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**Abstract:** Archival data from the University of North Carolina Alumni Heart Study were used to assess whether positive, neutral, and negative social comparisons assessed during college predicted the expression of personality during adulthood. College students in 1966 rated themselves relative to peers on several personal attributes. For men and women, these attributes produced 3 similar yet distinct variables reflecting gregariousness, achievement striving, and expressiveness. These students were contacted 20 years later and completed the NEO Personality Inventory and M. Rosenberg's (1965) self-esteem measure. In general, persons with comparatively positive self-evaluations during college viewed themselves as possessing more positive and less negative personality traits during adulthood and were also less likely to report poorer self-esteem during middle adulthood. The implications of social comparison processes for personality development are discussed. (PsycINFO Database Record (c) 2013 APA, all rights reserved)

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## **Do Comparative Self-Appraisals During Young Adulthood Predict Adult Personality?**

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The variables that contribute to the development, stability, and change in personality are multifaceted and complex ( [Caspi & Bem, 1990](#); [Moss & Susman, 1980](#); [Pervin, 1990](#)). Chief among these variables is how a person's personality and self-esteem are influenced and expressed within the social context (e.g., [Cooley, 1902](#); [James, 1910](#); [Mead, 1934](#)). Within the social context, individuals' self-perceptions are based, in part, on evaluations of themselves relative to other individuals. That is, people often use social comparison information to evaluate themselves for various reasons ( [Festinger, 1954](#); [Suls & Miller, 1977](#); [Suls & Wills, 1991](#)). Among these reasons is people's desire to obtain self-enhancing social comparative information (see [Wood, 1989](#), for a review).

The desire to obtain positive comparative self-appraisals may ultimately have important implications for the development and expression of personality. In other words, the processes that may underlie and result in positive comparative self-appraisals may ultimately contribute to the expression of personality. For example, do positive or negative social comparison evaluations assessed during young adulthood ultimately result in the expression of positive or negative personality traits several years later? Questions such as these are the main focus of this study. In this study, we used archival data to examine the impact that positive and negative comparative self-appraisals assessed during college had on personality development and self-esteem during middle adulthood.

We begin by providing a brief overview of self-enhancing social comparisons and their possible relationship to personality development and expression. We then provide an overview of this study and our hypotheses.

### **Self-Enhancing Social Comparisons and Personality**

Individuals often use social comparison information such that the resultant evaluation protects or enhances their self-esteem. For example, under threatening situations people will try to compare themselves with others who are worse off to make themselves feel better (downward social comparison; [Gibbons & Gerrard, 1991](#); [Wills, 1981, 1987](#)). Furthermore, on positive dimensions, people will often rate themselves as superior or uniquely superior to others (e.g., [Alicke, 1985](#); [Brown, 1986](#); [Campbell, 1986](#); [Marks, 1984](#)), particularly on self-relevant domains ( [Campbell, 1986](#); [Marks, 1984](#)), while also reporting being similar to others when the dimension of evaluation is negative (e.g., [Alicke, 1985](#); [Campbell, 1986](#); see [Wood, 1989](#); [Wood & Taylor, 1991](#), for reviews). Thus, the extant literature suggests that people are motivated to achieve positive social comparisons with the direction of comparison (i.e., upward or downward), the similarity or dissimilarity of the target person, and the personal relevance of the comparison dimension serving as the focal areas of research ( [Wood, 1989](#)). Moreover, the use of self-enhancing social comparisons may result in greater subjective well-being, such as promoting happiness, encouraging creative and productive work, and improving social relations ( [Taylor, 1989](#); [Taylor & Brown, 1988](#)).

Although there is substantial evidence buttressing the existence of and the beneficial consequences of self-enhancing comparative processes, there is no direct empirical evidence that these processes are linked to the development of a healthy personality profile or to the expression of personality spanning several years. Rather, the focus between social comparison processes and personality (e.g., Type A being self-conscious and self-monitoring) has emphasized how different individuals make use of and seek comparative information and how it might influence performances of tasks (e.g., [Beardon & Rose, 1990](#); [Cash, Cash, & Butters, 1983](#); [Kilduff, 1992](#); [Matthews & Siegel, 1983](#); [Scheier & Carver, 1983](#)). Thus, unlike previous investigations, the main focus of this study was to ascertain whether positive or negative comparative self-appraisals ultimately result in the expression of positive or negative personality traits several years later. Answers to such questions would contribute substantially to the scant literature linking social comparison processes with personality development. Indeed, although social comparison processes have been examined developmentally (e.g., see [Ruble & Frey, 1991](#); [Suls & Mullen, 1982](#); [Suls & Sanders, 1982](#), for reviews), much of this research has emphasized skills and abilities rather than personality development per se. The main challenge is to develop a heuristic model that can bridge the gap between social comparison processes and personality development.

