

Is “Generation Me” Really More Narcissistic Than Previous Generations?

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ABSTRACT In this commentary, we identify several methodological and conceptual issues that undermine Twenge, Konrath, Foster, Campbell, and Bushman’s (this issue) claim that narcissism levels have been rising over the past few decades. Specifically, we discuss (a) the limitations of convenience samples for making inferences about generational differences, (b) our failure to replicate other cross-temporal meta-analytic findings using data from a nationally representative sample, and (c) issues surrounding the interpretation of the Narcissistic Personality Inventory. It is important to consider these issues given the extensive media coverage of Twenge et al.’s claim that today’s youth are particularly narcissistic, which has wide-ranging implications for how this generation of young adults views itself and is viewed by society at large.

In their provocative article, Twenge, Konrath, Foster, Campbell, and Bushman (this issue) claim that today’s youth are more narcissistic than young adults from previous generations. This apparent generational shift is central to Twenge’s (2006) characterization of “Generation Me” (individuals born in the 1970s, 1980s, and 1990s) as egotistical, entitled, and self-centered. Twenge (2006) argues that these generational attributes are due, at least in part, to self-esteem

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enhancement programs and the “culture of narcissism” (e.g. Lasch, 1979) that some social commentators believe has characterized American society over the last few decades. Given the extensive media coverage of the Twenge et al. meta-analysis (see e.g., Associated Press, February 27, 2007), it is essential to evaluate critically the empirical basis of their conclusions, which have important implications for how the current generation of young adults views itself and is viewed by society at large. Here we comment on several methodological and conceptual issues that we believe undermine the claim that there has been a secular increase in narcissism over the past several decades.

Limitations of Convenience Sampling for Drawing Inferences About Generation Effects

To examine generational differences, Twenge and her colleagues (e.g., 2000; Twenge & Campbell, 2001) pioneered the method of a cross-temporal meta-analysis, which takes advantage of the extensive questionnaire data collected by psychologists and other social scientists over the years. The general strategy is to compute the association between year of data collection and the average score on measures of personality or attitudes for samples with restricted variability in age (e.g., college student samples). Although this is a creative and potentially useful application of meta-analytic techniques, we have some reservations about using this method for making inferences about birth-cohort-linked trends in psychological traits when the samples included in the meta-analysis were not generated using probability sampling methods. Our concerns apply to all convenience samples, whether of college students, adolescents, or children.

The samples used in the Twenge et al. (this issue) meta-analysis consisted of college students from conventional 4-year institutions, a segment of the population that represents approximately 20% of American youth aged 18 to 24 (U.S. Census Bureau, 2005a, Table 9; U.S. Census Bureau, 2005b, Table 2). Convenience sampling makes it impossible to estimate sampling errors accurately (Pedhazur & Schmelkin, 1991, p. 321), so there is no way to evaluate the validity of population inferences. As noted by the eminent epidemiologist Jane Costello (personal communication, 13 June 2007), “I entirely agree that no population conclusions can be drawn from convenience

samples—Epidemiology 101.” This same constraint on population inferences from convenience samples applies to the meta-analytic estimates derived from aggregates of convenience samples. Indeed, history has shown that bigger samples are not necessarily better samples for making predictions about the behavior of populations of interest. Recall that George Gallup used a relatively small but representative sample to predict correctly that Roosevelt would win the 1936 election, whereas the *Literary Digest* used a much larger, but nonrepresentative, sample and incorrectly predicted Landon would win that election. In that case, the benefits of a larger sample size were not offset by the limitations of a nonrepresentative sampling strategy. Thus, any inference about changes in the psychological attributes of American youth or even American college students is on uncertain grounds when the raw materials are convenience samples of college students. It is possible, for example, that the secular trends observed in Twenge et al.’s meta-analysis reflect changes in the kinds of people who attended college or participated in psychology research in the late 1970s and 1980s compared to the 1990s and 2000s. To our minds, this sampling issue is the single biggest limitation of the Twenge et al. meta-analysis for understanding cohort changes in narcissism.

