How Has Body Image Changed? A Cross-Sectional Investigation of College Women and Men From 1983 to 2001

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Body-image dissatisfaction is not uncommon and can adversely affect individuals' psychosocial functioning and quality of life. Various oft-cited surveys and a meta-analysis implicate a worsening of body image over the past several decades, especially among women and possibly among men. The present cross-sectional study examined changes in multiple facets of body image among 3,127 college students from 1983 through 2001; the same standardized assessment was used in 22 studies conducted within the same university. Results confirmed non-Black women's increasing body-image dissatisfaction until the early or mid-1990s, after which significant improvements occurred in terms of overall body-image evaluation and overweight preoccupation among both non-Black and Black women, despite heavier body weights. A reduction over time in women's investment in their appearance was also evident. Men's body image was relatively stable during the 19-year period. Explanations, limitations, and implications of the findings are discussed.

Body image is a multidimensional construct encompassing selfperceptions and attitudes regarding one's physical appearance. Two core facets of body-image attitudes include evaluation (e.g., body satisfaction) and investment (e.g., the psychological importance one places on one's appearance; Cash, 2002a). Moreover, these attitudes may be assessed relative to overall appearance or with regard to specific physical characteristics, such as body weight or shape. Body image has received increasing empirical and clinical attention (Cash & Pruzinsky, 2002; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999), in part because of the high prevalence of body-image concerns especially among females in Western societies (e.g., Cash, 2002c; Striegel-Moore, Silberstein, & Rodin, 1986). A negative body image can result in adverse psychosocial consequences for both sexes, including disordered eating (Cash & Deagle, 1997; Stice, 2002), depression (Noles, Cash, & Winstead, 1985), social anxiety (Cash & Fleming, 2002a), impaired sexual functioning (Wiederman, 2002), poor self-esteem (Powell & Hendricks, 1999), and diminished quality of life (Cash & Fleming, 2002b).

Researchers, clinicians, media, and the public have been intrigued by the question "Has negative body image increased over

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The Multidimensional Body-Self Relations Questionnaire is owned by Thomas F. Cash and is available from his Web site, http://www.body-images.com, for a nominal fee.

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time?" Prevalence rates of "negative body image" or "body-image disturbance" are difficult to quantify, largely because of inconsistency in defining such concepts (Cash, 2002b). Many researchers equate these terms with "body (or body-image) dissatisfaction," including any displeasure with one or more aspects of one's body or one's overall physical attractiveness. Although this unidimensional approach is limited, prevalence data in which body satisfaction has been used to define overall body image are often cited, especially data from large-sample surveys conducted in 1972, 1985, and 1996 and published in *Psychology Today* (Berscheid, Walster, & Bohrnstedt, 1973; Cash, Winstead, & Janda, 1986; Garner, 1997). The comparative results of these surveys frequently have been offered as evidence that both sexes' body image has worsened substantially over the ensuing 25 years.

Although these three surveys provide a wealth of information on the epidemiological patterns and correlates of body-image dissatisfaction, Cash (2002b) has questioned their accuracy. First, the samples were self-selected, potentially overrepresenting individuals with greater body-image concerns. Second, although the 1972 and 1985 surveys involved a stratified sample similar to the U.S. census on particular demographics, the 1996 survey included only the initial 4,000 surveys returned. Third, preamble instructions, item wording, and scaling formats differed across the surveys. In 1993, Cash and Henry (see Cash & Henry, 1995) conducted a more empirically sound survey of American women's body-image attitudes using the validated Multidimensional Body-Self Relations Questionnaire (MBSRQ; see Cash, 2000). A statistical comparison with the 1985 Psychology Today survey, in which the MBSRQ was also used, indicated that although overall appearance evaluation had worsened, women's overweight preoccupation had actually lessened.

Sondhaus, Kurtz, and Strube (2001) cross-sectionally compared the body-image attitudes of college men and women assessed at the same institution in 1966 and 1996. These researchers found that women reported significantly more body satisfaction in 1966 than in 1996, yet there were no differences in men's body-image attitudes between the two points in time. In addition, women were found to be more satisfied with their bodies than men in 1966, and the opposite was observed in 1996. The latter difference has been repeatedly supported by other recent research. For example, Muth and Cash (1997) found that college women report significantly more negative body-image evaluations, greater psychological investments in their appearance, and more frequent body-image dysphoria than do their male peers.

In a comprehensive meta-analysis of gender differences in body satisfaction, Feingold and Mazzella (1998) examined 222 studies conducted over a 50-year period. They compared effect-size differences between men and women on various measures of body-image evaluation across four chronological (i.e., year of study) categories: pre-1970, 1970s, 1980s, and 1990–1995. The progressively larger effect sizes observed over time indicated that reports of appearance satisfaction among women and men became increasingly disparate. The authors concluded that either women's, but not men's, body image worsened over time or women's dissatisfaction increased more precipitously.