What are the possible mechanisms that link comparative self-appraisals with personality development and expression? We offer, though we do not test, the following heuristic model. We begin with these working assumptions: (a) Personality, using traits as the unit of analysis, characterizes the way people feel, think, act, and experience their world ( [Costa & McCrae, 1989](#)); (b) attributions about comparative self-appraisals partially reflect and are influenced by the person's personality; and (c) comparative self-appraisals are likely to reinforce one's self-perceptions of personality. On the basis of this model, it is likely that a person who believes he or she is more extraverted than others is indeed an individual who would score highly on most personality

measures of extraversion. Consequently, there should exist a fairly strong connection between an individual's self-enhancing appraisals and reality ( Taylor, 1989). Furthermore, these self-enhancing comparative appraisals are likely to reinforce one's conception of being extraverted through various cognitive and behavioral processes.

The mutually reinforcing processes between comparative self-appraisals and personality can be sustained through various cognitive and behavioral strategies that involve the interaction between the person and the environment (cf. Caspi & Bem, 1990). First, individuals are likely to choose and create situations that are consistent with their self-perceptions and expectations. For example, extraverted people are likely to go out with other extraverts and seek or create social situations. The stability of this environment can help promote and maintain the stability and continuity of personality, which can subsequently affect comparative evaluations and vice versa. Second, individuals may evoke certain responses from others that reinforce patterns of behaviors and thoughts. For example, extraverted people are likely to evoke social behaviors from others and, therefore, come to expect that others will behave socially; in the process, the social behaviors of others are likely to reinforce and possibly increase the person's own level of gregariousness. Third, individuals may selectively use and recall information that supports their self-conceptions ( Cantor & Kihlstrom, 1987; Greenwald, 1980; Markus, 1977). A person who views himself or herself as more extraverted may use social comparison strategies that uphold these self-perceptions. For example, the person may select dimensions of extraversion for comparison purposes that lead to favorable evaluations (i.e., dimensional social comparison; Taylor, Wood, & Lichtman, 1983; see Wood & Taylor, 1991, for a discussion of these strategies). In summary, personality and social comparison processes are likely to be closely associated on the basis of several cognitive and behavioral strategies that reinforce and lend consistency to one's self-perceptions.

### **Nature and Predictions of this Study**

Archival longitudinal data sets provide superb opportunities for exploring key developmental questions about antecedents and consequences of important psychological constructs ( Block, 1993; Tomlinson-Keasey, 1993). In this study, data from the University of North Carolina Alumni Heart Study (UNCAHS; Siegler et al., 1990, 1992) were used to test hypotheses about the impact that comparative self-appraisals that were made during college have on personality during middle adulthood. To assess this relationship, we used data collected from students during 1966 who were part of a testing program of the American College of Education. Among the items on the four-page survey they completed, students were asked how well a total of 21 traits and skills described them relative to their peers. Although no information was collected as to their actual standings on these traits and skills compared with their peers, and, hence, the accuracy of these evaluations could not be assessed, 695 men and 284 women subsequently enrolled in the UNCAHS and provided information about their self-esteem and personality as measured by the NEO Personality Inventory ( Costa & McCrae, 1985) 20 years later.

The NEO measures five main dimensions of personality: extraversion, neuroticism, openness, agreeableness, and conscientiousness ( Costa & McCrae, 1985). Extraversion entails being a sociable, talkative, and affectionate person; neuroticism entails being an anxious, stressed, insecure, hostile, guilt-prone, and self-conscious individual. Openness reflects a person who is nonconforming and creative, has several interests, and seeks new experiences. Agreeableness

measures sympathy, cooperativeness, and trust. Finally, conscientiousness represents a person's dependability, productivity, and purposefulness in life. These five dimensions of personality have been substantiated and applied in a variety of settings (e.g., [McCrae & John, 1992](#); [Smith & Williams, 1992](#); [Widiger & Trull, 1992](#)).

On the basis of both the previous discussion that social comparison processes should be related to personality and the literature, which suggests that self-enhancing evaluations promote psychological well-being ( [Taylor, 1989](#); [Taylor & Brown, 1988](#)), we predicted that individuals who evaluated themselves more positively on the various traits and skills relative to their peers during college would have higher scores on extraversion, openness, conscientiousness, and agreeableness and lower scores on neuroticism compared with individuals who provided average and particularly negative comparative self-appraisals. In essence, this prediction asserts that people who provide positive comparative appraisals will view themselves favorably on generally positive personality dimensions (e.g., extraversion and openness), while reporting that they possess few negative characteristics (e.g., neuroticism) compared with people who provide average and especially negative comparative self-appraisals. However, we also predicted that the strongest evidence for positive comparative self-appraisals would be in domains that are similar during young and middle adulthood. For example, comparative self-appraisals that assess extraversion during young adulthood should most powerfully predict the personality dimension of extraversion during middle adulthood; it should also predict less strongly the other four dimensions of personality. This prediction is consistent with [Taylor's \(1989\)](#) notion that positive self-appraisals should mirror reality rather closely. Similarly, we predicted that individuals who provided positive comparative self-appraisals would report less negative self-esteem during middle adulthood compared with individuals who provided average and especially unfavorable comparative self-appraisals during college.