To be clear, we are not arguing that all or even most research on college students is inherently flawed. Kruglanski (1975) made an important distinction between research with universalistic (i.e., theory testing) and particularistic (i.e., purely descriptive) goals, and we emphasize that college student research is well suited for research with universalistic goals. Our point is that convenience samples of college students have limitations when it comes to making inferences about the particular thoughts, feelings, and behaviors of the entire population of college students or when making inferences to all members of a particular birth cohort. For example, a convenience sample of college students would be useful for evaluating the prediction that narcissism is linked to aggression following an ego threat; however, this sample would not be useful for determining the prevalence of aggression in a given population.

It is also important to note that representativeness can refer not only to participants but also to the studies included in the meta-analysis. Here the issue is how well the studies in the meta-analysis represent the universe of studies that have used the NPI with college students. In collecting studies to include in their meta-analysis,

Twenge et al. (this issue) excluded studies that did not report a mean for the NPI in the published article. This strategy of limiting published studies to those that reported NPI means might be a reasonable approach for creating a manageable sample of studies; however, it reduces the available pool of studies and creates potential biases. For instance, we published an article (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005) that included one large study with NPI data ($N = 3,143$), but we omitted the means due to the strict space constraints of *Psychological Science* and their lack of relevance to our focal research question. Adding the 3,143 participants from our article ($M = 14.87$; date coded as 2003) to Twenge et al.'s (this issue) analysis (i.e., the means reported in their Table 1) reduces the secular increase in NPI scores by almost half, from .53 to .28. Thus, the effect reported by Twenge et al. is somewhat volatile if the inclusion of one, albeit large, sample can cut the effect size so substantially. To be sure, there is no way to determine how the Twenge et al. results would ultimately be affected if they had contacted all authors of published papers to acquire unreported means; however, we believe that this step would have resulted in a data set that was larger and more representative of all studies using the NPI with college students.

Sampling Issues Can Matter: Failures to Replicate Other Cross-Temporal Meta-Analytic Findings

Our concern about the use of convenience samples is compounded by the fact that we have failed to replicate some of Twenge and colleague's previous findings when we have used more representative samples (Trzesniewski & Donnellan, 2007). Specifically, when we analyzed secular trends using data from the Monitoring the Future Project (MTF; Johnston, Bachman, & O'Malley, 2003), a large national probability study of high school seniors ($N = 177,598$, summed across annual assessments from 1976 to 2006), we failed to find the increases in self-esteem or locus of control reported by Twenge and her colleagues (Twenge & Campbell, 2001; Twenge, Zhang, & Im, 2004), raising concerns about the replicability of their latest finding on secular increases in narcissism.

Twenge and Campbell (2001) reported that self-esteem showed secular increases between 1965 and 1994, and that "birth cohort explains between 7% and 40% of the variance in self-esteem scores"

(p. 338). These data are cited by Twenge et al. as providing converging evidence that Generation Me is becoming more individualistic. For example, Twenge et al. (this issue) note that “previous cross-temporal meta-analyses demonstrate a clear rise in individualistic traits” (p. 877) and cite self-esteem as one instance. However, using data from the MTF study, we found no evidence of a secular increase in the self-esteem scores of high school seniors from 1976 to 2006 (see Figure 1). The correlation between year of assessment and an abbreviated version of the Rosenberg Self-Esteem scale ($\alpha = .82$) was virtually zero ($r = -.02$); similarly, high school seniors assessed in the 1970s ($M = 4.08$; $SD = 0.69$) had approximately the same level of self-esteem as high school seniors assessed in the 2000s ($M = 4.01$; $SD = 0.81$). This failure to replicate the generation trend for self-esteem warrants concern about the ability of cross-temporal meta-analyses to uncover population-level cohort effects when the underlying studies included in the meta-analysis were not designed for making such inferences. To our knowledge, the Twenge and Campbell meta-analysis, like the Twenge et al. meta-analysis, was based on convenience samples of college students and children.