Although these studies collectively evince diminishing bodyimage satisfaction among women at least through the mid-1990s, other investigations point to different conclusions. Rozin, Trachtenberg, and Cohen (2001) cross-sectionally examined body-image changes in men and women attending the University of Pennsylvania from 1983 to 1998. They used a figural body-image assessment whereby participants selected their self-perceived body size and ideal body size from a progression of nine "silhouette" drawings. The index of body dissatisfaction was a signed difference score (self minus ideal). The researchers found no differences in the scores between two time periods (1983–1984 vs. 1995–1998) for either gender, despite modest increases in body mass index (BMI). Unfortunately, two key flaws in this investigation undermined the authors' conclusion of no change over the past two decades, including no change in gender differences (contrary to Feingold & Mazzella, 1998). First, because they compared only two time periods, with no data from 1985 to 1994, it is possible that there were curvilinear changes over the 15-year period (e.g., a worsening of body image followed by an equivalent improvement). Second, in addition to recognized shortcomings of the silhouette methodology itself (Thompson & Gardner, 2002), the use of signed discrepancy scores is problematic. For example, especially among men, whose body dissatisfaction entails desires to be slimmer as well as desires to be heavier, analyzing signed discrepancies rather than absolute values can produce erroneous conclusions (Jacobi & Cash, 1994; Keeton, Cash, & Brown, 1990).

In marked contrast, two studies have suggested recent improvements in body satisfaction. Heatherton, Nichols, Mahamedi, and Keel (1995) surveyed 1,200 students at Radcliffe College in 1982 and 1992. Interestingly, despite significant weight gains over time among women, a smaller percentage considered themselves overweight in 1992 (31%) in comparison with the cohort of women surveyed in 1982 (42%). The women in the 1992 cohort were also relatively less likely to report a desire to lose weight, despite no comparable reduction in scores on the Drive for Thinness subscale

of the Eating Disorder Inventory (EDI; Garner, Olmsted, & Polivy, 1983). There were very few differences among men over the 10-year period. Subsequently, Heatherton and his colleagues (Heatherton, Mahamedi, Striepe, Field, & Keel, 1997) conducted a 10-year longitudinal study of the 1982 sample. Despite an average weight gain of 4 pounds (1.8 kg) over the decade, women reported a reduced drive to be thin and were more likely to regard themselves as average in weight rather than overweight. Furthermore, they were less likely to be dieting or to want to lose weight in 1992 than in 1982. Men, on the other hand, had gained an average of 12 pounds (5.4 kg) over the decade and reported a number of opposite eating and "body-image" patterns than women.

Although Heatherton and his colleagues (1995, 1997) offered informative and novel perspectives on the pattern of body-image change over this period, their research involved several limitations. First, in both studies the researchers used the EDI Drive for Thinness subscale to measure body dissatisfaction rather than the EDI Body Dissatisfaction subscale, arguably assuming that if an individual has a desire to be thin, he or she is dissatisfied with his or her appearance. Moreover, one's physical appearance is not wholly defined by one's weight. People may be dissatisfied with multiple, or very specific, aspects of their body that are unrelated to weight (e.g., muscle tone, facial features, or hair). As a result, relying solely on the Drive for Thinness subscale and selfclassified weight to index appearance dissatisfaction is limiting, and Heatherton and his colleagues' conclusions about changes in body dissatisfaction are potentially misleading. Second, the observed longitudinal changes may simply have revealed the typical developmental changes in body image that occur from 20 to 30 years of age (Feingold & Mazzella, 1998; Striegel-Moore & Franko, 2002; Whitbourne & Skultety, 2002). Third, like Cash and Henry (1995), Rozin et al. (2001), and Sondhaus et al. (2001), Heatherton et al. (1995, 1997) compared only two time periods. Although revealing, such linear data do not provide an understanding of the path that the body-image experiences of women and men had taken between those two points in time. It is more conclusive to determine the pattern over more than two time periods, as was done by Feingold and Mazzella (1998) in their meta-analysis of four periods ending in 1995.

In view of the clear relationship between body image and various facets of psychosocial functioning, the question of whether body image has changed over the past two decades is an important one. As noted earlier, body-image problems are associated with eating disturbances and disorders, depression, social anxiety, sexual difficulties, and poorer overall self-esteem (see Cash & Pruzinsky, 2002). These findings have been derived largely from adolescent and young, college-student samples. Thus, any crosssectionally observed body-image changes in this population have implications for other aspects of their well-being. The question of body-image changes is also significant given the fact that it is often assumed, on the basis of widely cited yet problematic comparisons of magazine surveys, that body image has worsened and continues to worsen for both sexes. Therefore, the purpose of our crosssectional investigation was to improve substantially on previous research by evaluating changes in body image from 1983 to 2001, using archival data from 22 published and unpublished studies collected at one university based on Cash's (2000) standardized MBSRQ. Unlike earlier research that used only one measure or assessed only one facet of the body-image construct (e.g., body

satisfaction or weight concern), we examined patterns of change over this 19-year span on *multiple* dimensions of body image: overall body-image evaluation, satisfaction with discrete body areas and attributes, preoccupation with being or becoming overweight, and cognitive—behavioral investment in one's physical appearance. Moreover, rather than comparing only two points in time separated by many years, we compared participants over five specific time periods.