## **Method**

### **Sample**

Participants in this study were a subgroup of students who enrolled at the University of North Carolina during 1966 and agreed to participate in the UNCAHS from 1987 through 1991. The UNCAHS was a prospective mail survey designed to examine biobehavioral predictors of coronary heart disease. To be eligible for the UNCAHS, a person had to have completed the Minnesota Multiphasic Personality Inventory while in college during 1964–1967, primarily at the time of registration ( [Siegler et al., 1992](#)). Participation in the UNCAHS in 1987 was not dependent on baseline personality functions. Further details about the UNCAHS can be found in [Siegler et al. \(1990, 1992\)](#).

### **Measures**

Participants in these analyses completed (during 1966) the American College of Education Survey of Student Attitudes ( [ACE; 1966](#)). Questions asked on the ACE survey formed the basis of this investigation. Of primary importance, participants responded to a 21-item checklist of traits and skills. The instructions read, "Rate yourself on each of the following traits as you really think you are when compared to the average student of your age. We want the most accurate estimate of how you see yourself." The 21 traits were presented in the following order: academic ability, athletic ability, artistic ability, cheerfulness, defensiveness, drive to achieve, leadership ability, mathematical ability, mechanical ability, originality, political conservatism, political liberalism, popularity, popularity

with opposite sex, public speaking ability, intellectual self-confidence, social self-confidence, sensitivity to criticism, stubbornness, understanding of others, and writing ability. Response options were (a) highest 10% (scored a 5), (b) above average, (c) average, (d) below average, and (e) lowest 10% (scored a 1).

Of the 1,768 participants who took the ACE, 37 were not included in the UNCAHS. This left a total of 1,731 eligible participants who completed the ACE (1,311 men and 420 women). The mean age in 1966 of participants was 18.38 years ( $SD= 0.58$ ) for men and 18.28 years ( $SD= 0.42$ ) for women.

During 1987, these 1,731 participants were contacted and asked to participate in the UNCAHS. Of the 1,731 participants, 41 had died (35 men and 6 women), 61 refused participation (49 men and 12 women), and 314 could not be located (251 men and 63 women). This left a total of 1,315 potential participants (976 men and 339 women) who were part of the study. During 1988, these 1,315 individuals were sent the NEO Personality Inventory. There were 1,049 participants who responded to the NEO (755 men and 294 women). During 1989, 1,089 participants (789 men and 300 women) completed Rosenberg's (1965) 10-item Self-Esteem Scale, in which higher scores reflect lower self-esteem. The mean age of participants during 1989 was 41.72 years ( $SD= 0.73$ ) for men and 41.68 years ( $SD= 0.61$ ) for women.

Complete data from both mailings were available from 695 men (53% of the 1,731 eligible participants) and 284 women (68% of those eligible). There were no significant differences on any of the 21 traits and skills between the 416 participants who were not part of the UNCAHS during 1987 and the 1,315 participants who participated.

## Results

### Factor Analyses Results

To simplify and provide a more meaningful pattern of results, we analyzed the participants' responses to the 21 traits and skills for men and women separately by principal-components factor analysis using varimax rotation. A priori we decided to retain factors with an eigenvalue greater than 1 that had three or more items with loadings above  $|.40|$  and whose internal consistency, based on Cronbach's alpha, was greater or equal to  $.60$ . On the basis of these criteria, three meaningful factors emerged for men and women. Tables 1 and 2 present the factor loadings, item-total correlations, item means, and Cronbach's alpha for the three factors for men and women, respectively.

Table 1  
Item and Scale Averages, Standard Deviations, Item-Total Correlations, and Factor Loadings  
for the Comparative Trait Ratings for Men

Characteristic	Item <i>M</i>	<i>SD</i>	Item-total <i>r</i>	Popularity–Social Skills	Expressiveness	Intellectualism–Achievement Striving
Popularity	3.38	0.78	.70	.79	.16	.09
Popularity with opposite sex	3.34	0.82	.69	.78	.16	.10
Social self-confidence	3.23	0.92	.62	.71	.27	.11
Athletic ability	3.39	0.90	.45	.62	–.15	.16
Cheerfulness	3.52	0.82	.44	.61	.13	.00
Leadership ability	3.50	0.86	.56	.56	.39	.27
Writing ability	3.22	0.90	.55	.06	.77	.01
Public speaking ability	3.15	0.99	.50	.32	.68	.15
Originality	3.42	0.81	.59	.18	.65	.10
Intellectual self-confidence	3.51	0.81	.50	.30	.53	.47
Athletic ability	3.46	1.04	.55	.63	.46	.06

