Longitudinal changes and cohort differences in narcissism from early to older adulthood

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Abstract

In the debate about whether or not narcissism has been increasing in recent history, there is a lack of basic information about how narcissism changes across the adult lifespan. Existing research relies on cross-sectional samples, purposely restricts samples to include only college students, or follows one group of individuals over a short period of time. In the current study, we addressed many of these limitations by examining how narcissism changed longitudinally in a sample of 747 participants (72.3% female) from age 13 to age 77 across six samples of participants born between 1923 and 1969. Narcissism was moderately stable across the lifespan (r s ranged from .37 to .52), to a comparable degree as other psychological characteristics. We found that more maladaptive forms of narcissism (e.g., hypersensitivity, willfulness) declined across life and individual autonomy increased across life. More later-born birth-cohorts were lower in hypersensitivity and higher in autonomy compared to earlier-born birth-cohorts; these differences were most apparent among those born after the 1930s. The results are discussed in the context of the mechanisms that drive both changes in narcissism across the lifespan and substantive differences in narcissism between historical periods.

Keywords: narcissism; willfulness; autonomy; hypersensitivity; lifespan development

Longitudinal changes and historic differences in narcissism from adolescence to older adulthood

People of a certain age have always seemed to remark on the self-centeredness of youth today (Roberts, Edmonds, & Grijalva, 2010). Young people are stereotyped as immoral, overconfident, less hardworking, lazier, meaner, emotionally unstable, more promiscuous, and—most commonly—narcissistic (Trzesniewski & Donnellan, 2014). Some media reports and early empirical evidence suggests that they might be uniquely narcissistic—more narcissistic than younger adults that have come before (Twenge, Konrath, Foster, Campbell, & Bushman, 2008). In the past decade, researchers have begun to re-examine whether younger adults today are more narcissistic than other adults and younger adults from other points in history. Since these early empirical observations, researchers have examined additional data, noted measurement problems in the study of narcissism, and contextualized the magnitude of historical changes in narcissism. As a result, it has been revealed that historical differences may be oversold, non-existent (Roberts et al., 2010; Trzesniewski, Donnellan, & Robins, 2008), or even in the *opposite direction* than what people previously thought (Wetzel et al., 2017).

In the debate about whether or not narcissism has been increasing in recent history, there is a lack of basic information about how narcissism changes across the adult lifespan. Many of the aforementioned studies rely on cross-sectional samples, purposely restrict samples to include only college students, or follow one group of individuals over a short period of time. In the current study, we address many of these limitations by examining how narcissism changes longitudinally from age 13 to age 77 across six samples of participants born between 1923 and 1969.

Narcissism

Narcissism is often considered to be a multi-faceted construct, comprised of both adaptive and maladaptive elements (Ackerman et al., 2011). For example, having leadership and authority aspects of narcissism (i.e., autonomy in the current report) are associated with great social competence and goal persistence. Grandiose forms of narcissism (i.e., willfulness in the current study) can often have mixed effects on interpersonal behavior across a variety of settings whereas more defensive forms of narcissism (i.e., hypersensitivity in the current study) is often accompanied by a host of negative outcomes, including lower self-esteem and well-being and greater psychopathology (Wink, 1992a, 1992b). The conceptualization and measurement of narcissism is not without controversy (Krizan & Herlache, 2018; Miller, Lynam, Hyatt, & Campbell, 2017; Wright & Edershire, 2018). In the current report, we approach the study of narcissism from the perspective that there is some consensus on there being approximately three dimensions of narcissism—dimensions encompassing agentic, antagonistic, and vulnerability factors.

Lifespan Differences in Narcissism

Why would one expect narcissism to change across the lifespan? Insights from the social investment model provide some preliminary expectations for why narcissism might change across the lifespan. Social investment theory posits that individuals invest in and make commitments to social institutions that ultimately change them over time (Roberts, Wood, & Smith, 2005). These investments and commitments in social institutions come with their own set of expectations and responsibilities to which individuals are expected to adhere. Individuals are rewarded and punished based on their adherence to these roles, and this pattern of social learning ultimately shapes behavior and an individual's psychological characteristics.

With respect to narcissism, higher levels of narcissism during emerging adulthood might be adaptive for individuals as they navigate the stressful transition of increased responsibilities and more complex social networks (Hill & Roberts, 2012). As a result, more maladaptive forms of narcissism might be highest among younger adults. After young adulthood, individuals begin to take on more individual, social, and occupational responsibilities that likely conflict with the core tenets of narcissism's focus on the self (Kernberg, 1986). Thus, an inflated sense of self-worth and the other features of narcissism (e.g., antagonistic tendencies) no longer help individuals navigate the social and work institutions found in middle age and older adulthood. Because antagonism and inflated self-worth often disrupts the formation and maintenance of close relationships, it is likely that these maladaptive forms would be lower in middle age and older adulthood, a time during which relationships become increasingly more central and important for health and well-being (Chopik, 2017; Luong, Charles, & Fingerman, 2011).