In this research, we sought to answer several empirical questions: Consistent with some of the studies just discussed, is there evidence of a worsening of women's evaluative body image at least up to the early or mid-1990s? Have there been body-image changes among men over the 19-year period? Moreover, as Heatherton et al.'s data (1995, 1997) suggested, is there evidence of a directional change at some point in the 1990s, with improvements in body-image evaluation among women? Are there changes visà-vis dissatisfaction with specific physical characteristics, such as concerns about shape or weight? In addition to evaluative body image, have there been changes in the extent to which people are psychologically invested in their appearance? We also examined body mass over time, in view of substantial evidence of Americans' increased body weight (Flegal, Carroll, Ogden, & Johnson, 2002) and its relationship to body image (Schwartz & Brownell, 2004). Finally, we considered the role of ethnicity in women's body-image changes, given that substantial evidence points to a more favorable body image among Black than non-Black women, even at higher body weights (e.g., Wildes, Emery, & Simons, 2001). No research, to our knowledge, has evaluated changes over time among Black and non-Black women separately.

Method

Participants

From 1983 through 2001, students at Old Dominion University, a moderately large mid-Atlantic public university, volunteered to participate anonymously in 22 studies that met the criteria defined subsequently and were approved by a human research ethics committee. The 3,242 participants were 30 years of age or younger (M=21.0 years, SD=2.9) and consisted of 1,870 non-Black women, 634 Black women, 623 non-Black men, and 115 Black men. Among non-Black women, the vast majority (86%) were White; 7% were Asian, 4% were Hispanic, and 4% were of other ethnicities. Among non-Black men, 82% were White, 10% were Asian, 4% were Hispanic, and 4% were of other ethnicities. Data on self-reported height and weight were available for 91% of the sample; average BMIs (kg/m²) were 22.1 (SD=4.0) among non-Black women, 24.2 (SD=5.3) among Black women, 24.0 (SD=3.8) among non-Black men, and 25.0 (SD=4.5) among Black men.

We divided the sample into five cohorts representing sequential time periods, including the 1980s and 3-year spans from 1990 through 2001. The 1989 study was placed within the 1980s grouping rather than the 1990–1992 period to ensure a larger sample for the former period. Table 1 summarizes sample sizes and number of studies by individual year and time period for non-Black women, Black women, and non-Black men. As a result of the relatively small number of Black men (n=115) over the five time periods, we were unable to conduct a separate analysis of this group. Evident from these data is that our construction of temporal periods permitted a comparison of appropriately larger samples (i.e., more participants across more studies) than could occur in year-by-year analyses (e.g., via regression).

Table 1
Sample Sizes for Participants in Each Group by Year of Study
and Time Period

Time period and year (number of studies)	Non-Black women	Black women	Non-Black men	
1983–1989 (5)	311	44	123	
1983 (1)	127	12	49	
1984 (2)	123	23	56	
1989 (1)	61	9	18	
1990–1992 (4)	317	116	158	
1990 (1)	56	58	0	
1991 (2)	160	48	128	
1992 (1)	101	10	30	
1993–1995 (4)	489	122	138	
1993 (2)	334	71	94	
1994 (2)	155	51	44	
1996–1998 (7)	554	251	163	
1996 (3)	232	90	73	
1997 (2)	152	80	18	
1998 (2)	170	81	72	
1999–2001 (3)	199	101	41	
2000 (2)	143	70	41	
2001 (1)	56	31	0	
All periods (22)	1,870	634	623	

Selection Criteria for Studies

In all of the studies, a similar generic announcement was used in recruiting participants to anonymously complete questionnaires regarding their attitudes and experiences regarding themselves and their lives in exchange for extra class credit. To qualify for inclusion in this investigation, the studies were required to meet several criteria: (a) The study included one or more MBSRQ appearance-related subscales with identical items; (b) the sample was drawn from the general population of students in psychology courses and was not restricted to selectively recruited participants (e.g., those with a "negative body image," gays/lesbians, sexually active persons, those in a stable relationship, or currently or formerly overweight individuals); (c) the MBSRQ was not an experimental posttest variable; and (d) information on participants' gender and race/ethnicity was obtained.

MBSRQ.

As detailed in its manual (Cash, 2000) and reviewed by others (e.g., Thompson et al., 1999), the MBSRQ is a well-validated assessment of specific facets of body-image attitudes. It has been used in national surveys (Brown, Cash, & Mikulka, 1990; Cash & Henry, 1995; Cash et al., 1986) and numerous empirical studies (Cash, 2000). There are two forms of the MBSRQ, a 69-item version with 10 subscales assessing both appearance-related and fitness/health-related body image and a 34-item version assessing only appearance-related body image.