Mathematical ability	<i>2.92</i>	<i>1.09</i>	<i>.52</i>	<i>-.02</i>	<i>.90</i>	<i>-.00</i>
Academic ability	3.50	0.97	.45	.11	-.06	.84
Drive to achieve	3.96	0.77	.56	.14	.37	.70
	3.78	0.84	.34	.30	.36	.43
Range of scores				0–30	0–25	0–15
Scale <i>M</i>				20.27	15.77	11.23
Scale <i>SD</i>				3.67	3.18	1.97
Eigenvalue				5.70	1.69	1.45
% variance explained				27.2	8.0	6.9
Cronbach's $\alpha$				.81	.74	.64

Note. Italicized loadings reflect items that compose the same subscale. Analyses were based on 1,311 men.

*Item and Scale Averages, Standard Deviations, Item-Total Correlations, and Factor Loadings for the Comparative Trait Ratings for Men*

Table 2

*Item and Scale Averages, Standard Deviations, Item-Total Correlations, and Factor Loadings for the Comparative Trait Ratings for Women*

Characteristic	Item <i>M</i>	<i>SD</i>	Item-total <i>r</i>	Popularity–Gregariousness	Achievement Striving	Creative Expressiveness
Popularity	3.24	0.66	.59	.78	.12	.04
Popularity with opposite sex	3.12	0.76	.57	.77	.16	.01
Cheerfulness	3.55	0.78	.46	.69	.15	-.01
Social self-confidence	3.01	0.76	.40	.60	.35	.05
Leadership ability	3.37	0.78	.55	.29	.77	.06
Public speaking ability	2.86	.094	.40	.18	.68	.20
Understanding of others	3.76	0.73	.32	.20	.50	.10
Drive to achieve	3.89	0.77	.34	.16	.49	-.09
Stubbornness	3.41	0.94	.19	-.17	.41	.14
Originality	3.33	0.84	.50	.16	.13	.77
Artistic ability	2.72	0.99	.38	-.01	-.07	.72
Writing ability	3.29	0.87	.40	-.07	.29	.69
Scale range of scores				5–19	6–25	4–14
Scale <i>M</i>				12.93	17.30	9.35
Scale <i>SD</i>				2.22	2.58	2.03
Eigenvalue				3.70	1.99	1.64
% variance explained				17.6	9.5	7.8
Cronbach's $\alpha$				.74	.60	.62

Note. Italicized loadings reflect items that compose the same subscale. Analyses were based on 420 women.

*Item and Scale Averages, Standard Deviations, Item-Total Correlations, and Factor Loadings for the Comparative Trait Ratings for Women*

Inspection of the results in Table 1 for men reveals that the first factor was defined by six items and represented the general tendency to see oneself as socially skilled, athletic, and popular—much like the stereotypical “all-American student.” Hence, we called this factor *Popularity–Socially Skilled*. The second factor was defined by six items and tended to represent one's expressive and artistic side (e.g., writing, public-speaking, and artistic abilities). We called this factor *Expressiveness*. The third factor was defined by three items and represented intellectual abilities (e.g., mathematical and academic abilities) and the desire to achieve. We called this factor *Intellectualism–Achievement Striving*.

A three-factor structure also emerged for women (see Table 2). The first factor was defined by four items that represented the tendency to see oneself as socially self-confident and popular. Unlike men, this factor did not emphasize potential skills that may enhance one's social status (e.g., leadership and athletic ability). We therefore labeled this factor *Popularity–Gregariousness*. The second factor consisted of five items and reflected the desire to achieve, as well as some of the potential skills that might be deemed important to excel, especially within the interpersonal domain

(e.g., leadership and public speaking ability and understanding of others). We called this factor *Achievement Striving*. The third factor was defined by three items and, as with men, reflected creativity and expressiveness (e.g., writing and artistic abilities). We called this factor *Creative Expressiveness*. For both men and women, items reflecting each domain were unit weighted and summed. [Tables 1](#) and [2](#) present the means, standard deviation, and ranges of scores for each factor for men and women, respectively.

Inspection of the items that loaded on the factors for men and women revealed that all the item-total correlations were positive and in the moderate range; higher item scores were related to increasing total scale scores. All the item averages, with the exception of two for women (artistic and public speaking ability) and one for men (artistic ability), were above the absolute midpoint of 3, indicating that participants, in general, viewed themselves more favorably on most traits and skills relative to peers. Similarly, inspection of the factor means reveals that participants, in general, viewed themselves positively relative to peers as reflected by scores above the median for each respective factor.

