests to the basic dispositional nature of both feminine- and masculine-linked traits (Lippa, 1991; Roberts, Robins, Trzesniewski, & Caspi, 2003).

Family Roles and Gender-Linked Traits

The marital role is ranked higher in importance than the work role by both men and women (Thoits, 1992). It is the primary role of our society in which a positive sense of identity, self-worth, and mastery is developed (Gove, Style, & Hughes, 1990). Moreover, for women, the quality of the marital relationship is a particularly potent predictor of mental health status (Greenberger & O'Neil, 1993). Indeed, there is substantial and consistent evidence that marital conflict is associated with increased risk of depression and other psychiatric disorders in women (Balog et al., 2003; Beach & Fincham, 1998; Fincham, Beach, Harold, & Osborne, 1997; Hammen, 2003; Kendler et al., 1995; O'Leary, Christian, & Mendell,

1994; Whisman & Bruce, 1999) and that marital support is associated with their psychological well-being (Barnett & Baruch, 1985; Baruch & Barnett, 1986; Gove et al., 1990; Martire, Stephens, & Townsend, 1998). Marriage also is the central arena in which gender roles are enacted (Eagly et al., 2000); thus, it may be the most salient interpersonal context for continued expression of feminine-linked traits by adult women. Further, wives in recent cohorts wield more power in the marital relationship than wives in past cohorts (Amato & Booth, 1995; Rogers & Amato, 2000); thus, the expression of masculine-linked traits also may be influenced in modern marriages.

Abele (2003) used the PAQ to assess socially desirable gender-linked traits in female graduate students: High femininity predicted involvement in family roles 18 months later; however, that association was not reversible (i.e., involvement in family roles did not predict increased femininity). Mori, Nakashima, and Kurita (2002) reported that femininity, assessed by the BSRI, was highly correlated with family support, but the measure of support used did not clarify which family member offered support. On the other hand, increased femininity (as assessed by the CPI and thus potentially moving in the direction of emotional vulnerability) also has been linked to marital tension, but only in young adults (Roberts et al., 2002). Overall, more satisfactory marital adjustment has been linked to sex-congruent or androgynous (i.e., high in both feminine and masculine) role traits and behaviors (Auster & Ohm, 2000; Barrett & White, 2002; Baucom & Aiken, 1984; Kalin & Lloyd, 1985; Peterson, Baucom, Elliott, & Farr, 1989).

With regard to the parent role, mothers typically assume the principal responsibility for child-care activities. Research that focuses on the impact of parenting on gender-linked traits and role behavior has been conducted primarily within the context of being a working mother. For the most part, working mothers are judged to be less agentic and less committed to their jobs than childless working women (Crittenden, 2002; Fuegen, Biernat, Haines, & Deaux, 2004) and also less communal and less effective parents than mothers who are full-time homemakers (Bridges & Etaugh, 1995; Bridges, Etaugh, & Barnes-Farrell, 2002). McHale and Huston (1984) reported that mothers who worked more hours or held less traditional attitudes regarding women's roles were less involved with their children and engaged in fewer child-care activities; nevertheless, they also reported that self-ascribed feminine- and masculine-related traits, as assessed by the PAQ, were not related to parenting behaviors.

The Work Role and Gender-Linked Traits

Recognition of work role influences on longitudinal personality change was facilitated by the seminal work of Kohn and Schooler (1978, 1982): They followed over 3,000 employed men and found that those engaged in self-directed (i.e., less closely supervised, independent) work increased in ideational flexibility and goal orientation, traits considered to be masculine in nature. Vandewater and Stewart (1998) compared women in differing occupations and found that those in career track occupations, which emphasize self-directed work, were rated as more instrumental and ambitious by their supervisors, whereas those in job track occupations, which emphasize closely supervised work, were rated as less self-reliant and more dependent. Roberts (1997) reported that women who increased participation in the workforce or increased in occupa-

tional prestige experienced a significant rise in their sense of agency. Other findings suggest that the degree to which women self-ascribe either feminine- or masculine-linked traits is more closely associated with employment status or education than with involvement in family roles (Abele, 2003; Cunningham & Antill, 1984).

The Current Study

Here we draw on longitudinal data obtained from a representative sample of 758 women assessed on measures of femininity and masculinity, work status and occupational prestige, and marital status and quality (support and conflict) in four waves of data collection in 1983, 1986, 1993, and 2003, when they were mean ages 39, 42, 49, and 59, respectively. Because these women all are mothers, we were not able to examine differences in mean trait levels or degree of change between women with and women without children. However, number of children at home affects mothers' emotional and physical resources (Sameroff, 1998), with higher numbers contributing to role overload and conflict (Barnett, Brennan, & Marshall, 1994), psychological distress (Gove & Geerken, 1977; Guelzow, Bird, & Koball, 1991; Russo & Zierk, 1992), and marital dissatisfaction (Glenn & McLanahan, 1982; Miller, 1975); consequently it is plausible that role-related traits also may be influenced. Thus, number of children at home was included in the analyses to control for those potential effects.

We also examine the impact on gender-linked traits of historical shifts in role norms for women by considering birth cohort membership. Women's role options increased dramatically in the latter half of the 20th century, owing in part to broad social forces that spurred events such as the women's movement that emerged in 1966, undertaken to raise awareness of gender-based role restrictions and behaviors that prevailed at that time (Buechler, 1990; Chafe, 1991). The women's movement has been implicated in personality change among women (Agronick & Duncan, 1998; Duncan & Agronick, 1995), with exposure in early adulthood, a life stage characterized by identity formation (Mannheim, 1972), exerting more influence than exposure in early middle adulthood, after life role commitments have been made. By 1969, the movement had gained momentum; therefore, the women in our sample were assigned to one of two birth cohorts on the basis of their age at that time: those who were born between 1945 and 1958 and were, on average, age 20 and thus more likely to be receptive to personality restructuring (referred to herein as *baby boomers*), or those who were born between 1931 and 1944 and were, on average, age 30 and thus more likely to have made role commitments (referred to herein as *preboomers*). That classification was shown to be salient with regard to cohort differences in depression (Kasen, Cohen, Chen, & Castille, 2003) and in associations between depression and marital and work role status (Kasen, Cohen, Berenson, Chen, & Dufur, 2005).

As noted above, we focus here on positive gender-linked traits. The research questions addressed are as follows:

1. Are there normative age changes in femininity or masculinity in this sample of women during the middle adult years?
2. Are age trajectories of femininity and masculinity predictive of each other?