The present research examined four appearance-related MBSRQ subscales. The *Appearance Evaluation* (AE) scale consists of 7 items measuring individuals' overall subjective appraisal of their appearance and attractiveness, based on a 5-point disagree–agree format. The *Body Areas Satisfaction* scale (BASS) also assesses evaluative body image, through the use of 5-point ratings of dissatisfaction–satisfaction with nine specific physical areas or attributes (i.e., face, hair, height, weight, upper torso, mid-torso, lower torso, muscularity, and overall appearance). Scores on the 4-item *Overweight Preoccupation* (OWP) scale are derived from 5-point ratings of concerns about being or becoming fat, vigilance of small weight fluctuations, dieting behaviors, and eating restraint. Finally, the 12-item *Appearance Orientation* (AO) scale uses a 5-point disagree–agree format

Table 2
Means, Standard Deviations, and Time Period Comparisons Among Non-Black Women, Black Women, and Non-Black Men on Different Study Variables

	1983–1989 (T1)		1990–1992 (T2)		1993–1995 (T3)		1996–1998 (T4)		1999–2001 (T5)			
Measure and cohort	M	SD	Significant time effects									
Body mass index												
Non-Black women ($n = 1,712$)	21.03	2.68	22.16	3.66	21.83	3.44	22.45	3.83	22.49	3.68	T1 < T2, T3, T4, T5	
Black women $(n = 605)$	22.80	4.15	22.16	3.29	24.74	4.22	24.12	4.56	25.09	4.65	T1 < T5; $T2 < T3$, $T4$, $T5$	
Non-Black men $(n = 528)$	22.75	2.07	23.77	3.58	24.86	4.14	24.55	3.42	24.18	3.33	T1 < T3, T4	
Appearance evaluation												
Non-Black women ($n = 1,650$)	3.44	0.75	3.44	0.84	3.22	0.79	3.30	0.82	3.51	0.72	T1, T2 > T3; T3, T4 < T5	
Black women $(n = 567)$	3.67	0.90	3.58	0.73	3.35	0.86	3.78	0.79	3.71	0.72	T3 < T4, T5	
Non-Black men $(n = 561)$	3.57	0.69	3.48	0.68	3.53	0.63	3.55	0.72	3.67	0.74	None	
Overweight preoccupation												
Non-Black women $(n = 1,440)$	2.50	0.98	2.81	1.00	2.92	0.97	2.73	1.02	2.68	0.98	T1 < T3; $T3 > T4$, $T5$	
Black women $(n = 546)$	2.64	1.05	2.63	0.98	2.81	1.00	2.48	1.01	2.38	0.98	T3 > T4, T5	
Non-Black men $(n = 500)$	2.07	0.86	2.23	0.87	1.98	0.79	2.03	0.79	2.02	0.85	None	
Appearance orientation												
Non-Black women ($n = 1,608$)	3.91	0.62	3.76	0.59	3.63	0.66	3.50	0.66	3.52	0.65	T1 > T3, $T4$, $T5$; $T2 > T4$, $T5$	
Black women $(n = 545)$	3.96	0.67	3.83	0.63	4.00	0.54	3.73	0.57	3.70	0.49	T3 > T4, T5	
Non-Black men $(n = 534)$	3.54	0.57	3.42	0.60	3.42	0.64	3.32	0.66	3.23	0.62	T1 > T5	

Note. T = time.

to assess one's degree of cognitive and behavioral investment in one's physical appearance vis-à-vis attending to and placing importance on one's looks and engaging in behaviors to manage physical appearance. Each MBSRQ subscale score is a mean of its constituent items.

Although each study did not include all four MBSRQ measures, 70% of the studies did so. The AE, AO, OWP, and BASS subscales were used, respectively, in 89%, 86%, 80%, and 86% of the studies. For the AE and AO subscales, composite scores were imputed if only one item was missing; otherwise, the scores were regarded as missing data. All items were required in computing the 4-item OWP subscale. Because BASS items were examined individually in this study, imputation was not an issue. We computed the measures' reliabilities within each of the 22 studies. Cronbach alpha coefficients were consistently acceptable for the AE (range for non-Black men: .70–.87; range for Black and non-Black women: .83–.93), OWP (range for men: .71–.82; range for women: .72–.84), and AO (range for men: .79–.88; range for women: .75–.88).

Results

Preliminary Analyses

Before performing inferential analyses, we examined whether their assumptions were met. All dependent variables were normally distributed. Several outliers occurred in the BMI data, which were recoded as recommended by Tabachnick and Fidell (2001). The assumption of homogeneity of variance was slightly violated in a few analyses; however, analysis of variance (ANOVA) is robust to this violation if there are no outliers and sample sizes are large and relatively equal (Tabachnick & Fidell, 2001). Post hoc Tukey honestly significant difference tests were performed if ANOVA time period effects were significant (p < .05).