Finally, we computed correlations among the factors to determine whether individuals who viewed themselves positively in one domain also viewed themselves positively in other domains. Among men, those who viewed themselves as comparatively more popular and socially skilled during college also viewed themselves as more expressive ( $r = .48, p < .0001$ ), and intellectual and achievement striving ( $r = .45, p < .0001$ ) than peers; men who viewed themselves as more expressive also perceived themselves as more intellectual and achievement striving than peers ( $r = .47, p < .0001$ ). Among women, those who viewed themselves as more popular and gregarious during college also perceived themselves as more achievement striving ( $r = .43, p < .0001$ ) but not as more creatively expressive ( $r = .09, ns$ ) than peers. However, women who felt more achievement oriented did feel more creatively expressive than peers ( $r = .29, p < .01$ ). Overall, men and women who rated themselves positively in one domain during college tended to regard themselves positively in other domains relative to peers.

### **Relationships With Personality and Self-Esteem**

Two predictions concerning the relationship between the comparative self-appraisal domains and personality were made. First, it was predicted that individuals who evaluated themselves during college most favorably relative to their peers would report greater levels of extraversion, openness, agreeableness, and conscientiousness and less neuroticism during middle adulthood in contrast to individuals who perceived themselves as comparatively average, and especially below average, on the various factors. Second, we expected that these effects would be strongest, as evidenced by the magnitude of univariate  $F$ s, between each factor and the personality dimension it most closely interpretatively resembled. In this regard, it can be argued post hoc that (a) the Popularity–Social Skills factor in men and the Popularity–Gregarious factor in women should most powerfully predict extraversion; (b) the Expressiveness and Creative Expressiveness factors in men and women, respectively, should predict most powerfully openness, a dimension of personality that accentuates ideas, creativity, and feelings; and (c) the Achievement Striving factor in women and the similar factor for men should most powerfully predict conscientiousness, a dimension of personality that accentuates task-oriented skills (e.g., dutifulness and achievement striving).

To test these predictions, participants were grouped into high, average, or low categories based on whether their total scores were in the top, middle, or bottom third of distribution of scores for each respective factor. We then performed multivariate analyses of variance (MANOVAs), which predicted each domain of personality from each factor separately. Owing to the number of tests (one MANOVA per factor equals three tests per sex), we used a conservative Bonferroni adjusted alpha of  $p < .017$ . On the basis of this criteria, there were significant main effects for all three factors for men ( $2.71 < \text{multivariate } F_s < 7.91, p_s < .0025$ ) and main effects for the three factors for women ( $3.60 < \text{multivariate } F_s < 5.94, p_s < .001$ ). Table 3 and 4 present the univariate results along with the average personality scores based on the factor groupings for men and women, respectively.

Table 3

*Group Averages on the NEO Personality Inventory and Self-Esteem as a Function of the Three-Factor Model in Men*

Personality trait	Popularity–Social Skills				Expressiveness				Intellectualism–Achievement Striving			
	High (n = 244)	Medium (n = 244)	Low (n = 216)	F	High (n = 258)	Medium (n = 290)	Low (n = 156)	F	High (n = 326)	Medium (n = 151)	Low (n = 227)	F
Neuroticism	70.9 <sub>a</sub>	74.4 <sub>ab</sub>	77.5 <sub>b</sub>	6.2**	73.8	72.9	77.2	2.3	72.9	73.4	76.4	2.2
Openness	115.3	116.5	116.7	0.4	122.3 <sub>a</sub>	114.4 <sub>b</sub>	109.3 <sub>c</sub>	29.7***	118.2 <sub>a</sub>	114.7 <sub>b</sub>	114.1 <sub>b</sub>	4.2*
Agreeableness	48.2	48.1	48.2	0.0	48.3	48.4	47.6	1.1	48.4	48.2	47.8	0.5
Extraversion	116.2 <sub>a</sub>	110.4 <sub>b</sub>	102.9 <sub>c</sub>	33.5***	111.6 <sub>a</sub>	111.1 <sub>ab</sub>	105.6 <sub>c</sub>	6.3**	112.2 <sub>a</sub>	109.6 <sub>a</sub>	107.4 <sub>b</sub>	4.8**
Conscientiousness	51.2	50.0	49.3	2.7	50.6	50.4	48.9	1.6	51.3 <sub>a</sub>	49.3 <sub>b</sub>	49.1 <sub>b</sub>	5.9**
Self-esteem	14.7 <sub>a</sub>	15.7 <sub>ab</sub>	16.0 <sub>c</sub>	6.7**	15.5	15.2	15.9	1.5	15.4	15.7	15.9	0.2
ns for self-esteem	266	263	232		285	306	170		350	166	245	