3. Do social role experiences predict mean-level differences or age changes in femininity or masculinity?
4. Does birth cohort membership predict mean-level differences or age changes in femininity or masculinity?
5. Do associations of social role experiences with femininity or masculinity vary by cohort?

Hypotheses

Underlying our hypotheses is the life span conception of personality change, which posits that change is not restricted to earlier developmental levels but may occur throughout the life course and that broad social influences may alter personality traits beyond genetic and more proximal environmental effects (Baltes, 1987; Baltes & Schaie, 1973; Helson & Stewart, 1994). We also adopt the position of proponents of contextual theories, who have established that the immediate social context, namely, involvement in work, marriage, and parenting roles, is implicated in shaping adult personality (e.g., Caspi, 1987; Helson, Kwan, John, & Jones, 2002; Kohn & Schooler, 1978, 1982; Neugarten, 1968, 1972; Roberts et al., 2003). We focus here on both positive communal traits and positive agentic traits as each is basic to personality growth and to overall human development (Bakan, 1966); thus, an increased level of either is considered to be a desirable outcome.

Women report increases in communal traits such as generativity and warmth (Haan, Millsap, & Hartka, 1986; Morfei, Hooker, Carpenter, Mix, & Blakeley, 2004; Stewart, Ostrove, & Helson, 2001) and agentic traits such as instrumental competence and independence (Helson, Kwan, et al., 2002; Helson & Wink, 1992; Parker & Aldwin, 1997; Roberts et al., 2002) in midlife; thus, we expected both femininity and masculinity to rise with age. We also expected that each would be predictive of the other, owing to evidence of increasing prevalence of androgyny in successive cohorts of women (Twenge, 1997) and positive associations in women between relatedness, a communal trait, and autonomy, an agentic trait (Rankin-Esquer, Burnett, Baucom, & Epstein, 1997). On the basis of the literature linking marital status and quality to women's well-being (as noted above), we expected that unmarried women would report fewer feminine-linked traits than married women; that marital support would be positively related to femininity; and that marital conflict would be inversely related to both femininity and masculinity. Similarly, because having more children is related to psychological distress (as noted above), we also expected an inverse association between number of children and femininity. Empirical support for the impact of work on the development of masculine-linked traits, especially of career-track occupations, is substantial (e.g., Clausen & Gilens, 1990; Kohn & Schooler, 1978, 1982; Roberts, 1997; Vandewater & Stewart, 1998); thus, we expected that working full or part time or being in a high-prestige occupation would be related to less feminine- but more masculine-linked traits.

Spousal support alleviates stress related to role overload and conflict in working mothers, especially those working full time (Barnett, Marshall, & Singer, 1992; Greenberger & O'Neil, 1993); thus, we expected that full-time working women with more marital support would report higher levels of femininity than full-time working women with less marital support.

Recent cohorts are more likely to endorse both feminine- and masculine-linked traits in men and women than earlier cohorts (Auster & Ohm, 2000); thus, we hypothesized that baby boomers would be higher in both femininity and masculinity than pre-boomers. Rogers and Amato (2000) found that although wives in more recent cohorts have acquired more influence and power in the marital relationship than wives in earlier cohorts, they also report more conflict. Increased conflict may be due to a greater proportion of wives in more recent cohorts juggling dual family and work roles. However, that takes its greatest toll among younger women; by midlife, conflict may diminish and more masculine traits emerge owing in part to those changes in gender relations. Thus, we also hypothesized that the expected inverse association between marital conflict and masculinity would be stronger in baby boomers.

Method

Sample

This sample of 758 mothers first was assessed on several measures of personality traits and work and marital role experiences in 1983 when they were, on average, 39 years old; subsequent follow-ups occurred in 1986, 1993, and 2003, at mean ages 42, 49, and 59, respectively. These women,

originally sampled in 1975 on the basis of family residence in one of two upstate New York counties and having a child between the ages of 1 and 10, were randomly selected and interviewed about their offspring for a study of childhood behavior. Detailed information regarding study methodology is available from previous reports (P. Cohen & Cohen, 1996; Kasen et al., 2003).

Table 1 shows the number of women, mean age (and standard deviations), full- and part-time work status, marital status, and number of children at home at each assessment point for the total sample and by individual cohort: preboomers (born between 1931 and 1944) and baby boomers (born between 1945 and 1958). Accumulated mean years of education (and standard deviations) is shown in the wave 2003 column (with 12 years indicating high school graduate). The women in the sample are 91% White; reside in urban, suburban, and rural areas; span the full socioeconomic status range; and are representative of the northeastern region of the United States, from which they were sampled in 1975. Retention rates were 95% and 90% in 1986 and 1993, respectively. In the recent 2003 follow-up, 609 women were reinterviewed and another 73 women had died, accounting for 90% of the 1983 sample; those remaining were not reinterviewed owing to refusal to participate (31), serious illness (17), study time constraints (16), and failure to locate (12).

Procedure

Trained lay interviewers collected study data in the women's homes. Informed consent was obtained in adherence to institutional guidelines.

Table 1
Mean Scores (and Standard Deviations) on Predictor Scales and Demographic Status at the Four Assessments

Measure	1983	1986	1993	2003
Number assessed				
Total sample	758	723	684	605
Preboomers	401	378	361	293
Baby boomers	357	345	323	301
Mean (<i>SD</i>) age				
Total sample	39 (6.0)	42 (6.0)	49 (6.0)	59 (5.7)
Preboomers	44 (4.1)	47 (4.0)	53 (4.1)	63 (3.9)
Baby boomers	34 (3.1)	37 (3.0)	43 (3.1)	53 (2.9)
Mean years of education by 2003				
Total sample				12.7
Preboomers				12.8
Baby boomers				12.6
Mean number children at home				
Total sample	3.4	2.3	1.9	0.3
Preboomers	3.6	2.2	1.5	0.2
Baby boomers	3.0	2.5	2.2	0.3
Percentage married				
Total sample	79.5	77.7	76.7	74.3
Preboomers	82.6	80.9	79.1	69.0
Baby boomers	76.8	74.7	74.1	77.9
Percentage working full time				
Total sample	41.2	51.6	53.2	42.6
Preboomers	40.3	50.0	48.9	26.0
Baby boomers	42.6	54.3	60.2	60.3
Percentage working part time				
Total sample	19.7	17.4	13.9	7.4
Preboomers	19.6	17.8	13.2	7.3
Baby boomers	19.9	17.0	15.1	7.3
Mean (<i>SD</i>) of predictor scales				
Femininity	22.50 (4.2)	22.67 (4.0)	22.80 (4.1)	23.73 (4.0)
Masculinity	15.66 (5.1)	15.81 (5.1)	15.98 (5.2)	16.22 (5.1)
Marital Support	11.96 (3.2)	11.85 (3.5)	11.72 (3.8)	12.19 (2.6)
Marital Conflict	3.31 (2.1)	3.23 (2.0)	3.22 (2.0)	2.55 (1.3)
Occupational Prestige	3.47 (1.5)	3.60 (1.6)	3.99 (1.5)	3.75 (1.9)