In view of established body-image differences between Black and non-Black women (Wildes et al., 2001) and the increased representation of Black students in our database over time, $\chi^2(4, N = 3242) = 91.87$, p < .001, reflecting progressive changes in the university's diversity, we conducted separate ANOVAs for

non-Black women, Black women, and non-Black men in the case of all dependent variables. As noted previously, sample size precluded a separate analysis of Black men's data. Given the increased proportion of Black men in more recent studies, we confined the analyses to non-Black men rather than collapsing across Blacks and non-Blacks.

Body Mass Index

One-way ANOVAs indicated that BMI increased over time among non-Black women, F(4, 1707) = 9.39, p < .001, $\eta^2 = .02$; Black women, F(4, 600) = 8.61, p < .001, $\eta^2 = .05$); and non-Black men, F(4, 523) = 6.51, p < .001, $\eta^2 = .05$. As can be seen in Table 2, non-Black women's average BMI was significantly lower at Time 1 than at all other time points. Black women's BMI was lower at Time 1 than at Time 5 and lower at Time 2 than at Times 3, 4, and 5. Non-Black men's BMI was lower at Time 1 than at Times 3 and 4. Thus, in general, participants were heavier in later than earlier periods of study.

Accordingly, to examine the possibility that body-image changes over time might differ as a function of participants' BMI, we conducted 2 (BMI level) \times 5 (time period) ANOVAs on the body-image measures, using a median split of BMI over the entire

¹ As a result of violation of the assumption of homogeneity of regression for most dependent variables and a reduction in sample size from missing BMI scores, we could not use BMI as a covariate in an analysis of covariance (ANCOVA). This assumption requires that the slopes of the regression of the dependent variable on the covariate be the same for all levels of the independent variable. Statisticians (Atkins, 1999; Keppel, 1991; Tabachnick & Fidell, 2001) warn of problems (e.g., increased Type I error or difficulty interpreting results) in using ANCOVA if this assumption is violated. Therefore, the alternative strategy of blocking was used (Tabachnick & Fidell, 2001).

sample within gender. 1 In each case, the nonsignificant interaction term's F ratio was less than 1, and the data plots depicted very similar effects over time for lighter and heavier participants. Thus, lighter and heavier participants did not differ in regard to bodyimage changes over time.

Appearance Evaluation

The MBSRQ AE subscale assesses the favorability of individuals' overall view of their appearance. Table 2 shows the pattern of changes in this dimension over time for each group. Among non-Black women, evaluations significantly decreased and then increased across the five time periods, F(4, 1645) = 7.07, p < .001, $\eta^2 = .02$. Specifically, body image worsened from Time 1 and Time 2 to Time 3 and then improved from Time 3 and Time 4 to Time 5. Black women's evaluations also changed over the five time periods, F(4, 562) = 5.50, p < .001, $\eta^2 = .04$. There was a reliable improvement in appearance evaluation from Time 3 to Time 4 and Time 5 for Black women. There were no significant changes in appearance evaluation over the five time periods among non-Black men, F(4, 556) = 0.65, ns.

Overweight Preoccupation

The MBSRQ OWP subscale assesses individuals' fat anxiety, weight vigilance, and dieting behaviors. Table 2 presents these data. Among non-Black women, overweight preoccupation initially increased and then decreased over time, F(4, 1435) = 4.47, p < .01, $\eta^2 = .01$. Preoccupation with being or becoming overweight significantly increased from Time 1 to Time 3 and then significantly decreased from Time 3 to Time 4 and Time 5. Overweight preoccupation declined among Black women, F(4, 541) = 3.15, p < .05, $\eta^2 = .02$, from Time 3 to Time 4 and Time 5. Non-Black men's overweight preoccupation did not change over time, F(4, 495) = 1.83, ns.

Appearance Orientation

The MBSRQ AO subscale measures cognitive and behavioral investment in one's appearance (e.g., placing importance on being attractive, attending to one's looks, and engaging in appearance management behaviors). As shown in Table 2, appearance investment decreased over the time periods for non-Black women, F(4, 1603) = 20.87, p < .001, $\eta^2 = .05$; Black women, F(4, 540) = 5.85, p < .001, $\eta^2 = .04$; and non-Black men, F(4, 529) = 2.73, p < .05, $\eta^2 = .02$. Non-Black women's appearance investment was significantly greater at Time 1 than at Times 3, 4, and 5 and significantly greater at Time 2 than at Times 4 and 5. Black women's appearance investment lessened significantly from Time 3 to Time 4 and Time 5. Appearance investment also declined among non-Black men from Time 1 to Time 5.