Indeed, some of the more adaptive aspects of narcissism that might be associated with success in work and social domains might increase even in the context of decreases in other, pathological aspects of narcissism (e.g., willfulness, hypersensitivity). Such divergence in the utility of different aspects of narcissism is seen in many different settings and domains (Back et al., 2013; Campbell & Campbell, 2009; Geukes et al., 2017; Grijalva, Harms, Newman, Gaddis, & Fraley, 2015; Grijalva & Newman, 2015; Leckelt, Küfner, Nestler, & Back, 2015; Miller et al., 2011; Pincus et al., 2009). For example, the difficulties in close relationship across the lifespan can be attributable to more antagonistic features of narcissism, like the tendency toward rivalry (Wurst et al., 2017); having high levels of antagonistic features of narcissism is likely maladaptive. Life events—and our interpretation of them—have the potential to change narcissism over time as well. For example, taking responsibility of one's health and making

adaptive relationship decisions are associated with increases in more adaptive forms of narcissism (Grosz et al., 2017). To date, there are several cross-sectional studies confirming this general trend—that grandiose and other pathological forms of narcissism are highest among younger adults and lower among middle aged and older adults (Barlett & Barlett, 2015; Foster, Campbell, & Twenge, 2003; Hill & Roberts, 2012; Roberts et al., 2010; Wilson & Sibley, 2011).

Historical changes in narcissism

Aside from the question of how narcissism changes within an individual's own life is whether people in more recent history report higher levels of narcissism. A large number of diverse efforts have demonstrated changes in either narcissism or indicators of narcissistic tendencies. For example, in both archival data analyses and meta-analytic work, people from more recent history are higher in narcissism, lower in empathy, higher in attachment avoidance, use more positive self-evaluation statements, and have display several more behaviors of problematic or narcissistic behavior (Gentile, Twenge, & Campbell, 2010; Konrath, Chopik, Hsing, & O'Brien, 2014; Konrath, O'Brien, & Hsing, 2011; Twenge, 2006; Twenge, Campbell, & Gentile, 2011; Twenge et al., 2008). Indicators of increases in narcissism are also seen in the products American culture creates, including books, popular songs, and even political speeches (Chopik, Joshi, & Konrath, 2014; DeWall, Pond, Campbell, & Twenge, 2011; Twenge, Campbell, & Gentile, 2012a, 2012b, 2012c). Researchers have speculated that these differences come from many different sources, including changes in parenting practices, cultural norms and expectations, the introduction of technology, and shifts in demographics (Konrath et al., 2011; Twenge, 2006).

Although there are now several reports documenting historical increases in narcissism and other self-focused constructs, there is also a healthy amount of skepticism in the academic

community, and in recent years, the general public (Roberts et al., 2010; Trzesniewski & Donnellan, 2014; Trzesniewski et al., 2008; Wetzel et al., 2017). Some of this skepticism arises from compelling data showing no (or even decreases) in narcissism, critiques of cross-temporal meta-analyses that are often used to study changes in narcissism, a critical approach to the time course of historical changes, and an acknowledgement that the evidence does not quite keep in step with the moral panic often reported by researchers.

Thus, there is evidence for historical changes in narcissism but also a healthy skepticism about the existence, direction, and magnitude of these historical changes. Unfortunately, researchers who study narcissism and time often strictly adhere to conceptualizing narcissism changes either across the lifespan or across historical time, but rarely both simultaneously.

Limitations of the current literature

There are at least two major limitations of the current literature that obscures just how much narcissism (a) changes across the lifespan and (b) changes across historical time.

First, the majority of these studies examine how age is correlated with an omnibus measure of narcissism, one that obscures how some aspects of narcissism might change differently. This is particularly important because of there are some theoretical reasons to expect adaptive forms of narcissism to increase throughout life while maladaptive forms of narcissism would be expected to decrease throughout life.

Second, the fact that these studies are almost entirely cross-sectional also obscures whether narcissism declines across the lifespan in a developmental fashion. Likewise, exclusively studying individuals of a narrow age range (e.g., college students) at the expense of others and how those individuals change over time. In other words, it is equally plausible that narcissism might be higher in later-born birth-cohorts than earlier-born birth-cohorts and that

narcissism also changes over time. This specific pattern would also be manifest in narcissism being higher in young adults and lower in middle aged and older adults. However, the conclusions about where age differences in narcissism come from would be dramatically different. This has been especially true historically in the case of narcissism, which is often the target of studies of birth-cohort differences with little longitudinal data to make developmental conclusions. Unfortunately, it has been difficult to draw many conclusions from the studies that have examined longitudinal changes in narcissism across life. For example, studies of individuals followed over 4- and 10 years during young adulthood reveal declines in narcissism, providing some support for the social investment model's prediction of increased maturity as young adulthood ends (K. S. Carlson & Gjerde, 2009; Grosz et al., 2017). Studies beyond adulthood are exceptionally rare. In one of the only studies to examine changes in narcissism in midlife, Edelstein, Newton, and Stewart (2012) found that both maladaptive and adaptive forms of narcissism declined over a 10-year period in a sample of women followed from age 43 to 53. Another study found that some maladaptive forms of narcissism (hypersensitivity) decline from age 34 to 59 whereas other maladaptive forms (willfulness) do not change at all (Cramer, 2011a). There are also a number of studies that have examined narcissistic-like traits using these data sets which, although not always explicitly labeled as narcissism, constitute some overlap with our study (although these analyses were only conducted within a single study rather than aggregating multiple studies; Roberts & Helson, 1997). Other than these few studies, there have been no other longitudinal studies of narcissism followed over long periods of life. Nor have there been studies that have followed members of different birth-cohorts to examine (a) how they differ from each other with respect to narcissism while controlling for within-person changes and (b) how members of different birth-cohorts might change differently from one another over time.