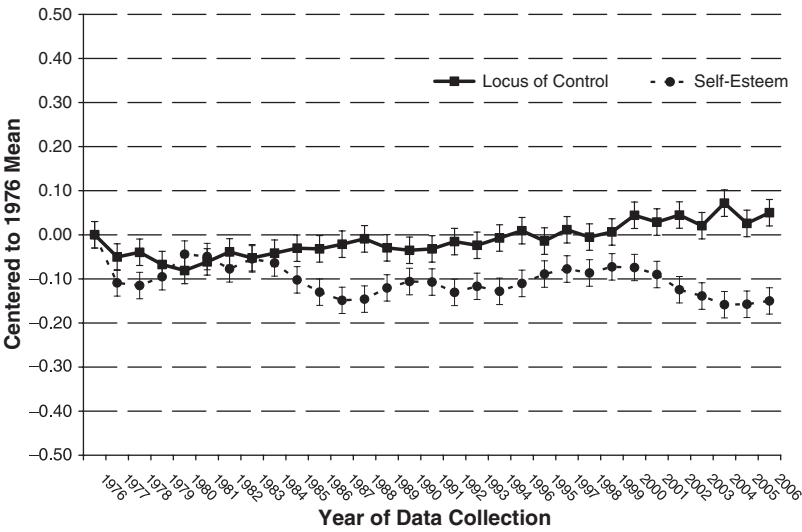


Figure 1
Self-esteem and locus of control by year of data collection in the monitoring the future study.

Our analyses of the MTF data also failed to replicate Twenge, Zhang, and Im's (2004) cross-temporal meta-analysis of secular trends in locus of control. Whereas Twenge et al. (2004) reported a substantial increase in external locus of control for both college students and children, the correlation between year of assessment and external locus of control in the MTF data set was close to zero ($r = .05$; see Figure 1). Moreover, the Twenge et al. meta-analysis was based exclusively on dissertations and master's theses, raising further questions about the representativeness of the studies included in the data set, as well as about their methodological quality.

Thus, we found two cases where we could not replicate results from a cross-temporal meta-analysis using data from a nationally representative sample of young people. In fact, the secular trend was in the opposite direction for self-esteem, such that the correlation between year and self-esteem was negative rather than positive.

In another recent set of analyses using the MTF data set, we found no evidence that self-enhancement, which is closely linked conceptually and empirically to narcissism, has been increasing over time among American youth (Trzesniewski, Donnellan, & Robins, 2008). Self-enhancement, operationalized as the degree to which self-perceived intelligence was higher than self-reports of grades, was unrelated to year of data collection ($r = -.03$ across 1976 to 2006). Together, these analyses of the MTF data set weaken our confidence in the generalizability of the Twenge et al. meta-analysis and suggest that more data are needed before concluding that Generation Me is particularly narcissistic compared to previous generations.

The MTF data set can also be used to illustrate an important difference between the standardized regression coefficients reported by Twenge et al. and the correlations that result from primary studies conducted at the individual level. The regression coefficients in Twenge et al. are ecological correlations (Robinson, 1950) or alerting coefficients (Rosenthal, Rosnow, & Rubin, 2000), which capture the association between the year of data collection and the sample mean at each year (e.g., the β of .53 for the association between year of data collection and average yearly NPI score). Twenge et al. (this issue) note that "the β s reported are standardized to allow for easier interpretation" (p. 881); however, we do not believe that these co-

efficients have a straightforward interpretation and emphasize that they should not be interpreted like the individual correlation coefficient that is the basis of so much research in personality and social psychology (see also Robinson, 1950; Rosenthal et al., 2000).