Note. Numbers in parentheses represent cell frequencies. Numbers with different lettered subscripts differ by  $p < .05$  based on Tukey's post hoc comparison tests. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

*Group Averages on the NEO Personality Inventory and Self-Esteem as a Function of the Three-Factor Model in Men*

Table 4

*Group Averages on the NEO Personality Inventory and Self-Esteem as a Function of the Three-Factor Model in Women*

Personality trait	Popularity–Gregariousness				Achievement Striving				Creative Expressiveness			
	High (n = 97)	Medium (n = 132)	Low (n = 62)	F	High (n = 134)	Medium (n = 91)	Low (n = 66)	F	High (n = 108)	Medium (n = 68)	Low (n = 98)	F
Neuroticism	78.5 <sub>a</sub>	83.1 <sub>ab</sub>	89.6 <sub>b</sub>	4.5*	78.0 <sub>a</sub>	85.4 <sub>ab</sub>	89.7 <sub>b</sub>	6.8**	79.5	85.7	84.5	2.0
Openness	125.9 <sub>a</sub>	117.6 <sub>b</sub>	122.5 <sub>ab</sub>	6.2**	124.8 <sub>a</sub>	120.4 <sub>ab</sub>	116.2 <sub>b</sub>	5.2**	126.6 <sub>a</sub>	120.7 <sub>ab</sub>	114.4 <sub>b</sub>	12.7***
Agreeableness	52.7 <sub>a</sub>	51.1 <sub>ab</sub>	50.2 <sub>b</sub>	4.5*	52.2	50.9	50.6	2.5	51.8	51.4	50.8	0.8
Extraversion	117.7 <sub>a</sub>	104.1 <sub>b,c</sub>	101.3 <sub>c</sub>	25.2***	112.4 <sub>a</sub>	107.9 <sub>ab</sub>	99.4 <sub>c</sub>	12.6***	108.5	107.1	107.7	0.1
Conscientiousness	51.6	50.1	50.0	1.1	52.2 <sub>a</sub>	50.2 <sub>ab</sub>	47.9 <sub>b</sub>	6.4**	50.4	50.8	50.8	0.1
Self-esteem	15.5 <sub>a</sub>	16.5 <sub>ab</sub>	17.8 <sub>b</sub>	4.6**	15.6 <sub>a</sub>	18.0 <sub>ab</sub>	16.5 <sub>b</sub>	5.7**	16.0	16.6	16.6	0.6
ns for self-esteem	100	131	63		137	90	67		108	68	101	

Note. Numbers in parentheses represent cell frequencies. Numbers with different lettered subscripts differ by  $p < .05$  based on Tukey's post hoc comparison test. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

*Group Averages on the NEO Personality Inventory and Self-Esteem as a Function of the Three-Factor Model in Women*

Among men, the Popularity–Social Skills factor predicted significant mean differences in extraversion and neuroticism, with the observed effects, as predicted, being more powerful for extraversion than neuroticism (see Table 3). Men who perceived themselves during college as being very popular and socially skilled relative to peers reported feeling more extraverted and less neurotic overall during middle adulthood than men who evaluated themselves as comparatively least popular and socially skilled. Men who viewed themselves as moderately popular and socially skilled also

perceived themselves as more extraverted but not less neurotic than men who felt least popular and socially skilled.

Several significant findings were also found for the Expressiveness factor that predicted extraversion and openness. Men who viewed themselves during college as being very expressive relative to peers perceived themselves as more open overall during middle adulthood in contrast to men who viewed themselves to be comparatively average or least expressive during college. Furthermore, men who perceived themselves to be moderately expressive felt more open compared with men who viewed themselves as least expressive. With respect to extraversion, men who viewed themselves as being very expressive relative to peers during college viewed themselves as being more extraverted during middle adulthood than men who perceived themselves as least expressive. Furthermore, and as predicted, the effects size was stronger for openness than for extraversion.

Finally, the Intellectualism–Achievement Striving factor significantly predicted extraversion, conscientiousness, and openness among men. Men who felt comparatively more intellectual and achievement striving felt more extraverted, conscientious, and open during middle adulthood compared with men who perceived themselves as relatively the least intellectual and achievement striving. As predicted, the effect size was strongest between this factor and conscientiousness.

For women, the Popularity–Gregariousness factor significantly predicted neuroticism, openness, agreeableness, and extraversion during middle adulthood (see [Table 4](#)). Women who rated themselves as very popular and gregarious during college relative to their peers felt more open, agreeable, extraverted, and less neurotic during middle adulthood than women who felt relatively least popular and gregarious. These women also felt more open and extraverted during middle adulthood than women who viewed themselves as relatively average in popularity and gregariousness. Furthermore, as predicted, the effect size was strongest for extraversion.