The Current Study

The current study examined longitudinal changes in narcissism across the lifespan from age 13 to 77. Research to date has primarily been comprised of cross-sectional studies of individuals, cross-temporal meta-analyses, or examining how cultural indicators have changed in recent historical periods. However, there have been very few long-term, longitudinal studies. Further, no study has examined within-person changes and historical changes in narcissism simultaneously. Based on previous research of age differences in narcissism (Barlett & Barlett, 2015; Foster et al., 2003; Hill & Roberts, 2012; Roberts et al., 2010; Wilson & Sibley, 2011), we hypothesized that more pathological forms of narcissism (e.g., hypersensitivity, willfulness) would decline across the lifespan. Based on research examining age differences in independence-like traits (Chopik, 2016; Jackson et al., 2009), we hypothesized that more adaptive forms of narcissism-like traits (e.g., autonomy) would increase across the lifespan. Because of the mixed nature of findings regarding historical changes in narcissism (Trzesniewski et al., 2008; Twenge et al., 2008; Wetzel et al., 2017), we did not make any formal hypotheses regarding the direction or magnitude of changes in narcissism. To date, the current study is the most comprehensive examinations of changes in narcissism across different historical birth-cohorts ever conducted.

Method

The current study includes data from multiple widely used data sets (i.e., the Block and Block Longitudinal Study of Cognitive and Ego Development, the Intergenerational Studies, the Mills Longitudinal Study, and the Radcliffe College Class of 1964 study). Many papers have been published using the personality data from these samples (Block, 1971; Block & Block, 2006; Eichorn, Clausen, Haan, Honzik, & Mussen, 1981; Haan, Millsap, & Hartka, 1986; Helson, 1966; Roberts & Helson, 1997; Stewart & Vandewater, 1993). Narcissism data from

ages 43 to 53 of the Radcliffe Sample and from ages 34 to 59 of the Oakland Growth/Berkeley Guidance Studies have been published previously (Cramer, 2011a; Edelstein et al., 2012). Some Q-Sort data has been used to study narcissism-type traits in K. S. Carlson and Gjerde (2009), but their use of the Block and Block Study data from ages 14 to 23 used a crude measure of narcissism, utilized paired sample t-tests, and did not examine rank-order and mean-level change across the assessment points in concert with these other data sets. Other studies have used more formal scales but have only utilized an adult wave of the Block and Block Study (Cramer, 2011b, 2017). There have also been multiple uses of narcissism data from the age 43 Mills College data but never combined with the age 21 narcissism data (Wink, 1992a, 1992b, 1996). Other than these exceptions, no studies to our knowledge have examined longitudinal changes in narcissism using these data. In the current study, we use all available waves from each of the studies reported below to yield a comprehensive picture of how narcissism changes across life and historical time.

Participants

Block and Block Longitudinal Study of Cognitive and Ego Development. One hundred and seven individuals (50.5% female) were participants in the Block and Block Longitudinal Study of Cognitive and Ego Development, which was initiated in 1968 at the University of California at Berkeley (for full description, see Block & Block, 2006). The sample was recruited from two preschools in Berkeley, California. Q-Sort measures were collected at ages 14, 18, and 23. The ethnic composition of the sample was 68.3% Caucasian, 24% African-American, 4.8% Asian-American, and 2.9% other ethnicities.

Intergenerational Studies. Three hundred and fifty four individuals (53.7% female) were participants in the Intergenerational Studies, an umbrella study combining participants from

the Berkeley Guidance Study ($N = 177$), the Oakland Growth Study ($N = 122$), and the Berkeley Growth Study ($N = 62$). The three longitudinal studies were started in the late 1920s and early 1930s and continued for over 70 years. The Berkeley Guidance and Growth Studies sampled infants born in the Berkley area in 1928-1929. The Oakland Growth Study began in 1932 and sampled fifth and sixth graders (approximate birth year = 1921). Frequency of Q-Sort assessments was high in each study: Berkeley Guidance (ages 13, 16, 30, 40, 52, 69), Oakland Growth (ages 13, 16, 40, 50, 60, 77), and Berkeley Growth (ages 13, 16, 36, 52). All participants from the Berkeley Growth and Oakland Growth Study were Caucasian; a small percentage of participants from the Guidance Study were African American (3%). Socioeconomic status was similar across the three samples: Forty percent of Oakland Guidance Study participants and 33% of participants from the remaining two samples came from households classified as working-class; the remaining participants were from upper-class households. The Intergenerational Studies are considered landmark studies in human development; their history and sampling have been extensively documented elsewhere (Block, 1971; Eichorn et al., 1981; Haan et al., 1986).

Mills Longitudinal Study. One hundred and twelve individuals (all female) were participants in a longitudinal study of the 1958 and 1960 senior classes at Mills College (for a full description, see Helson, 1993). Q-Sort measures were collected at ages 21 and 43. The sample was predominantly Caucasian; exact percentages of racial/ethnic groups are unavailable. Over 60% had at least one parent with a Bachelor's degree. Approximately 60% of the sample had completed some sort of certificate or graduate-level education.

Radcliffe College Class of 1964. One hundred and sixty seven individuals (all female) were participants in a longitudinal study of members of the 1964 graduating class of Radcliffe College (see Stewart & Vandewater, 1993, for full description). Q-sort measures were collected

at ages 43, 53, 62, and 72. All but one woman was European American. Eighty percent of the sample had completed at least some graduate-level education.

Combined Sample. Sample sizes at each assessment wave, study design, and the number and timing of assessment points are presented in Table 1. The average age of the combined sample ($N = 747$ participants), across assessment waves, was 39.44 years ($SD = 19.78$; 70.4% female). Across all participants and all assessment waves, there were 2,282 observations. We included all available data and did not exclude any participants in the analyses below. To examine the smallest possible effect size we could reasonably estimate, we ran a sensitivity analysis. Given 80% power at $\alpha = .05$, the smallest possible effect we could estimate is Cohen's $f^2 = .005$.