Body Areas Satisfaction

The BASS measures dissatisfaction–satisfaction with nine physical characteristics. ANOVAs were performed for each of these attributes to elucidate the nature of the global changes observed in global appearance evaluation. Results are summarized in Table 3. Lower torso satisfaction improved significantly from Time 3 to Time 5 among non-Black women, F(4, 1591) = 4.28, p < .01,

 $\eta^2 = .01$, and from Time 3 to Times 4 and 5 among Black women, $F(4, 591) = 5.47, p < .001, \eta^2 = .04$. Non-Black women's mid-torso satisfaction significantly decreased from Time 1 to Times 2 through 5, $F(4, 1590) = 2.95, p < .05, \eta^2 = .01$. Upper torso satisfaction significantly declined among non-Black women from Time 2 to Time 3, F(4, 1591) = 3.27, p < .05, $\eta^2 = .01$. Black women's weight satisfaction significantly lessened from Time 2 to Time 3, F(4, 590) = 4.08, p < .01, $\eta^2 = .03$. Overall appearance satisfaction among non-Black women significantly declined from Time 2 to Time 4 and then improved significantly from Time 4 to Time 5, F(4, 1565) = 3.81, p < .01, $\eta^2 = .01$. Black women's overall appearance satisfaction increased slightly from Time 3 to Time 4, F(4, 589) = 2.36, p = .052, $\eta^2 = .02$. In the case of both non-Black and Black women, no other comparisons for individual items were significant (i.e., satisfaction with face, hair, height, and muscularity). There were no significant time period differences on any of the BASS items among non-Black

Gender and Ethnicity Differences

Finally, one-way ANOVAs compared the three groups on the study's three primary body-image measures across time periods. As expected, relative to non-Black men (M=3.54, SD=0.69) and Black women (M=3.64, SD=0.80), non-Black women (M=3.35, SD=0.80) had a less positive global appearance evaluation, F(2, 2775)=34.49, p<0.001, $\eta^2=0.02$. More overweight preoccupation was reported by non-Black women (M=2.79, SD=1.00) than Black women (M=2.56, SD=1.01) and by both female groups relative to non-Black men (M=2.07, SD=0.83), F(2, 2483)=102.04, p<0.001, $\eta^2=0.08$. Both Black women (M=3.82, SD=0.58) and non-Black women (M=3.66, SD=0.66) reported greater appearance investment than did non-Black men (M=3.41, SD=0.62), and scores were higher among Black than non-Black women, F(2, 2684)=56.79, p<0.001, $\eta^2=0.04$.

Discussion

The present investigation was unique in its cross-sectional examination of multiple facets of body image over a 19-year period among both male and female college students through the use of a well-validated assessment. Our data revealed significant changes in body image over this period, especially among women. Unlike all previous studies, however, we observed two reliable patterns over multiple periods of time: a worsening of evaluative body image followed by reliable improvements. Consistent with the most comprehensive study to date, which meta-analyzed research up to 1995 (Feingold & Mazzella, 1998), non-Black (predominantly White) women in the present investigation reported increasingly negative evaluations of their appearance and more overweight preoccupation from the 1980s to the early and mid-1990s. During this period, they reported diminishing satisfaction with their mid-torso, upper torso, and overall appearance. In contrast, Black women did not evince evaluative body-image changes during this time frame, with the sole exception of a decline in weight satisfaction from the early to mid-1990s. More recent female cohorts, including both Black and non-Black women, reported a more favorable overall body image as well as less overweight

Table 3
Means, Standard Deviations, and Time Period Comparisons Among Non-Black Women, Black Women, and Non-Black Men on Body
Area Satisfaction