To be sure, Twenge et al. use the unstandardized regression equation to translate their results into a *d*-metric effect size by dividing the difference between the predicted 2006 average and the predicted 1982 average by the average *SD* of the individual samples ($d = .33$). They suggest that this transformation avoids the ecological fallacy (see Robinson, 1950) and provides a reasonable way to judge the magnitude of their effect. However, Twenge et al. (2004) also noted that "this technique probably still results in somewhat higher effect sizes" (p. 314). Thus, we believe that it is an unresolved issue as to how optimally to convert ecological effects into easily interpretable effect sizes. Moreover, we suggest that it is even more illuminating to transform the estimated *d*-metric effect size into the *r*-metric given that both year of data collection and NPI scores are continuous variables. In the case of the Twenge et al. meta-analysis, the estimated individual effect is .16, based on readily available formulas for translating *ds* into *rs* (e.g., Rosenthal & DiMatteo, 2001).

Using the MTF sample, we can provide concrete illustrations of the potential differences between ecological correlations and the "regular" correlation calculated on the same data set. In the MTF data, the ecological correlation—the standardized beta from a regression predicting average yearly self-esteem score from year of data collection—was $-.44$ ($N = 31$), whereas the individual-level correlation—the standardized beta from a regression predicting individual self-esteem scores for every participant from year of data collection—was $-.02$ ($N = 177,598$). Likewise, the ecological correlation for locus of control was $.85$ ($N = 31$), whereas the individual level correlation was $.05$ ($N = 82,088$). Viewed in this light, then, there might be some support for a secular decrease in self-esteem and a secular increase in external locus of control. Nonetheless, it appears that these ecological correlations amplify effects that are trivial from a psychological perspective (as seen in the individual correlations of $-.02$ and $.05$).

What Does It Mean to Have a High Score on the NPI?

Our penultimate concern is not so much a criticism per se of the Twenge et al. (this issue) findings but rather a comment on inter-

preting full-scale NPI scores. Even if the evidence for an upward shift in narcissism were compelling, it is not altogether clear what this would mean because the NPI measures a multifaceted construct and the individual facets are not strongly intercorrelated (e.g., Campbell, Bonacci, Shelton, Exline, & Bushman, 2004; Emmons, 1987; Raskin & Terry, 1988). Thus, a secular increase in overall NPI scores is difficult to interpret because it could be driven entirely by one or two facets or it could even be that some facets decline while others increase. As Twenge et al. acknowledged, we “do not know if only certain facets of narcissism are increasing among American college students, or if the change is evenly distributed across them” (p. 890).

Indeed, we found that the narcissism facets showed distinct secular trends when we compared NPI subscale means reported by Raskin and Terry’s (1988) to subscale means we obtained from over 26,000 University of California students between 1996 and 2007 (see Trzesniewski et al., 2008). The Superiority and Vanity subscales declined by about one-fifth of a standard deviation whereas the Self-Sufficiency subscale increased by about one-fifth of a standard deviation. Secular changes in the other subscales, as well as the full-scale NPI, were all less than one-fifth of a standard deviation. Thus, we found no overall trend for the broader construct of narcissism but evidence that certain narcissism facets have declined over time whereas others have increased. However, consistent with our sampling concerns, these results should be interpreted cautiously because they are based on convenience samples.

These divergent trends are relevant to Twenge and colleagues’ thesis that the generational increase in narcissism represents a movement toward more interpersonally problematic traits. Only some NPI facets seem to be socially toxic (e.g., Entitlement; see e.g., Konrath, Bushman, & Campbell, 2006) whereas others seem to be socially noxious (e.g., Vanity) or even potentially adaptive (e.g., Self-Sufficiency). For example, Emmons (1984) found the entitlement/exploitativeness subscale was positively related to Neuroticism ($r = .40$), whereas the other NPI scales were negatively related to Neuroticism (r s ranged from $-.21$ to $-.36$). More recently, Barry, Frick, and Killian (2003) showed that a child version of the NPI can be divided into adaptive and maladaptive components. Thus, an increase in the full-scale NPI may be a “bad” thing, a “good” thing, or neither when viewed from the perspective of individual functioning

or from the perspective of society at large, because two people with the same NPI score might have very different patterns of behavior and social outcomes.