Measures

Self-attributions of gender-linked traits were assessed with 20 items from the BSRI (Bem, 1974), a widely used self-report measure of gender role classification composed of 60 adjectives classified as more descriptive of a feminine role orientation (20), more descriptive of a masculine role orientation (20), or neutral (20). Although it has been three decades since it was developed, the BSRI still is considered to be a useful index of self-perceived feminine- and masculine-linked traits that can be used to assess either men or women of varying ages (Oswald, 2004). Ten positive items each from the Feminine (affectionate, compassionate, feminine, gentle, loves children, shy, sensitive to the needs of others, tender, warm, yielding) and Masculine (acts as a leader, aggressive, ambitious, analytical, assertive, competitive, dominant, independent, masculine, self-reliant) BSRI scales were rated on a 4-point Likert scale ranging from 0 (*never or almost never true about me*) to 3 (*always or almost always true about me*) and summed to create Femininity and Masculinity scales, respectively. Estimates of internal consistency were .80 or above on each scale at all assessments. Zero-order correlations between the Femininity and Masculinity scales declined gradually over mean ages 39 ($r = .22, p < .01$), 42 ($r = .18, p < .01$), 48 ($r = .12, p < .01$), and 59 ($r = -.03, ns$); the magnitude of those associations validates the orthogonal structure of these scales. Selection of Femininity and Masculinity scale items from the BSRI by study investigators was based in large part on their social desirability.

The Marital Support and Marital Conflict scales used here were adapted from the Marital-Adjustment and Marital-Prediction tests of Locke and Wallace (1959). Marital support was assessed with four questionnaire items indicating how often husband and wife help each other when there is trouble, talk with each other about everything, are very affectionate with each other, and engage in outside interests together, all rated on a 5-point Likert scale ranging from 0 (*never*) to 4 (*almost always*). Estimates of internal consistency were .80, .82, .83, and .83 across the four assessments. Marital conflict was assessed with three items indicating how often differences of opinion occur and how often arguing and yelling or "rough stuff" occur, rated on a 5-point Likert scale from 0 (*never*) to 4 (*almost always*). Estimates of internal consistency were .60, .63, .61, and .60 across the four assessments. The validity of the Marital Support and Marital Conflict scales has been supported by significant longitudinal associations with offspring emotional and behavioral disturbances and substance use in the expected directions (Brook, Brook, Gordon, Whiteman, & Cohen, 1990; Brook, Zheng, Whiteman, & Brook, 2001; Crawford, Cohen, Midlarsky, & Brook, 2001).

Occupational prestige was assessed on a 7-point scale based on modified versions of job categories as indicated in Hollingshead and Redlich (1958). The lowest scores reflect low-level occupations that typically are low in challenge and high in supervision (e.g., waitress, health care aid); the highest scores reflect high-level occupations that typically are high in challenge, responsibility, and autonomy (e.g., business executives, major professions in academia, medicine, or law). Occupations were classified as follows: 1 = unskilled work, 2 = semiskilled, 3 = skilled, 4 = clerical/sales, 5 = administrative, 6 = managers/lesser professionals, 7 = executives, proprietors of major concerns, major professions; interrater reliability ranged from .84 to .87 across the four assessments. Similar constructs have been used by others to examine qualitative aspects of the work role (Duncan & Agronick, 1995; Roberts, 1997; Stewart & Vandewater, 1993).

Mean scores (and standard deviations) on the Femininity, Masculinity, Marital Support, Marital Conflict, and Occupational Prestige scales as well as information on number of women assessed, age, years of education, number of children at home, and marital and work status at all four assessments are shown in Table 1. The women were classified as married or unmarried (separated/divorced, widowed, never married) and as full-time workers (paid employment 40 or more hours per week), part-time workers (paid employment for 20 or more hours but less than 40 hours per week), or not working (all others) at each assessment.

Conditional Missing Data

For a substantial number of women, marital role occupancy varied across the four assessment points because of separation or divorce, widowhood, and remarriage; moreover, work role occupancy also was time varying. Questions regarding support from and conflict with marital partners or occupational prestige were conditional on role occupancy; thus, a woman would have data missing on these variables in any wave of data collection at which she was not married or not working. We used the missing-data/dichotomy method recommended by J. Cohen, Cohen, West, and Aiken (2003) to address this issue: Women not occupying the role were scored 0 on the role (marital or work) status variable(s), and cohort-specific means on the Marital Support, Marital Conflict, and Occupational Prestige scales were substituted for each woman in the corresponding cohort in any wave at which she was not married or working. Such statistical treatment of missing conditional data uses all available information, thus avoiding the loss of statistical power and precision of estimates and also minimizing the risk of obtaining biased results (J. Cohen et al., 2003); this method has been successfully implemented in other studies (e.g., Golding, 1989; Noor, 1995, 1997; Stumpf, 1978).

Data Analytic Models

The PROC MIXED procedure from the SAS statistical package (Littell, Miliken, Stroup, & Wolfinger, 1996; Singer, 1998) was used to estimate the effects of social role predictors and birth cohort membership on mean levels and age change trajectories of femininity and masculinity over the two-decade period covered by the four follow-ups. In addition, we were able to estimate the impact of the alternate gender-linked trait by examining each trait as a dependent variable with the other incorporated into the model as a time-varying independent variable. This growth curve method has a number of advantages that allow fuller exploitation of longitudinal data as compared with traditional regression: It estimates both linear and nonlinear change, accommodates time-varying repeated measures, permits inclusion of individuals not assessed at all time points, allows data from individuals assessed at different ages to be combined, and is tolerant of unequal intervals between data points. Growth curve modeling provides estimates of both random effects (i.e., variation in individuals' means and slopes and deviation from own slope of femininity or masculinity) and fixed effects (i.e., average effects of predictors on femininity or masculinity across participants); however, as the current study focuses on normative change in gender-linked traits and whether mean-level differences or age-related changes are attributable to variations in social role experiences or birth cohort membership, only the fixed effects are reported here.