CAQ Narcissism

At each wave, narcissism was measured with the California Adult Q-Sort (CAQ; Block, 1961, 2008). The CAQ is a broad personality measure comprised of 100 descriptive items. These 100 items are sorted using a forced distribution into nine categories, ranging from 1 (*extremely uncharacteristic*) to 9 (*extremely characteristic*). Evaluations were completed by study personnel, who included clinicians, graduate students, and psychologists. The basis of the evaluations were in-depth interviews and observations conducted during a variety of experimental tasks. Q-Sorts from multiple observers were averaged within each participant at each assessment wave.

Specifically, three scales of narcissism can be derived from the CAQ—hypersensitivity, willfulness, and autonomy (Wink, 1992a). The 12-item *hypersensitivity* scale measures a form of defensive narcissism (sample items: “is thin-skinned; sensitive to anything that can be construed as criticism or an interpersonal slight” and “concerned with own adequacy as a person, either at conscious or unconscious levels”; $\alpha_{mean} = .89$ across waves). The 10-item *willfulness* scale

measures a form of grandiose narcissism (sample items: “is self-indulgent” and “shows condescending behavior in relations with others”; $\alpha_{mean} = .81$ across waves). The 11-item *autonomy* scale has been proposed to measure a form of healthy or adaptive narcissism according to previous research (sample items: “values independence and autonomy” and “has high aspiration level for self”; $\alpha_{mean} = .80$ across waves). The three narcissism scales were validated with a selection of other measures of narcissism, psychopathology, and personality (see Wink, 1992a, for full details).

Results

Measurement comparison

Wink (1992a) developed the three narcissism scales from the CAQ using expert sorts and validated these scales using the California Psychological Inventory, a proprietary measure of individual differences. However, we sought to examine the comparability between Wink’s CAQ measures of narcissism and more contemporary measures of narcissism used in more recent studies examining historical changes in narcissism. To this end, we collected data from 545 Internet respondents ($M_{age} = 38.02$, $SD = 12.02$; 47.6% Female; 77.1% White) who completed the CAQ narcissism measures (Wink, 1992a), the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988), and the Narcissistic Admiration and Rivalry Questionnaire (NARQ; Back et al., 2013).

The NPI is a 40-item, forced-choice, self-report measure of grandiose narcissism (Raskin & Terry, 1988). Participants chose between one of two options for 40 pairs (sample item: “The thought of ruling the world frightens the hell out of me v. If I ruled the world, it would be a better place”). We also computed three NPI subscales (LA: leadership/authority; $\alpha = .81$, GE: grandiose exhibitionism; $\alpha = .84$, and EE: entitlement/exploitativeness; $\alpha = .57$) identified by

Ackerman and colleagues (2011) and an overall measure of narcissism from all 40 items ($\alpha = .92$).

The NARQ-S is an 18-item measure that taps into narcissistic admiration and rivalry (Back et al., 2013; Leckelt et al., 2017). The 9-item admiration subscale assesses the agentic parts of grandiose narcissism (sample item: “I manage to be the center of attention with my outstanding contributions.”). The 9-item rivalry subscale assesses the antagonistic parts of grandiose narcissism (sample item: “I want my rivals to fail.”). Participants indicated the degree to which they agree with each item ranging on a scale from 1(*not agree at all*) to 6(*agree completely*). A scale for NARQ admiration ($\alpha = .91$), rivalry ($\alpha = .91$), and a composite measure of NARQ-Narcissism ($\alpha = .93$) was also calculated by averaging all 18 items.

We compared the CAQ measures of hypersensitivity ($\alpha = .80$), willfulness ($\alpha = .74$), and autonomy ($\alpha = .76$). Table 2 shows the correlations between each of the respective narcissism scales. CAQ measures of narcissism each correlated with at least one dimension from the NPI and NARQ ($|.28| \leq r_s \leq |.67|$). Hypersensitivity correlated most strongly with NPI entitlement/exploitativeness and the NARQ rivalry scales. Willfulness correlated most highly with the overall NPI and NARQ composites and nearly all the subscales of both measures. Autonomy correlated most highly with NPI leadership/authority, NARQ admiration, and (negatively) with NARQ rivalry. Thus, we can reasonably conclude that there is at least moderate overlap between the CAQ hypersensitivity and willfulness scales and more commonly used narcissism scales (e.g., NPI and NARQ).

Worth noting, the low magnitude of correlations between the CAQ autonomy scale and the NPI/NARQ raise questions about whether it could truly be considered a form of narcissism and not a broader individual difference characteristic (e.g., general autonomy). Because the CAQ

was the only measure of narcissism included in each wave discussed here, we still model changes in autonomy despite being agnostic as to whether it is considered a type of narcissism. In the sections below, we refer to this construct as “autonomy” rather than characterizing it as a form of adaptive or healthy narcissism, as done in previous research (Cramer, 2011b). We discuss this limitation in the Discussion at length.

Test-retest stability

Test-retest (i.e., stability) correlations of narcissism are provided in Table 3. Across all intervals and ages, hypersensitivity ($r_{mean} = .37$), willfulness ($r_{mean} = .39$), and autonomy ($r_{mean} = .52$) showed moderate levels of stability over time, replicating similar work on other psychological characteristics (e.g., Big Five personality traits; Roberts & DelVecchio, 2000). Men were higher in autonomy at most ages and were occasionally higher in hypersensitivity and willfulness across the lifespan. That men were generally higher in narcissism is consistent with meta-analytic work suggesting the same (Grijalva, Newman, et al., 2015). Because gender was associated with narcissism in the current study and in past work, we included it as a covariate and moderating variable of age-related changes in narcissism below.