Dody satisfaction massure	1983–1989 (T1)		1990–1992 (T2)		1993–1995 (T3)		1996–1998 (T4)		1999–2001 (T5)		
Body satisfaction measure and cohort	M	SD	Significant time effects								
Face											
Non-Black women $(n = 1,594)$	3.85	0.80	3.82	0.83	3.72	0.91	3.71	0.90	3.71	0.89	None
Black women $(n = 596)$	4.11	0.78	3.94	0.86	4.01	0.92	4.08	0.92	4.12	0.85	None
Non-Black men $(n = 509)$	3.56	0.71	3.69	0.88	3.70	0.82	3.83	0.76	3.63	0.89	None
Hair											
Non-Black women ($n = 1,596$)	3.97	0.94	3.88	0.92	3.82	0.99	3.96	0.97	3.96	0.88	None
Black women $(n = 596)$	3.67	1.23	3.94	0.99	3.97	0.88	3.92	0.95	4.03	0.95	None
Non-Black men $(n = 509)$	3.67	0.91	3.74	0.98	3.71	0.96	3.99	0.96	3.88	0.98	None
Lower torso											
Non-Black women ($n = 1,596$)	2.85	1.34	2.72	1.25	2.50	1.19	2.70	1.18	2.86	1.07	T3 < T5
Black women $(n = 596)$	3.22	1.48	3.09	1.16	2.73	1.32	3.21	1.25	3.48	1.17	T3 < T4, T5
Non-Black men $(n = 508)$	3.50	0.79	3.70	0.96	3.56	0.94	3.57	1.10	3.66	0.91	None
Mid-torso											
Non-Black women ($n = 1,595$)	3.30	1.28	2.90	1.22	2.80	1.22	2.76	1.25	2.80	1.14	T1 > T2, T3, T4, T5
Black women $(n = 596)$	3.00	1.50	3.07	1.23	2.74	1.33	2.83	1.34	2.87	1.30	None
Non-Black men $(n = 509)$	3.33	1.03	3.09	1.15	2.98	1.08	3.12	1.11	3.07	1.01	None
Upper torso											
Non-Black women $(n = 1,596)$	3.63	0.99	3.49	1.04	3.27	1.14	3.29	1.09	3.37	1.08	T2 > T3
Black women $(n = 596)$	4.56	0.53	3.54	1.11	3.54	1.20	3.67	1.15	3.69	1.06	None
Non-Black men $(n = 509)$	3.44	0.86	3.46	0.97	3.40	0.98	3.44	1.04	3.39	1.05	None
Muscle tone											
Non-Black women $(n = 1,596)$	3.15	1.06	3.09	0.95	2.97	1.03	2.93	1.02	2.97	1.06	None
Black women $(n = 596)$	3.22	0.97	3.14	0.99	3.03	1.07	3.10	1.13	3.02	1.09	None
Non-Black men $(n = 509)$	3.44	0.78	3.31	0.96	3.30	0.93	3.30	1.02	3.34	1.06	None
Weight											
Non-Black women $(n = 1,594)$	3.18	1.14	2.86	1.22	2.78	1.21	2.86	1.23	2.99	1.14	None
Black women $(n = 595)$	3.33	1.12	3.21	1.29	2.58	1.29	2.95	1.26	2.98	1.21	T2 > T3
Non-Black men $(n = 508)$	3.44	0.86	3.26	1.06	3.26	1.06	3.37	1.12	3.44	1.12	None
Height											
Non-Black women ($n = 1,593$)	3.98	0.85	3.66	1.08	3.72	1.11	3.76	1.07	3.85	0.96	None
Black women $(n = 595)$	3.89	0.93	3.96	1.08	3.88	1.12	3.98	0.99	3.98	0.94	None
Non-Black men $(n = 508)$	3.78	1.11	3.71	1.10	3.58	1.06	3.71	1.11	3.51	1.00	None
Overall appearance											
Non-Black women ($n = 1,570$)	3.64	0.71	3.58	0.88	3.44	0.88	3.40	0.92	3.61	0.80	T2 > T4 < T5
Black women $(n = 594)$	3.89	0.60	3.70	0.82	3.58	0.95	3.85	0.90	3.82	0.82	T3 < T4
Non-Black men $(n = 506)$	3.72	0.75	3.73	0.80	3.70	0.79	3.71	0.81	3.71	0.96	None

Note. T = time.

preoccupation and improved lower torso satisfaction. The latter differences are particularly striking in view of the fact that these women were significantly heavier than the 1980s cohort, as would be expected from U.S. population-based data (Flegal et al., 2002).

Our findings support and expand Heatherton et al.'s (1995, 1997) evidence of a reliable reversal of college women's growing body-image concerns, despite those researchers' use of indirect body-image indexes. Of course, they observed this change earlier in the 1990s than was evident in our database. Explanations of this discrepancy can only be speculative but may reflect regional or demographic variations in change. Their studies were conducted at a private college in the northeastern region of the United States (Massachusetts), whereas our data were collected at a public university in Virginia. We would not expect that these changes would occur simultaneously across different populations within U.S. society. What is important here is that several studies have now evinced favorable recent changes in college women's body satisfaction.

Few changes were apparent among men, who were limited to non-Black men in this research. Whereas there was a slight but significant decline in body-image investment from the 1980s to 1999-2001, evaluative body image and overweight preoccupation were quite stable among non-Black men over the 19-year period. Such stability is consistent with the cross-sectional findings of Heatherton et al. (1995), Rozin et al. (2001), and Sondhaus et al. (2001). Moreover, our data collectively suggest that the growing gender differences that Feingold and Mazzella (1998) observed in their meta-analysis of studies conducted through 1995 were due to the growing body-image dissatisfaction among women and not due to the fact that men were increasingly dissatisfied but less precipitously so. Our findings further call into question a conclusion derived from the Psychology Today surveys conducted in 1972, 1985, and 1996 that male body image has become more negative over time (Cash, 2002b). There is little doubt that societal messages promote an unrealistically mesomorphic male ideal and that many boys and men experience body-image difficulties (Corson &

Andersen, 2002). Nevertheless, our data do not indicate that dissatisfaction with muscularity or any other physical attribute has changed over time in our sampled non-Black male cohorts.