Basic models examined the fixed effects of linear and nonlinear (quadratic) age changes in feminine- and masculine-linked traits (e.g., $Femininity = \alpha_1 + \beta_{11} \text{ linear age} + \beta_{12} \text{ quadratic age}$). Main models examined the additional fixed effects of cohort, the alternate gender-linked scale, number of children at home, marital status and marital support and conflict, and full- and part-time work status and occupational prestige, all of which, with the exception of cohort, were time varying; in addition, years of education completed was controlled¹ (e.g., $Femininity = \alpha_2 + \beta_{21} \text{ linear age} + \beta_{22} \text{ quadratic age} + \beta_{23} \text{ education} + \beta_{24} \text{ cohort} + \beta_{25} \text{ masculinity} + \beta_{26} \text{ number of children} + \beta_{27} \text{ marital status} + \beta_{28} \text{ marital support} + \beta_{29} \text{ marital conflict} + \beta_{210} \text{ full-time work} + \beta_{211} \text{ part-time work} + \beta_{212} \text{ occupational prestige}$).

Interaction models examined the effects of two-way cross-product interaction terms, formed by multiplicative combinations of age, cohort, alternate gender scale, and marital and work role variables. If the set of

¹ The zero-order correlation between years of educational and overall occupational level was .34 ($p < .001$). Controlling for age and quadratic age only, there was a positive association between the control variable years of education and masculinity ($\beta = .13, SE = .06, p < .05$); however, that effect was not independent of social role predictors (see Table 3).

Table 2
Predictors of Feminine-Linked Traits in Two Cohorts of Women

Effect	Basic model		Main model		Interaction model	
	β	SE	β	SE	β	SE
Intercept	22.995****	0.132	23.040****	0.205	23.052****	0.204
Age	.051****	.008	.028****	.010	.029**	.010
Age ²	-.0002	.001	-.002**	.001	-.002**	.001
Years of education			-.004	.049	-.009	.049
Cohort ^a			.454†	.258	.468†	.257
Masculinity			.162****	.016	.188****	.023
Number of children			-.109*	.049	-.110*	.049
Unmarried			-.566**	.188	-.508**	.187
Marital support			.089****	.020	.143****	.028
Marital conflict			-.038	.042	-.038	.042
Full-time work			-.510***	.152	-.514***	.151
Part-time work			-.581***	.189	-.576***	.188
Occupational prestige			-.044	.052	-.079	.052
Masculinity–age change					-.005****	.001
Masculinity–cohort					-.078*	.035
Masculinity–occupational prestige					-.031***	.009
Marital support–full-time work					-.090**	.032

Note. All parameter entries are maximum-likelihood estimates using SAS PROC MIXED. Age was centered at 47. β = estimate.

^a Preboomers = 0, baby boomers = 1.

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$. **** $p < .0001$.

interactions significantly improved the fit to the data as compared with the predictor model, the significant interactions within the set were graphed and interpreted; only significant interactions were tabled.

To facilitate interpretation, age was centered at 47, the mean age of the total sample; thus, the regression intercept in the basic model represents estimated overall mean levels of Femininity or Masculinity² at age 47; all other scaled variables were centered at the mean. Cohort was set at 0 for preboomers and 1 for baby boomers, and marital status was set at 0 for married and 1 for unmarried, producing main effects for preboomers and married women, respectively, when interactions with these variables were examined. To analyze the effects of work status, we used dummy variable coding to compare both full-time workers and part-time workers with nonworking women, thus producing main effects for nonworking women when interaction effects were examined for full- and part-time workers.

Results

Preliminary Analyses

Preliminary analyses (not tabled) compared cohorts with regard to marital and work status and number of children at home at mean age 43 (using 1983 data for preboomers [$N = 401$] and 1993 data for baby boomers [$N = 323$], as indicated in Table 1) and mean age 53 (using 1993 data for preboomers [$N = 361$] and 2003 data for baby boomers [$N = 301$], as indicated in Table 1). More preboomers than baby boomers were in intact marriages at mean age 43 (82.6% vs. 74.1%), $\chi^2(1) = 8.8$, $p < .01$, whereas more baby boomers than preboomers were working full time at mean ages 43 (60.2% vs. 40.3%), $\chi^2(1) = 27.8$, $p < .0001$, and 53 (60.3% vs. 48.9%), $\chi^2(1) = 8.3$, $p < .01$. At mean age 53, however, more preboomers than baby boomers were working part time (13.2% vs. 7.3%), $\chi^2(1) = 5.8$, $p < .05$. Nonetheless, across full- and part-time work statuses, more baby boomers than preboomers were working at mean ages 43 (75.7% vs. 60.1%), $\chi^2(1) = 14.24$, $p < .001$, and 53 (68.7% vs. 62.2%), $\chi^2(1) = 10.45$, $p < .001$. Baby boomers also had fewer children at home at

mean ages 43 (2.2 vs. 3.4), two-tailed $t(1) = 12.64$, $p < .001$, and 53 (0.3 vs. 1.5), two-tailed $t(1) = 13.01$, $p < .001$, than preboomers. Those differences are compatible with the increased divorce rate, increased workforce participation, and reduced family size reported in more recent cohorts of women relative to women in earlier cohorts (Aube, Fleury, & Smetana, 2000; Bond, Galinsky, & Swanberg, 1998).

Femininity

The basic model examined linear and nonlinear (quadratic) age changes in Femininity (Table 2). The average Femininity score at age 47 was 22.995, with a significant .051 average unit increase per year from mean ages 39 to 59 ($\beta = .051$, $SE = .008$, $p < .0001$) but no significant quadratic age effect; trajectories are shown in Figure 1 (left panel) by cohort. The addition of fixed effects of years of education, cohort, masculinity, number of children at home, marital status and marital support and conflict, and full- and part-time work statuses and occupational prestige in the main model improved the fit to the data, $\chi^2(10, N = 2,770) = 159.9$, $p < .001$. Mean level of Femininity rose significantly with each unit increase in masculinity ($\beta = .162$, $SE = .016$, $p < .0001$) and marital support ($\beta = .089$, $SE = .020$, $p < .0001$) and was higher among baby boomers than among preboomers, but only at a trend level ($\beta = .454$, $SE = .258$, $p < .10$) (albeit prior to consideration of other fixed effects, baby boomers reported a significantly higher mean level of Femininity than preboomers independent of age: $\beta = .647$, $SE = .251$, $p = .01$, not tabled). On the other hand, mean level of Femininity declined significantly with each additional child at home ($\beta = -.109$, $SE = .049$, $p =$

² For clarity we capitalize *Femininity* and *Masculinity* when these terms are used as time-varying dependent variables.