Main Analysis

The six samples were combined for the purposes of multi-level analyses in a variant of an accelerated longitudinal design, in which data sets with overlapping ages are combined to estimate growth curves across the entirety of the data (Chopik, Edelstein, & Grimm, 2019; Helson, Jones, & Kwan, 2002; Hirschberger, Srivastava, Marsh, Cowan, & Cowan, 2009; Kubinski, Chopik, & Grimm, 2016; Miyazaki & Raudenbush, 2000; Oh, Chopik, Konrath, & Grimm, 2019; Raudenbush & Chan, 1992; Terracciano, McCrae, Brant, & Costa, 2005). The samples were combined because of the similarity and overlap between the samples, to maximize

power, and to present the data in the most parsimonious way (see Supplementary Materials for analyses within each sample). Following the observation that it is more appropriate to examine research questions within one larger sample rather than smaller, separate samples (which sacrifices power and increases the number of false positive findings; see Schimmack, 2012), we present only the results from this larger combined sample. Sample source was added as a covariate in all the analyses reported below. The Oakland Sample (the eldest sample) was added as the reference group against which the other samples were compared.

Gender was contrast coded (-1 = men, 1 = women) prior to computing the interaction terms and treated as time invariant. Each narcissism scale was predicted from age, age², gender, and the interaction between these variables.

To examine whether and how narcissism changed across the lifespan, we used growth curve modeling in the SPSS Mixed command (Peugh & Enders, 2005), which enabled us to model intra-individual changes and moderators of these changes (Roberts & Chapman, 2000; Willett, 1988).

The question of whether birth-cohorts differed in narcissism was addressed in three waves. First, birth-cohort was added as a blocking variable to examine differences between samples in an exploratory fashion in the context of multi-level models. Second, birth year was entered as a continuous contrast code to more formally measure the association between historical time and narcissism while controlling for age and longitudinal changes that an individual might experience. Finally, age-adjusted birth year differences were graphically plotted to examine the specific pattern of historical changes in narcissism over historical time.

Hypersensitivity. Results from the growth curve analysis for hypersensitivity are presented in Table 4. The effects of age, gender, age² and were significant predictors of

hypersensitivity. As seen in Figure 1a, hypersensitivity declined across the lifespan, particularly after age 40. Men were more hypersensitive than women.

Willfulness. Results from the growth curve analysis for willfulness are presented in Table 5. The effects of age and gender were significant predictors of willfulness. As seen in Figure 1b, willfulness declined on average across the lifespan. Men were higher in willfulness than women. Gender moderated the effects of age and age² on willfulness (although the main effect of age² was not significant). Decomposing this interaction revealed that women experienced the greatest declines in willfulness, especially during young adulthood; men experienced slight increases in willfulness early in the lifespan before declining in later life. The effect of age was significant for women ($\beta = -.25, p < .001$) but not men ($\beta = .07, p = .14$); the effect of age² was significant for both women ($\beta = .09, p = .001$) and men ($\beta = -.10, p = .01$).

Autonomy. Results from the growth curve analysis for autonomy are presented in Table 6. The effects of age and gender are significant predictors of autonomy. As seen in Figure 1c, autonomy generally increased across the lifespan. Men were slightly more autonomous than women across the lifespan. Gender moderated the effects of age² on autonomy (although the main effect of age² was not significant). Decomposing this interaction revealed that women had sharper increases in autonomy across the lifespan, especially after middle age, albeit this effect is small. The effect of age² was significant for women ($\beta = -.08, p < .001$) but not men ($\beta = .06, p = .252$).

Birth-cohort changes. Although we entered in birth-cohort/sample as a blocking variable, we also recoded the variable to represent the sample's birth year and modeled this in a supplementary analysis (i.e., -2=1923, -1=1929, 0=1936/1938, 1=1943, 2=1969). Results from this analysis suggests that hypersensitivity is declining ($b = -.13, SE = .02, t = -7.90, p < .001$)

and autonomy is increasing ($b = .29$, $SE = .02$, $t = 19.51$, $p < .001$) in later-born birth-cohorts. Willfulness is not significantly changing across birth-cohorts ($b = -.03$, $SE = .02$, $t = -1.66$, $p = .10$). This pattern of results can be seen in Figure 2. Each narcissism scale was predicted from age and the residuals from this analyses were saved. Thus, the values in Figure 2 represent an age-adjusted narcissism to more directly compare across birth-cohorts. As seen in this figure, autonomy is higher in later-born birth-cohorts compared to earlier-born birth-cohorts; hypersensitivity is lower in recent-born birth-cohorts compared to later-born birth-cohorts.

Discussion

The current study examined changes in narcissism from age 13 to age 77 across six different studies of human development. Narcissism was moderately stable across the lifespan, to a comparable degree as other psychological characteristics (Roberts & DelVecchio, 2000). We found that more maladaptive forms of narcissism (e.g., hypersensitivity, willfulness) declined across life and autonomy increased across life. Later-born birth-cohorts were lower in hypersensitivity and higher in autonomy, which is consistent with one study on historical changes in narcissism (Wetzel et al., 2017) but also in strong contrast to studies suggesting that later-born birth-cohorts are higher in narcissism than earlier-born birth-cohorts (Twenge, 2006; Twenge et al., 2008). The current study is one of the most comprehensive examinations of narcissism changes ever conducted and included data from individuals born throughout a 46-year period (from 1923 to 1969).

The current findings are consistent with tenets of the social investment model of personality development (Roberts et al., 2005). Specifically, although narcissism may serve some protective role for well-being in emerging adulthood (Hill & Roberts, 2012), high levels of maladaptive forms of narcissism are incompatible with the age-graded social roles and

expectations that individuals adopt throughout the lifespan. Psychological characteristics are thought to change in response to the complex interplay of individuals functioning within the demands and expectations of increased responsibility and maturity. As a result, maladaptive forms of narcissism that serve as a barrier to success in work, life, and love are abated throughout middle age and older adulthood. Forms of narcissism that enhance successes in these domains are likely to be cultivated. For these reasons, maladaptive forms of narcissism tend to decline across life and adaptive forms of narcissism tend to increase across life.