The literature is replete with cultural and developmental explanations of the forces that undermine body acceptance among girls and women (Cash, 2002a; Striegel-Moore & Franko, 2002; Thompson & Smolak, 2001). The deleterious effects of the physical objectification of females in Western societies are well established (McKinley, 2002), particularly in relation to the prominent and progressively thin ideal standard of beauty promulgated by the media (Groesz, Levine, & Murnen, 2002; Tiggemann, 2002). Many females come to internalize these cultural expectations and judge their physical and personal self-worth in relation to unrealistic and extreme standards (Thompson & Stice, 2001). Thus, the progressive worsening of body image among women that researchers have found in the past is understandable.

More difficult to explain is why young college women's body images appear to be improving over the past several years, despite a significantly heavier average body weight. There is no evidence of a reduction in the cultural (e.g., media) messages that promote beauty and thinness as socially desirable goals for females (Tiggemann, 2002). A continued scientific evaluation of these media images and messages is imperative. On the other hand, perhaps a confluence of other factors is beginning to buffer these messages. The growing public consciousness of body image as an issue, the perils of dieting and eating disorders, and efforts to enhance cultural media literacy may empower females and promote body acceptance (Levine & Piran, 2004; Levine & Smolak, 2001, 2002). In addition, perhaps career opportunities for college women have recently served to shift their perspectives on and criteria for self-evaluation from appearance to achievement. Each of these factors is worthy of study in relation to possible recent body-image changes among young women.

Indeed, our study uniquely confirms that women's psychological investment in their appearance is less pronounced than it was in the early to mid-1990s. This may serve as a protective factor against a negative evaluative body image and its psychosocial consequences (Cash, 2002b; Cash, Melnyk, & Hrabosky, 2004; Stice, 2002). Thus, the extent to which women attended to their appearance and engaged in appearance-managing behaviors decreased. The index used, the MBSRQ AO scale, is positively related but not equivalent to the more dysfunctional dimension of self-schematic appearance investment that reflects the salience of one's appearance in terms of self-evaluation (Cash et al., 2004). Thus, it is possible that our data reflect a shift in norms that reflect a more casual or unadorned appearance among college students rather than a change in internalized standards related to body weight or shape per se.

Finally, as also observed in this study, body mass (including overweight and obesity) has increased in the general U.S. population over recent years (Flegal et al., 2002). Perhaps this fact has paradoxically promoted greater body acceptance as women encounter more "real people" (as opposed to media images) in everyday life who are as heavy as or heavier than they are, and therefore their social comparisons serve to normalize their own body acceptability.

Our investigation, which spanned nearly two decades, involved the use of a well-validated, multidimensional body-image assessment of students from one university, greatly enhancing the study's internal validity yet necessarily narrowing its external validity. With the exception of two cells of the research design (i.e., Black women in the 1980s and non-Black men from 1999–2001), sample sizes were substantial. Of course, the smaller cells would have less power, although several reliable differences were found relative to these cells. At the same time, our findings support broader evidence of gender and ethnicity differences in body image, with non-Black men and Black women reporting more positive body images than non-Black women (Feingold & Mazzella, 1998; Wildes et al., 2001).

We strongly encourage researchers who have available bodyimage data sampled repeatedly from the same or similar populations over the past decade to attempt a replication of our results that point to positive changes in the body-image experiences of young women. An extension of Feingold and Mazzella's (1998) meta-analysis to include studies conducted since 1995 would provide particularly important information. Such favorable changes, if evident, could have important implications for young women's psychosocial functioning, particularly their vulnerability to the development of unhealthy dieting behaviors or eating disorders. Clearly, it is also crucial to investigate these issues with children and adolescents, for whom body image represents an important aspect of psychosocial development. Early investment in extreme physical ideals portends body dissatisfaction and the risk for such problems as eating disturbances (Stice, 2002). Studies with older adults and culturally diverse samples are also imperative. As substantial body-image research comes from the United States, Australia, Canada, and the United Kingdom, further evidence from these Westernized cultures would be elucidating.

Despite possible improvements in American college women's body-image attitudes, a sizable percentage of women and many men continue to struggle with body-image issues (Cash & Pruzinsky, 2002; Heatherton et al., 1995). For example, if we average across the nine physical characteristics assessed on the MBSRQ BASS subscale for our research participants since 1996, we find that multifaceted body-image dissatisfaction (i.e., a mean score below the neutral midpoint of 3) was expressed by 29% of non-Black women, 16% of non-Black men, and 17% of Black women. Both preventative and therapeutic interventions (Cash & Strachan, 2002; Levine & Smolak, 2001, 2002; Striegel-Moore & Smolak, 2001; Winzelberg, Abascal, & Taylor, 2002) remain imperative in helping individuals develop and sustain a body image that is personally acceptable and does not contribute to psychosocial difficulties and disorders and diminish their quality of life.

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