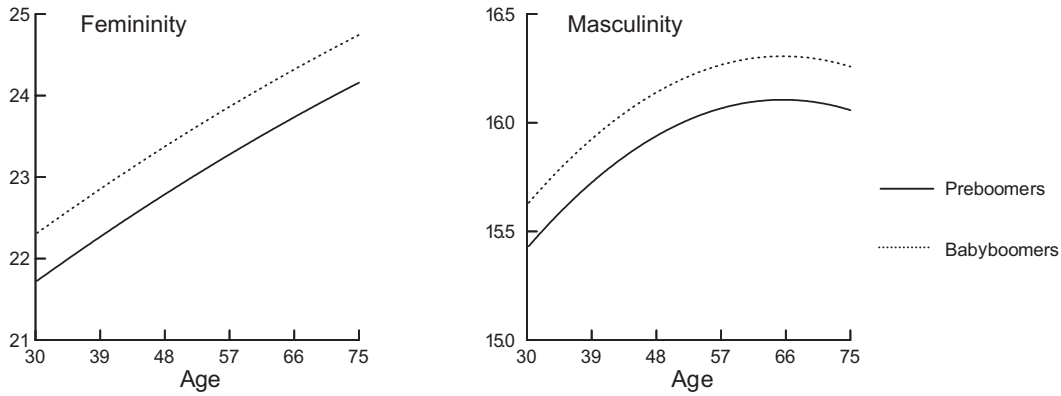


Figure 1. Age changes in Femininity and Masculinity by birth cohort.

.05) and was significantly lower among unmarried women than among married women ($\beta = -.566, SE = .188, p < .01$) and, compared with nonworking women, among women working full time ($\beta = -.510, SE = .152, p = .001$) or part time ($\beta = -.581, SE = .189, p = .001$).

Compared with the main model, the interaction model significantly improved the fit to the data, $\chi^2(4, N = 2,770) = 34.7, p < .001$. To illustrate interaction effects with scaled variables as high and low values (e.g., high marital support vs. low marital support), cutoffs of $\pm 1 SD$ were used. Masculinity modified the trajectory of Femininity so that the linear increase in Femininity with age was more rapid in women with low masculinity than in women with high masculinity (0.034 per year vs. 0.024 per year, respectively) (Figure 2, left panel vs. right panel). Moreover, although the positive association of masculinity with Femininity remained significant across cohorts, among women with high masculinity there was virtually no cohort disparity in mean level of Femininity, whereas among women with low masculinity, preboomers reported a significantly lower mean level of Femininity than baby boomers (Figure 2, right panel vs. left panel). Occupational prestige modified the positive association of masculinity with Femininity such that the association was of lesser magnitude among women in high-prestige occupations than among women in low-prestige occupations (Figure 3, right panel vs. left panel). In

addition, the inverse association of full-time work status with Femininity was modified by marital support: Nonworking women with high marital support had the highest mean level of Femininity; however, women working full time with high marital support had a higher mean level of Femininity than full-time working or nonworking women with low marital support (Figure 4).

Masculinity

The basic model examined the fixed effects of the linear and nonlinear (quadratic) age change in Masculinity (Table 3). The average Masculinity score at age 47 was 16.011, with a significant .019 average unit increase per year ($\beta = .019, SE = .009, p < .05$) but no quadratic effect of age; trajectories are shown in Figure 1 (right panel) by cohort. The addition of fixed effects of years of education, cohort, femininity, number of children at home, marital status and marital support and conflict, and full- and part-time work statuses and occupational prestige in the main model improved the fit to the data, $\chi^2(10, N = 2,770) = 169.5, p < .001$; however, the linear effect was no longer significant. Mean level of Masculinity rose significantly with each unit increase in femininity ($\beta = .228, SE = .021, p < .0001$) and occupational prestige ($\beta = .224, SE = .058, p < .001$) and was significantly higher among

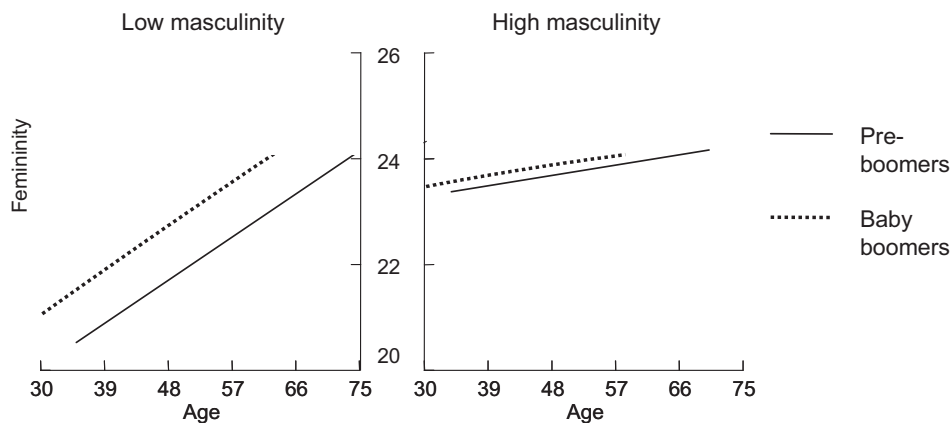


Figure 2. Age changes in Femininity by masculinity level and cohort differences in Femininity.

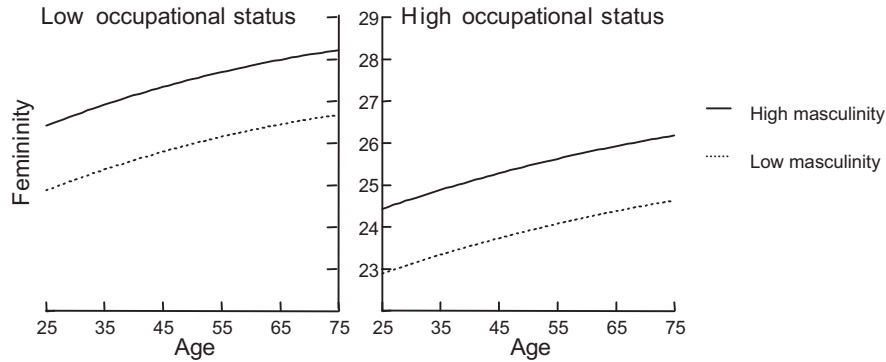


Figure 3. Differences in Femininity level by masculinity and occupational prestige.

women working full time than among nonworking women ($\beta = .927, SE = .171, p < .0001$).

Compared with the main model, the interaction model significantly improved the fit to the data, $\chi^2(1, N = 2,770) = 5.5, p < .05$. As shown in Figure 5, among preboomers, high marital conflict was associated with a higher mean level of Masculinity (the reverse of what was hypothesized), whereas among baby boomers, low marital conflict was associated with a higher mean level of Masculinity (as hypothesized). Moreover, baby boomers in low-conflict marriages had the highest mean level of Masculinity, whereas baby boomers in high-conflict marriages had the lowest.