The Achievement Striving factor in women significantly predicted all domains of personality during middle adulthood except agreeableness, with the strongest effect size being observed for extraversion rather than for the predicted dimension of conscientiousness. Women who rated themselves during college as very achievement oriented relative to peers reported being more extraverted, conscientious, open, and less neurotic overall during middle adulthood than women who viewed themselves as comparatively low on achievement striving. No other significant effects were found.

Last, the Creative Expressiveness factor predicted openness during middle adulthood. Women who rated themselves during college as high in creative expressiveness relative to peers felt more open during middle adulthood than women who were relatively low on creative expressiveness. No other significant differences emerged.

In addition to personality, we predicted that participants who viewed themselves during college more positively on the various factors would report lower levels of negative self-esteem compared with individuals who viewed themselves less positively across factors. [Tables 3](#) and [4](#) present the mean level of self-esteem as a function of each factor for men and women (Bonferroni adjusted alpha of  $p < .017$  for analysis of variance tests).

In general, men and women who viewed themselves during college as being more popular and gregarious were less likely to report having poor self-esteem during middle adulthood than those who viewed themselves as being the least popular and gregarious during college. Furthermore, among women, those who viewed themselves during college as being more achievement striving than their peers were also less likely to report having poor self-esteem during middle adulthood compared with participants who perceived themselves as comparatively the least achievement striving during college.

Overall, these findings supported the hypothesis that individuals who provided positive comparative self-appraisals during college would rate themselves more highly on the positive personality dimensions and lower on negative dimensions (i.e., neuroticism) during middle adulthood than would individuals who provided average and especially negative relative self-appraisals; the more positive adults also felt better about themselves during middle adulthood. However, one alternative explanation is, that during middle adulthood, individuals with higher self-esteem viewed themselves more favorably than those with lower self-esteem. Consequently, self-esteem can provide a more parsimonious account of these results. To test this alternative explanation, we performed analyses of covariance using each factor separately and self-esteem as a covariate to predict personality. Only two changes occurred: The Popularity–Social Skills factor for men and the Popularity–Gregariousness factor in women no longer significantly predicted neuroticism during middle adulthood ( $F_s < 1.97$ , *ns*). We found no other appreciable changes. These results suggest that the comparative self-appraisals during college predicted personality during middle adulthood independent of self-esteem.

## Discussion

We designed the present study to use archival longitudinal data to determine whether positive, average, and negative comparative self-appraisals during college predicted the expression of personality during middle adulthood. On the basis of the work of [Taylor and Brown \(1988; Taylor, 1989\)](#), we predicted that individuals who provided positive comparative self-appraisals during young adulthood would express a healthier personality profile as evidenced by higher scores on extraversion, openness, agreeableness, and conscientiousness and lower neuroticism scores compared with individuals who provided average and especially negative comparative self-evaluations. Overall, our results were consistent with Taylor and Brown's expectations. Specifically, individuals who provided positive comparative self-appraisals during college reported being more extraverted, open, conscientious, agreeable, and less neurotic during middle adulthood in contrast to individuals who reported negative self-evaluations; the positive adults were also less likely to report negative self-esteem during middle adulthood. Naturally, these results need to be tempered by the specific factor of focus and gender. This study provides suggestive evidence that supports Taylor and Brown's subjective well-being hypothesis within the realm of personality.

Because of a lack of objective criteria to assess the accuracy of these comparative judgments, it was impossible to test directly whether the differential expressions of personality during middle adulthood were based on participants' accurate comparative self-appraisals during college or a cognitive bias. Nonetheless, there is evidence to suggest that these comparative self-appraisals closely matched aspects of their personality. The strongest evidence for this conjecture stems primarily from the close interpretive correspondence between the social skills and gregariousness

factors in men and women with extraversion. That is, we would predict that both these factors should most powerfully predict (by magnitude of multivariate and univariate  $F$ s) extraversion than any other dimension of personality. In both cases, these predictions were confirmed. Indeed, men and women who reported being very popular during college relative to peers had, correspondingly, the highest extraversion scores during middle adulthood than any other group and the largest effect size.

There existed additional indirect evidence indicating a close correspondence between comparative appraisals and personality. Specifically, it was argued, albeit post hoc, that the Expressiveness and Creative Expressiveness factors in men and women, respectively, should most powerfully predict openness, and the Achievement Striving factor in women and the similar factor for men should most powerfully predict conscientiousness. These predictions received good support especially for men: The Expressiveness factor did predict openness most powerfully, whereas the Intellectual–Achievement Striving factor predicted conscientiousness most powerfully. For women, the Achievement Striving factor did predict conscientiousness, although it was not the most powerful predictor, and the Creative Expressiveness factor did predict openness most powerfully. Overall, the prediction that comparative self-appraisals during college should most powerfully predict the interpretatively similar dimension of personality during middle adulthood received support in five of six cases. These results not only lend support for a fairly strong association between comparative appraisals and personality, but also provide convergent and discriminative evidence that these factors did measure to some degree the proposed constructs.