Table 1 displays some of the correlates of the NPI subscales using prescreening data collected at the University of California (UC), Davis, from 2002 to 2007. The associations between the NPI subscales and measures of aggression and self-esteem clearly illustrate our concern that certain NPI scales have relatively distinct correlates. As seen in Table 1, the association between narcissism and aggression is primarily driven by the Entitlement, Exploitativeness, and Exhibitionism scales; the Self-Sufficiency and Superiority scales have virtually no association with aggression. A reverse pattern occurs for self-esteem, where the overall association with the NPI is driven by the Authority, Self-Sufficiency, and Superiority scales whereas the Entitlement, Exploitativeness, and Exhibitionism scales have very little association with self-esteem. Thus, some of the socially toxic aspects of Narcissism (i.e., those correlated with aggression) seem to be fairly distinct from self-esteem. This finding has implications for the presumed connection between self-esteem enhancement programs and narcissism frequently noted by Twenge, Campbell, and their colleagues (Twenge & Campbell, 2001).

In short, we are concerned that any apparent increase in college students' NPI scores may be driven by particular components of the NPI that do not have an appreciable "dark side." The importance of distinguishing between changes in adaptive versus maladaptive components of the NPI is particularly relevant when trying to interpret the gender difference in the secular trend for the NPI. Twenge et al. (this issue) note that the increase in NPI scores is detectable for women but not for men when analyses are restricted to the 44 samples that reported means separately by gender. This gender effect and the heterogeneity of the NPI may have profound implications for how the purported secular change in the NPI is best interpreted. For example, Roberts and Helson (1997) found that narcissistic traits increased through the 1960s and 1970s in a sample of women who were seniors at Mills College in 1958 or 1960; however, those women also experienced improvements in their physical and mental health as they aged. It could be that this increase in narcissistic traits was driven by increased agency and empowerment, which could have been adaptive given cultural attitudes and social conditions facing women at the time. Likewise, if there has been a secular increase in

Table 1
Correlations Between Narcissism and Measures of Interest to Social and Personality Psychologists

Scale	Full-Scale NPI	Authority	Self-Sufficiency	Superiority	Exhibitionism	Exploitativeness	Vanity	Entitlement
Aggression (<i>N</i> = 14,573)								
Full-scale aggression	0.21	0.10	-0.04	0.02	0.22	0.22	0.07	0.35
Physical aggression	0.25	0.14	0.04	0.07	0.21	0.24	0.11	0.30
Verbal aggression	0.33	0.29	0.11	0.13	0.24	0.28	0.09	0.26
Anger	0.17	0.07	-0.05	0.01	0.21	0.15	0.07	0.29
Hostility	-0.03	-0.11	-0.18	-0.10	0.06	0.04	-0.05	0.22
Attachment (<i>N</i> = 18,061)								
Avoidance	-0.07	-0.12	-0.07	-0.14	-0.01	0.03	-0.10	0.09
Anxiety	-0.06	-0.13	-0.19	-0.06	0.06	-0.03	-0.01	0.12
Emotion (<i>N</i> = 18,200)								
Negative affect	-0.06	-0.14	-0.19	-0.12	0.06	0.01	-0.05	0.18
Positive affect	0.35	0.39	0.28	0.26	0.19	0.14	0.19	0.07
Self-Esteem (<i>N</i> = 18,211)	0.29	0.33	0.32	0.30	0.08	0.09	0.21	-0.04

Personality (*N* = 18,274)

Extraversion	0.49	0.52	0.21	0.29	0.44	0.27	0.21	0.10
Agreeableness	-0.14	-0.04	0.04	0.01	-0.16	-0.18	-0.04	-0.27
Conscientiousness	0.12	0.24	0.26	0.08	-0.07	-0.04	0.05	-0.04
Neuroticism	-0.20	-0.22	-0.28	-0.17	-0.05	-0.14	-0.07	0.05
Openness	0.24	0.23	0.13	0.24	0.16	0.14	0.11	0.03
Social Desirability	-0.06	0.01	0.19	-0.03	-0.16	-0.08	-0.08	-0.16