Additional Analyses

We found the opposing directions of the marital conflict \rightarrow Masculinity association across cohorts to be quite provocative; thus, we undertook additional analyses to explore those differences. Because of space limitations and the ex post facto nature of these analyses, however, results are presented only briefly in the text (but are shown in Table 4).

Marital support significantly increased with age in the basic model ($\beta = .032, SE = .008, p < .0001$), following an earlier decline (quadratic age effect: $\beta = .0013, SE = .0006, p < .05$). However, the main-interaction model significantly improved the fit to the data, $\chi^2(3, N = 2,770) = 12.0, p < .0001$. As shown in Figure 6 (left panel), compared with preboomers, the upswing in marital support began at a younger age in baby

boomers; moreover, after consideration of this age-cohort interaction effect, the increase in marital support with age was no longer significant among preboomers. Viewed alternatively, although there was no significant difference between cohorts in overall mean level of marital support, preboomers reported higher levels than baby boomers prior to reaching age 50, whereas baby boomers reported higher levels than preboomers after reaching age 50.

Marital conflict significantly decreased with age in the basic model ($\beta = -.024, SE = .004, p < .0001$); however, there was no quadratic age effect. The main-interaction model significantly improved the fit to the data, $\chi^2(3, N = 2,770) = 13.3, p < .0001$. Mean level of marital conflict was comparable across cohorts; however, as shown in Figure 6 (right panel), baby boomers reported a decline in conflict from about their late 40s, whereas a more stable level of conflict across the entire age span was reported by preboomers; moreover, after consideration of that effect, decline in marital conflict with age was no longer significant among preboomers.

Discussion

Normative Change in Femininity and Masculinity With Age

Our hypothesized finding of an increase in positive feminine-linked traits with age is consistent with longitudinal evidence of increased warmth, generativity, and relatedness in women at midlife (Franz, 1997; Haan et al., 1986; Stewart et al., 2001).

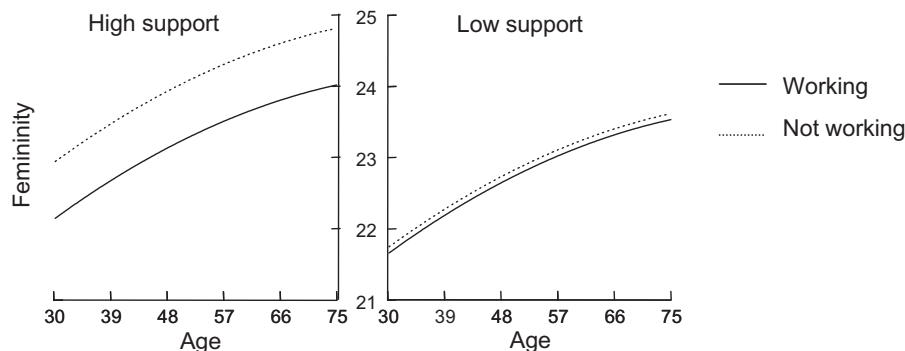


Figure 4. Differences in Femininity level by work status and marital support.

Table 3
Predictors of Masculine-Linked Traits in Two Cohorts of Women

Effect	Basic model		Main model		Interaction model	
	β	SE	β	SE	β	SE
Intercept	16.011****	0.172	15.495***	0.256	15.486****	0.256
Age	.019*	.009	-.007	.012	-.009	.012
Age ²	-.001	.001	.001	.001	.001	.001
Education			.068	.065	.073	.065
Cohort ^a			-.077	.332	-.062	.331
Femininity			.228****	.021	.227****	.021
Number of children			-.070	.056	-.073	.056
Unmarried			-.041	.217	.049	.217
Marital support			.012	.022	.012	.022
Marital conflict			-.015	.047	.087	.064
Full-time work			.927****	.171	.911****	.171
Part-time work			.275	.210	.268	.210
Occupational prestige			.224****	.058	.225****	.058
Marital conflict-cohort difference					-.202*	.086

Note. All parameter entries are maximum-likelihood estimates using SAS PROC MIXED. Age was centered at 47. β = estimate.

^a Preboomers = 0, baby boomers = 1.

* $p < .05$. *** $p < .001$. **** $p < .0001$.

Moreover, our finding of a parallel increase in positive masculine-linked traits, also expected, is supported by considerable longitudinal evidence that women become more autonomous and competent at midlife relative to their earlier adult years (Helson, Jones, & Kwan, 2002; Helson & Moane, 1987; Helson & Wink, 1992; Parker & Aldwin, 1997; Roberts et al., 2002). Those findings have implications for how femininity and masculinity are conceptualized and measured. Women may not decline in positive feminine-linked traits in midlife as is suggested when femininity and masculinity are defined as opposite ends of a single dimension, such as on the Femininity/Masculinity Scale of the CPI, where high scores denote negative feminine-linked traits and low scores denote negative masculine-linked traits. Gender role socialization pressures may suppress masculine-related traits during the younger adult years, especially in women with family role commitments; by midlife, however, such pressures tend to diminish, and women may feel relaxed enough to express their full personality, including both traditional and nontraditional facets. Nonetheless, we also found that the observed linear effect of increased masculinity was accounted for by other predictors in the main model, indicating that age-related changes in masculinity may be attributable to

social role or other predictors examined here, at least in this sample of mothers.

Confluence of Femininity and Masculinity

As hypothesized, femininity and masculinity each were predictive of an increase with age in the other. This finding corresponds to evidence of positive associations between traits indicative of femininity and masculinity (Rankin-Esquer et al., 1997) and supports the contention of others that feminine- and masculine-linked traits are both independent and related and are exhibited simultaneously (Barrett & White, 2002; Bem, 1974, 1978; Feldman & Aschenbrenner, 1983; Galambos, Almeida, & Petersen, 1990). We also found that women low in masculinity increased in femininity with age at a more rapid rate than women high in masculinity, thus exhibiting an increasingly extreme sex-congruent orientation. Women with low levels of both masculinity and femininity are reported to experience poorer mental health and lower self-esteem compared with women with high levels of either or both (Auster & Ohm, 2000; Barrett & White, 2002); thus, those with few

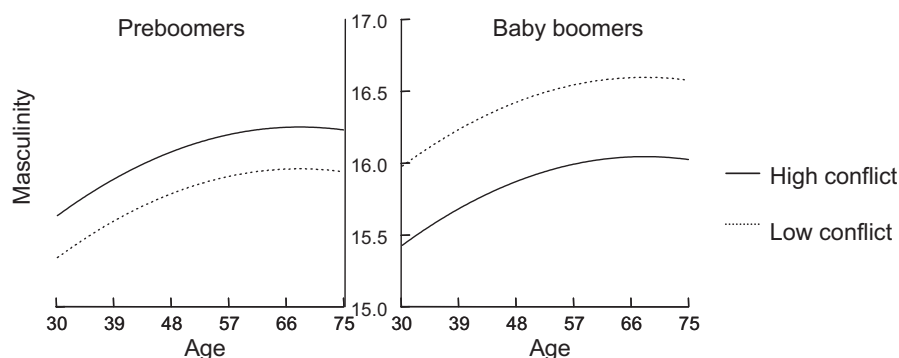


Figure 5. Differences in Masculinity level by birth cohort and marital conflict.