Birth-cohort Effects on Narcissism

That later-born birth-cohorts were lower in hypersensitivity and higher in autonomy was also perplexing as it goes against a narrative that recent birth-cohorts have experienced a monotonic rise in narcissistic traits across the past century (Twenge et al., 2012a, 2012b; Twenge et al., 2008). It is not necessarily surprising that maladaptive narcissism is declining while autonomy is increasing, as these two are inextricably linked (Deffler, Leary, & Hoyle, 2016). Although some research has found similar (decreasing) levels of maladaptive narcissism, the reasons behind such differences have not been thoroughly examined. There are many substantive and non-substantive differences between birth-cohorts and previous work has tried to identify a number of social indicators for why birth-cohorts might psychologically differ (e.g., technological changes, changes in parenting styles; Konrath et al., 2011). Exactly how these differences translate into mean differences in some forms of narcissism and not others is an exciting direction for future research. Of course, as with gender, the samples were not perfectly comparable with respect to ages distributed across the birth-cohorts. For example, some samples (e.g., the Radcliffe Sample) had only participants who were middle age and older. Other samples (the Block and Block Sample) had only participants who were young adults. Thus, sample/birth

year and age are somewhat conflated in the current study. Thus, we interpret caution when drawing conclusions from the birth-cohort analyses.

Limitations and Future Directions

The current study had many strengths. We combined data from six distinct sources to model changes in narcissism over a 59-year period. Nevertheless, there are some limitations that are worth noting.

Why did people change in narcissism over time? Other than the sample imbalance with respect to age and gender (see above), we did not have a consistent set of predictors to model the mechanisms underlying lifespan changes and birth-cohort differences in narcissism over time. Like other traits that function within the social investment framework, there are likely both selection and socialization factors that drive the development of narcissism across the lifespan (Specht et al., 2014; Specht, Egloff, & Schmukle, 2011). For example, people high in autonomy might select environments that are conducive to cultivating their autonomous lifestyle (and avoid situations that dampen it). Likewise, once individuals have selected an environment, there are additional mechanisms that drive stability and change in narcissistic characteristics as these changes are socialized within individuals (Caspi & Roberts, 1999). What are the environments and life circumstances that initiate changes in narcissism? And which environments and life circumstances lead to sustainable changes in narcissism over long periods of time? Although there is a great deal of research highlighting narcissists' resilience and resistance to critical feedback about themselves (Bushman & Baumeister, 1998), some studies show some promising signs that narcissists can change in response to life events (Grosz et al., 2017). Nevertheless, the mechanisms through which narcissists are able to reflect on their lives in an impartial way and consciously change their thoughts and actions are currently unknown,

even though it appears that narcissists do have some accurate self-insight into their personalities (E. N. Carlson, 2013; E. N. Carlson, Vazire, & Oltmanns, 2011). Future research can more formally model individual differences in changes in narcissism and the conditions under which lifespan changes are largest.

Why do birth-cohorts differ in narcissism over time? Likewise, it is worth noting that our study did find reliable differences in narcissism between birth-cohorts, but in the reverse direction than is typically seen (Wetzel et al., 2017). Just as it is important to examine predictors of lifespan changes in narcissism, it is also important to examine whether changes in narcissism can be attributable to changes in parenting behaviors, shifting demographics and the relative risk of exposure to life events, some broader cultural changes, or another explanation entirely (Konrath et al., 2011; Twenge et al., 2008). Because the studies did not have consistent or, in some cases, any variables to operationalize changes in these variables, we are left with merely descriptive data on how narcissism might change over historical time. We view this as a major limitation to the current report and hope that future researchers can more seriously conceptualize and test why birth-cohorts might be changing in narcissism. That two of the samples were comprised entirely of women is also a considerable limitation, particularly for the birth-cohort analyses. Worth noting, because of the gender differences found in narcissism facets, it is likely that the birth-cohort differences cannot be entirely attributable to the gender composition of the sample. In other words, samples comprising entirely of women were often still higher than samples containing both men and women. Of course, the differences we observed in the current study are likely the combination of substantive changes in psychological and demographic variables. Future research can have more balanced gender designs with respect to gender and other demographic characteristics.

How do researchers measure narcissism changes in secondary data sources? In the current study, we relied on just one of many models of narcissism—Wink’s (1992a) conceptualization of hypersensitivity, willfulness, and autonomy. The operationalization and measurement history of narcissism is long and controversial, with several alternative models and measures portending to measure narcissism’s core features (Ackerman et al., 2011; Back et al., 2013; Campbell, Bonacci, Shelton, Exline, & Bushman, 2004; Glover, Miller, Lynam, Crego, & Widiger, 2012; Konrath, Meier, & Bushman, 2014; Pincus et al., 2009; Raskin & Terry, 1988; Wink, 1991). Our choice to use Wink’s conceptualization was primarily (and necessarily) driven by an effort to maximize the available data across the six studies.