(*N* = 7,187)

Note: Narcissism was assessed using the Narcissistic Personality Inventory and its subscales (Raskin & Terry, 1988); Aggression was assessed using the Buss-Perry Aggression Questionnaire (Buss & Perry, 1992); Attachment was assessed using the Experience in Close Relationships scale (Brennan, Clark, & Shaver, 1998); Emotion was assessed using the Positive and Negative Affect Schedule (Watson & Clark, 1994); Self-esteem was assessed using the Rosenberg Self-Esteem scale (Rosenberg, 1965); Personality was assessed using The Big Five Inventory (John & Srivastava, 1999); and social desirability was assessed using the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960). All correlations equal or greater than .03 are significant at $p < .01$.

women's NPI scores, as Twenge et al. claim, this might simply indicate that today's generation of young adult women are more confident and assertive than previous generations of women.

Given these concerns, we believe that speculation that the current generation will have either heightened interpersonal difficulties or intrapsychic advantages based on full-scale NPI scores is unwarranted. What is needed is more precise information about which aspects of personality assessed by the NPI are actually affected by sociohistorical factors and how those specific aspects relate to consequential outcomes. To be clear, the full-scale NPI score is important and psychologically meaningful in many research contexts, and we have routinely used these scores in our own research. In the present context, however, the full-scale score can obscure divergent patterns that have potential implications for claims about generational changes in intrapsychic and interpersonal adjustment.

Concluding Thoughts: The Self-Esteem Movement and Explaining Cohort-Linked Changes

Caspi (1998) noted that a cohort difference "is like an age difference or a social class difference; it remains an empty finding until it can be translated into psychological processes or events" (p. 343). Thus, once researchers identify replicable cohort effects, there is a pressing need to develop and empirically evaluate models that link sociohistorical changes to individual personality development (Stewart & Healy, 1989). Thus far, there has been relatively little testing of theoretical models that might explain the apparent changes in the attributes of so-called Generation Me. Twenge (2006) has argued that the self-esteem movement, which spawned programs that emphasized feeling good over real accomplishments, was an important factor in shaping the personalities of this generation toward greater egotism, entitlement, and excessive confidence. However, we are unaware of replicable support for the hypothesis that self-esteem enhancement programs have harmful effects and we found no evidence for a secular trend toward increased self-esteem or self-enhancement in data from a representative sample of high school students. Instead, the evidence suggests that well-designed self-esteem interventions can have positive effects on child and adolescent outcomes (e.g., Haney & Durlak, 1998), and there are indications that improving self-esteem is, in principle, a worthwhile

goal even if it is unclear whether many programs designed to boost self-esteem actually succeed (e.g., Swann, Chang-Schneider, & McClarty, 2007). Accordingly, we believe that it is premature to implicate self-esteem programs as a cause of generational changes toward increasing levels of narcissistic traits.

To avoid any misunderstanding: We are not saying that self-esteem enhancements are a panacea for social ills or that such programs have no potential to cause harm in some cases. Our point is that there is pressing need for longitudinal research on the long-term outcomes of these programs to improve the evidentiary basis for claims about their beneficial or deleterious effects on entire generations of Americans.¹ Until such evidence has been collected, we think that researchers should avoid making broad claims about their potential effects, harmful or otherwise. At this point, we believe that there are sufficient concerns about the Twenge et al. meta-analysis to warrant caution before concluding that Generation Me is particularly narcissistic or that their presumed narcissism results from participation in self-esteem enhancement programs.

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1. Moreover, distinctions can and should be made between different types of self-esteem intervention programs. Not all self-esteem programs are created equally, and programs based on different approaches should be evaluated separately.

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