Table 4
Age Changes and Cohort Differences in Marital Support and Marital Conflict Among Women

Effect	Basic model		Main-interaction model	
	β	SE	β	SE
Marital support				
Intercept	10.954****	0.123	10.947****	0.159
Age	.032****	.008	-.017	.017
Age ²	.0013*	.0006	.004****	.001
Cohort ^a			-.010	.234
Age-cohort			.085***	.024
Marital conflict				
Intercept	3.104****	0.055	3.107****	0.073
Age	-.024****	.004	-.015	.009
Age ²	.000	.000	-.000	.001
Cohort			.034	.112
Age-cohort			-.031**	.011
Age ² -cohort difference			-.002*	.0009

Note. All parameter entries are maximum-likelihood estimates using SAS PROC MIXED. Age was centered at 47. β = estimate.

^a Preboomers = 0, baby boomers = 1.

* $p < .05$. ** $p < .01$. *** $p < .001$. **** $p < .0001$.

masculine-linked traits may adhere even more so to traditional femininity in order to enhance positive feelings about themselves.

The Influence of Family Roles on Gender-Linked Traits

As hypothesized, marital support was associated with more femininity, whereas unmarried status was associated with less. Spousal support is reported to enhance women's feelings of self-efficacy in the wife role (Martire et al., 1998), which may spur the expression of traditional gender-role traits related to enactment of that role. Moreover, having a supportive spouse is associated with increased psychological well-being and reduced role stress in women (e.g., Gove et al., 1990), especially among those with offspring (Barnett et al., 1994). Thus, lack of a supportive partner also may be implicated in the lower level of femininity found here in unmarried mothers compared with married mothers. There was an inverse relation between number of children at home and femininity, also expected. In women, role-related stress is attributed more frequently to the parenting role than to the marital or worker role (Barnett & Baruch, 1985; Barnett et al., 1992); con-

sequently, in mothers with more versus fewer children at home, the increased potential for role overload or conflict may account in part for their lower levels of femininity. On the other hand, we did not find the expected inverse relation between marital conflict and femininity or masculinity for the sample as a whole; among baby boomers, however, less conflict was related to more masculinity, providing partial support for that hypothesis. The potential impact of changing gender relations in the marital role on perceived gender-linked traits is discussed more fully below (in *Birth Cohort Effects*).

The Influence of Work Roles on Gender-Linked Traits

The finding that women working full time were higher in masculinity than nonworking women supports existing evidence suggesting that work experiences may play a role in shaping adult personality, especially in the direction of more agentic traits (e.g., Kohn & Schooler, 1978, 1982; Roberts, 1997). We also found that relative to nonworking women, full- and part-time working women were lower in femininity. Working mothers often bear the brunt of

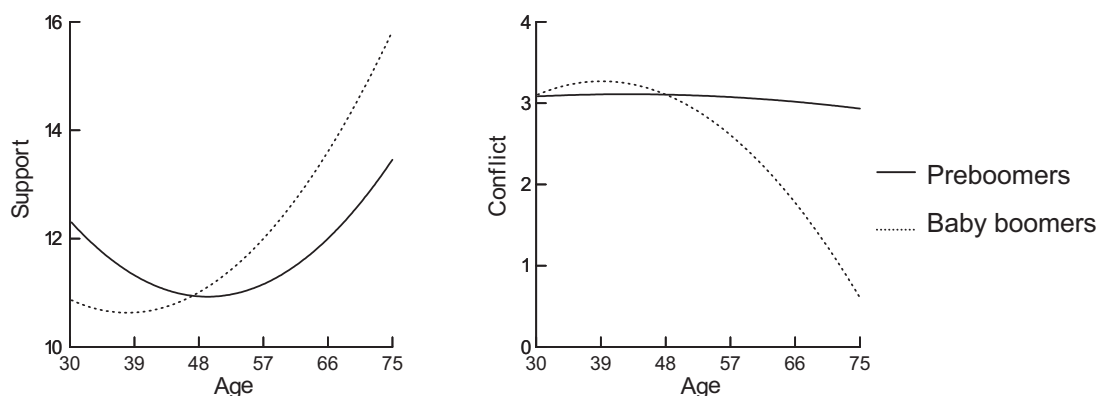


Figure 6. Age changes in Marital Support and Marital Conflict by birth cohort.

child-care and household responsibilities, making them more vulnerable to role strain (Aneshensel, 1986); consequently, their expression of communal traits may be dampened. Marital support, however, modified the association in that full-time working mothers with high support endorsed more feminine-linked traits than full-time working or nonworking mothers with low support. Thus, in addition to increasing psychological well-being among women in multiple roles, emotional or instrumental support from husbands or other significant figures may counteract the negative effect of role overload or conflict on the expression of personality traits indicative of nurturance and warmth.

As found by others (e.g., Roberts, 1997; Vandewater & Stewart, 1998), masculinity also increased in women working in high-prestige occupations. The hypothesized association of occupational prestige and less femininity, however, was not observed; nonetheless, high occupational prestige weakened the positive relation of masculinity with femininity and thus, in effect, played an instrumental if indirect role in lowering femininity. For women in a high-powered professional or business position, the increase in agentic traits may come at the expense of a decrease in communal traits, perhaps because expression of the latter by working mothers, especially those in demanding career-track occupations, may heighten others' perceptions of lessened commitment to the workplace (Crittenden, 2002).