However, in directly comparing the CAQ scales to more contemporary measures of narcissism (e.g., NPI, NARQ), we found that one facet in particular—autonomy—had relatively small overlap with other measures of narcissism ($r_s < |.28|$). In previous research, the CAQ autonomy scale was often conceptualized as a form of adaptive narcissism (Cramer, 2011a; Wink, 1992a). However, in our very preliminary examinations, it appears that these items capture autonomy as a broader individual difference characteristic than a form of adaptive narcissism per se. Thus, our and others’ necessary reliance on using CAQ autonomy as a form of adaptive narcissism is likely misplaced. This limitation speaks to a larger concern for researchers who use secondary data to examine changes in characteristics that were not intended to be measured in the original data collection. Running additional studies to verify the convergent and criterion validity of researcher-generated scales in the context of secondary data analysis is not particularly expensive; the benefits of adopting such an approach are numerous though. The danger is in liberally using measures from secondary data sources without formally examining their conceptual meaning and empirical validity. Indeed, such ready adoption of measures is

likely one of the contributing factors for why some concepts (e.g., adaptive narcissism) might become so broad as to assume related, but technically different concepts (e.g., autonomy)(Haslam, 2016). For hypersensitivity and willfulness, there was substantial overlap with other measures of narcissism, suggesting that these aspects of narcissism may be less problematic to continue using in future research. Nevertheless, more formal efforts to examine how the developmental trajectories of different narcissism inventories vary would be an exciting direction for future research.

Although our use of a quasi-accelerated longitudinal design had many strengths, including measuring changes in narcissism over a 64-year period and across multiple birth-cohorts, its use also presents several unique limitations. For example, no one person was followed from age 13 to age 77, severely limiting our ability to truly isolate lifespan changes in narcissism. Further, because the studies had large gaps in between assessment points, we were limited in our ability to assess more nuanced developmental changes.

Conclusion

In the current study, we combined data from six different samples to examine changes in narcissism across the lifespan from age 13 to age 77. We found that more maladaptive forms of narcissism (e.g., hypersensitivity, willfulness) declined across life and autonomy increased across life. Later-born birth-cohorts were lower in hypersensitivity and higher in autonomy. Future research can begin to examine the exact reasons why narcissism changes across the lifespan and why narcissism might vary across historical periods.

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Table 1. Summary of Study Designs and Sample Sizes of Narcissism Data Available at each Wave

Approximate Birth Year:	Total Observations at Each Wave	Block	Guidance	Growth	Oakland	Mills	Radcliffe
		1969	1929	1929	1923	1936/1938	1943
Age	n						
13	209		73	39	97		
14	106	106					
16	200		66	40	94		
18	104	104					
21	56					56	
23	103	103					
30	133		133				
36	50			50			
40	235		136		99		
43	208					105	103
50	97				97		
52	192		142	50			
53	109						109
60	91				91		
62	99						99
69	117		117				
72	109						109
77	64				64		
Total n:		107	177	62	122	112	167

Note. Ns based on number of individuals with at least one assessment of narcissism and thus do not sum to the total N for each sample.

Table 2. Comparisons between Q-sort and contemporary measures of narcissism

	1	2	3	4	5	6	7	8	9
1.) Hypersensitivity									
2.) Willfulness	.50**								
3.) Autonomy	-.58**	-.12**							
4.) NPI Total	.22**	.66**	.07						
5.) NPI Entitlement/Exploitativeness	.43**	.62**	.09*	.68**					
6.) NPI Grandiose Exhibitionism	.24**	.60**	-.05	.90**	.51**				
7.) NPI Leadership/Authority	.05	.53**	.23**	.91**	.51**	.67**			
8.) NARQ Total	.46**	.76**	-.05	.73**	.62**	.68**	.60**		
9.) NARQ Admiration	.13**	.61**	.20**	.75**	.50**	.67**	.69**	.88**	
10.) NARQ Rivalry	.67**	.74**	-.28**	.56**	.56**	.55**	.39**	.90**	.58**

Note. $N = 545$. * $p < .05$ ** $p < .01$.

Table 3. Rank-order Stability in Narcissism

	1	2	3	4	5	6	7	8	9	10	11	12
1.) Gender												
2.) Hypersensitivity age 13	-.11											
3.) Willfulness age 13	.11	.35**										
4.) Autonomy age 13	-.11	-.18*	-.25**									
5.) Hypersensitivity age 14	-.11											
6.) Willfulness age 14	-.15				.44**							
7.) Autonomy age 14	-.21*				-.41**	.003						
8.) Hypersensitivity age 16	.09	.56**	.41**	-.24**								
9.) Willfulness age 16	.13	.13	.63**	-.24**				.42**				
10.) Autonomy age 16	-.26**	-.08	-.31**	.66**				-.32**	-.34**			
11.) Hypersensitivity age 18	-.20*				.52**	.47**	-.34**					
12.) Willfulness age 18	-.16				.21*	.57**	-.13				.54**	
13.) Autonomy age 18	-.03				-.18	-.21*	.62**				-.36**	-.14
14.) Hypersensitivity age 21												
15.) Willfulness age 21												
16.) Autonomy age 21												
17.) Hypersensitivity age 23	-.09				.51**	.44**	-.22*				.63**	.28**
18.) Willfulness age 23	-.31**				.10	.61**	.06				.37**	.67**
19.) Autonomy age 23	.05				-.16	-.07	.49**				-.15	-.04
20.) Hypersensitivity age 30	-.01	.20	.13	-.10				.31*	.10	-.13		
21.) Willfulness age 30	.12	.13	.29*	-.09				.29*	.58**	-.32**		
22.) Autonomy age 30	-.10	.05	-.16	.45**				-.18	-.31*	.60**		
23.) Hypersensitivity age 36	-.37**	.43*	.19	-.25				.32	-.13	-.28		
24.) Willfulness age 36	-.21	-.07	.52**	-.42*				.25	.33	-.44**		
25.) Autonomy age 36	-.07	.11	-.12	.41*				-.11	.07	.63**		
26.) Hypersensitivity age 40	-.22**	.21**	.14	-.21**				.22**	.01	-.13		
27.) Willfulness age 40	-.06	.20*	.35**	-.01				.13	.28**	-.07		
28.) Autonomy age 40	-.03	-.03	-.17*	.51**				-.07	-.13	.49**		
29.) Hypersensitivity age 43												
30.) Willfulness age 43												
31.) Autonomy age 43												
32.) Hypersensitivity age 50	-.11	.36**	.10	-.33**				.20	-.07	-.28*		
33.) Willfulness age 50	.04	.14	.24*	-.02				.08	.26*	-.07		
34.) Autonomy age 50	-.30**	-.08	-.24*	.49**				-.06	.06	.48**		