These results also shed some interesting insights concerning social comparison processes and personality development. Among women, the Achievement Striving factor was a significant predictor of neuroticism, extraversion, conscientiousness, and openness such that women who viewed themselves during college as most achievement oriented relative to their peers were the most extraverted, conscientious, open, and least neurotic group during middle adulthood relative to women who evaluated themselves as comparatively the least achievement oriented. In men, the factor most closely approximating this factor in women, Intellectualism–Achievement Striving, predicted openness, extraversion, and conscientiousness, but not neuroticism. This suggests that women who see themselves as early achievers in life may ultimately develop fewer dimensions of an unhealthy personality than men (e.g., neuroticism). Whether comparative appraisals of achievement striving predict the development of different dimensions of personality in men and women needs to be replicated and is an important area of future research.

Another finding that may have important implications for well-being is the relationship between personality and the Popularity–Social Skills factor for men and the similar construct for women. The least neurotic group during middle adulthood were men and women who considered themselves to be very popular during college relative to peers, whereas the highest neuroticism scores during middle adulthood were found among participants who considered themselves the least popular. Seemingly, viewing oneself as comparatively more social appears to predict lower neuroticism years later. However, these results no longer proved significant after we controlled for self-esteem. Individuals with higher self-esteem viewed themselves as less neurotic. Consequently, it seems that comparative self-appraisals in the social domain are related to neuroticism entirely or partly through self-esteem.

The potential importance of the comparative social factor (i.e., popularity) is also indicated by the number of personality domains this factor predicted. The Popularity–Gregariousness factor in women predicted more dimensions of personality than in men. Despite differences in the factor structure for men and women, one potential implication of this finding is that, for women, seeing oneself as being more successful in the social domain than others may have more long-term consequences for personality development than men. This would be an interesting area to pursue further.

Although these findings attest to the significance of social comparison processes for adult personality, in this study we could not determine the magnitude by which social comparison processes predict personality during middle adulthood beyond that already explained by participants' preexisting levels of personality during college. For example, Sieglar et al. (1990), using the UNCAHS, found that college MMPI scores on extraversion and neuroticism accounted for approximately 50% of the variance in extraversion and neuroticism of the NEO during middle adulthood. Therefore, extraversion and neuroticism are relatively stable dimensions of personality from young to middle adulthood. Whether participants' comparative appraisals add additional explanatory power could not be assessed in this study. Even if the issue could be addressed, it would be limited to extraversion and neuroticism because the personality dimensions of agreeableness, openness, and particularly conscientiousness were not fully articulated in 1966. Consequently, it is the task of future researchers to ascertain longitudinally the extent to which social comparison processes provide additional explanatory power to predict the stability and expression of personality beyond preexisting levels of personality.

In summary, this is the first study, to our knowledge, to use a normal population of participants to assess the relationships between social comparison processes and personality expression several years later. As such, it demonstrates the importance and utility of bridging social psychological, personality, and aging processes.

## Footnotes

<sup>1</sup> The decision to factor analyze the 21 traits separately for men and women was due to the disproportionate number of men relative to women, which closely mirrored the proportion of men and women enrolled at UNC during that time. The procedure eliminates the possibility that the factor patterns in women would be heavily influenced by the responses of men. Indeed, although the constructs were similar for men and women, the factor items and loadings were different. This suggests that combining the results for men and women into one analysis is probably inappropriate.

<sup>2</sup> The attributes that did not load on any factor, based on the present criteria for men and women, were mechanical ability ( $M_{men} = 2.91, SD = .95; M_{women} = 2.49, SD = .92$ ), political conservatism ( $M_{men} = 2.83, SD = 1.06; M_{women} = 2.74, SD = 0.94$ ), political liberalism ( $M_{men} = 2.92, SD = 1.04; M_{women} = 2.89, SD = 0.95$ ), sensitivity to criticism ( $M_{men} = 3.07, SD = .86; M_{women} = 3.31, SD = .83$ ), and defensiveness ( $M_{men} = 3.10, SD = .82; M_{women} = 3.14, SD = .84$ ). Attributes that did not load for women but did for men were academic ability ( $M = 4.12, SD = .69$ ), intellectual self-confidence ( $M = 3.38, SD = .71$ ), mathematical ability ( $M = 3.35, SD = .93$ ), and athletic ability ( $M = 2.94, SD = .88$ ). Finally, two attributes that did not load for men but did for women were stubbornness ( $M = 3.28, SD = .90$ ) and understanding of others ( $M = 3.68, SD = .79$ ).

Correlations among factors and personality as well as the means associated with the facets of personality as a function of the factors were also computed. These analyses can be obtained from the first author on request.

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