Birth Cohort Effects

The expected higher level of femininity in baby boomers was only a trend; however, among women with very low masculinity, baby boomers reported significantly more feminine-linked traits than preboomers, thus supporting this hypothesis in part. Baby boomers may have responded in kind to the increased value placed on communal and nurturing traits by both men and women in more recent cohorts (Amato & Booth, 1995; Rogers & Amato, 2000), especially baby boomers who perceive themselves as less agentic at a time when such traits are increasingly endorsed in women. Albeit expected, no cohort disparity in masculinity was observed; associations of marital conflict with masculinity, however, did differ significantly by cohort: The inverse relation between marital conflict and masculinity hypothesized in the entire sample was observed in baby boomers only; moreover, among preboomers, marital conflict was positively related to masculinity.

Further analyses of marital conflict and support across all assessment points revealed that although mean levels did not differ significantly between preboomers and baby boomers, age-related changes were significantly more favorable for baby boomers, namely, a decline in conflict with a parallel upswing in support. The literature on marital conflict suggests that wives are more likely to initiate and argue over controversial issues than husbands, who are more likely to avoid these issues (Christensen & Heavey, 1990; Heavey, Layne, & Christensen, 1993). Such patterns of behavior are thought to be a consequence of the power hierarchy that exists in marriage: Wives are more demanding of change owing to their less favorable positions, whereas husbands prefer to protect the status quo. However, recent cohorts of married couples have reported a more egalitarian distribution of influence, albeit a greater amount of conflict in their younger adult years (Greenberger & O'Neil, 1993; Rogers & Amato, 2000). Thus, baby boomers may have had fewer issues over which to argue as they

aged owing to earlier gains in marital influence (at the expense of earlier conflict), which in turn may have fostered more agentic traits.

In contrast, preboomers did not report a significant reduction in marital conflict (or a significant upswing in marital support) with age, yet there was a positive association between marital conflict and masculinity, suggesting that high levels of masculinity in wives from earlier cohorts may place strain on the marriage. Nonetheless, as shown here and in a previous study (Kasen et al., 2005), divorce rate was higher in baby boomers than in preboomers in this sample. Accordingly, an alternative explanation for this finding may be that baby boomers were more likely than preboomers to extricate themselves from high-conflict/low-support relationships; thus, baby boomer marriages that remained intact likely would be those characterized by relatively less conflict and more support than those that failed. Further, the lack of a cohort difference in divorce rate at age 53 after a significant difference at age 43 suggests that baby boomers may have entered into successful remarriages, also characterized by low conflict and high support. Nonetheless, the finding of a simultaneous decline in marital conflict and increase in marital support in baby boomers but not preboomers was based on exploratory analyses only; thus, it requires further replication.

Compatibility With Theory and Evidence of Overall Personality Change

The findings here of normative increases in positive feminine- and masculine-linked traits are compatible with the notion that both communal and agentic traits are basic to overall personality development in all individuals (Bakan, 1966; Spence & Helmreich, 1978, 1980; Spence et al., 1974, 1975) and with reports of normative change in broader personality dimensions in adulthood. In a recent meta-analysis (Roberts, Walton, & Viechtbauer, 2006) and review (Roberts et al., 2003) of longitudinal findings organized by the five-factor model of personality, increases in traits reflecting agreeableness and conscientiousness, both of which are related to femininity, and traits reflecting social dominance and emotional stability, both of which are related to masculinity, occurred through middle age. Similar trends based on cross-sectional data were reported for those same dimensions (Srivastava, John, Gosling, & Potter, 2003) and for self-esteem (Robins, Trzesniewski, Tracy, Gosling, & Potter, 2002). Overall, both cross-sectional and longitudinal data support normative increases in personality traits confirming prevailing expectations that people become more socially competent and adapt more easily to changed circumstances with age (Helson & Wink, 1987; Roberts et al., 2003). In addition, the results here suggest that gender-linked traits may be influenced by the immediate social context of family and work and by broader social forces as assessed by birth cohort membership. Thus, these findings also support arguments and evidence that social role involvement affects adult personality development (e.g., Eagly et al., 2000; Havighurst, 1975; Helson & Picano, 1990; Helson & Roberts, 1992; Neugarten, 1968; Pals, 1999; Roberts, 1997; Robins, Caspi, & Moffitt, 2002) and that exposure or timing of exposure to meaningful events or shifting social norms may account for generational differences (e.g., Baltes, 1987; Baltes & Schaie, 1973; Duncan & Agronick, 1995; Elder, 1979; Stewart & Healy, 1989; Twenge, 2001a, 2001b).

Summary and Conclusions

We found normative increases with age in both feminine- and masculine-related traits that were, for the most part, positive traits; moreover, each predicted an increase in the other. Those findings support reports of personality development in women during midlife that reflect increases in generativity and warmth on the one hand and competence and independence on the other, and of an age-related rise in androgyny. Work role experiences influenced gender-linked traits in the expected directions, namely, more masculinity but less femininity, especially among those in full-time work and high-prestige occupations, thus corroborating the findings of others in a representative sample of mothers. The longitudinal impact of marital experiences on gender-linked traits found here suggests the need for more research in this area. Partner support had a direct effect on more femininity in all mothers and offset less femininity in those working full time. Lack of partner support also may have contributed to the lower level of femininity found here in unmarried mothers relative to married mothers, suggesting that the increased burdens inherent in single parenting may, paradoxically, reduce communal traits. We also found that birth cohort membership significantly influenced the impact of marital conflict on masculinity: An inverse association held for baby boomers, whereas a positive one held for preboomers. Further analyses revealed that although average levels of marital conflict and marital support did not differ across cohorts, age-related changes did, namely, a simultaneous decline in conflict and upswing in support in baby boomers only, suggesting that changing role norms and expectations may be implicated in differential personality change among women. Overall, the findings here emphasize the longitudinal influence of social role experiences on personality trait change and also suggest that the repercussions of historical changes in gender role norms that have come about for both women and men may continue to affect personality trait change for some time to come.

Limitations

The following limitations should be considered when interpreting these findings. First, we had no information regarding gender-linked personality traits of spouses of this study sample. The systems perspective of marriage indicates that complementary personality styles of husbands and wives may be more important to marital quality and adjustment than individual personality styles (Robins, Caspi, & Moffit, 2000). Second, these data were obtained from single, not multiple, informants; thus, it was actually *perceptions* of marital quality and *self-attributions* of gender-linked traits that were examined. Third, the women in the sample all were mothers; thus, findings may not generalize to women who are childless. Fourth, both number of offspring and offspring age may influence perceived gender-linked traits in mothers (Kessler & McRae, 1982); however, although we controlled for number of children at home, information about the youngest child at home was not available at all assessment points and so was not controlled. Nonetheless, this sample of women was followed longitudinally over two decades and is representative of the region from which sampling took place. In addition, the study emphasized normative changes in gender-linked traits with age, and findings highlight the influence of social role experiences and shifting social norms on personality change through the adult years.

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