35.) Hypersensitivity age 52	-.11	.15	.30**	-.10	.34**	.30**	-.16
36.) Willfulness age 52	-.35**	-.03	.15	.04	-.03	.16	-.02
37.) Autonomy age 52	-.13	-.08	-.26*	.36**	-.25*	-.23*	.35**
38.) Hypersensitivity age 53							
39.) Willfulness age 53							
40.) Autonomy age 53							
41.) Hypersensitivity age 60	-.11	.27*	.15	-.21	.17	.04	.02
42.) Willfulness age 60	-.23*	.22	.33**	-.002	-.03	.29*	.04
43.) Autonomy age 60	-.30**	-.14	-.25*	.39**	-.12	-.09	.38**
44.) Hypersensitivity age 62							
45.) Willfulness age 62							
46.) Autonomy age 62							
47.) Hypersensitivity age 69	-.12	.14	.19	.20	.16	-.04	.27
48.) Willfulness age 69	-.18	.04	.39**	.06	.14	.31*	.02
49.) Autonomy age 69	.12	.05	-.34*	.42**	-.20	-.17	.39*
50.) Hypersensitivity age 72							
51.) Willfulness age 72							
52.) Autonomy age 72							
53.) Hypersensitivity age 77	.13	.37**	.45**	-.34*	.44**	.45**	-.30*
54.) Willfulness age 77	.05	.11	.24	.07	.19	.34*	-.03
55.) Autonomy age 77	-.20	-.34*	-.48**	.43**	-.33*	-.27	.60**

Note. Gender: -1 = men, 1 = women. * $p < .05$, ** $p < .01$

[illegible]

.21*	.27**	.08	.21	.33*	.11	.17
-.10	-.10	.44**	-.16	-.23	.38*	-.19*

.39**
.14
-.20

.35**	.24*	.10	.33**
.22*	.35**	.04	.22*
.02	-.16*	.49**	-.17

.24
.24
-.27*

27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
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-.03

.17*

-.30**

.25**

.20

-.39**

.42**

-.04

.19

-.12

.70**

-.50**

-.21*

.12

-.06

[illegible]

42	43	44	45	46	47	48	49	50	51	52	53	54
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[illegible]

Table 4. Multilevel model predicting changes in hypersensitivity across the lifespan

	b	SE	β	t	p	LB	UB
Intercept	4.76	.06	4.68	85.80	< .001	4.65	4.87
Age	-.01	.001	-.19	-6.88	< .001	-.01	-.01
Gender	-.13	.04	-.11	-3.45	.001	-.21	-.06
Age $\times$ Gender	< .001	.001	-.003	-.12	.91	-.003	.002
Age ²	< .001	< .001	-.08	-3.20	.001	< .001	< .001
Age ² $\times$ Gender	< .001	< .001	.02	.98	.33	< .001	< .001
Block	-.55	.08		-6.83	< .001	-.71	-.39
Berkeley Guidance	.06	.06		.92	.36	-.06	.18
Berkeley Growth	-.05	.09		-.59	.55	-.23	.13
Mills	.39	.10		3.93	< .001	.20	.59
Radcliffe	-.29	.08		-3.61	< .001	-.45	-.13

Note. Oakland Growth is the reference group for the dummy coded sample source variable. Gender: -1 = men, 1 = women. LB: Lowerbound of 95% CI of b; UB: Upperbound 95% CI of b.

Table 5. Multilevel model predicting changes in willfulness across the lifespan

	b	SE	β	t	p	LB	UB
Intercept	4.16	.05	4.16	78.50	< .001	4.06	4.27
Age	-.01	.001	-.12	-4.39	< .001	-.01	-.003
Gender	-.16	.04	-.08	-4.49	< .001	-.23	-.09
Age $\times$ Gender	-.004	.001	-.07	-3.15	.002	-.01	-.001
Age ²	< .001	< .001	.002	.07	.95	-.001	< .001
Age ² $\times$ Gender	< .001	< .001	.07	3.22	.001	< .001	< .001
Block	-.21	.06		-2.79	.01	-.37	-.06
Berkeley Guidance	.04	.09		.67	.50	-.08	.15
Berkeley Growth	-.30	.10		-3.40	.001	-.47	-.13
Mills	-.30	.08		-3.05	.002	-.48	-.10
Radcliffe	.08	.12		1.02	.31	-.07	.23

Note. Oakland Growth is the reference group for the dummy coded sample source variable. Gender: -1 = men, 1 = women. LB: Lowerbound of 95% CI of b; UB: Upperbound 95% CI of b.

Table 6. Multilevel model predicting changes in autonomy across the lifespan

	b	SE	β	t	p	LB	UB
Intercept	5.27	.05	5.27	107.12	< .001	5.17	5.37
Age	.01	.001	.23	9.42	< .001	.01	.01
Gender	-.08	.03	-.12	-2.44	.02	-.15	-.02
Age $\times$ Gender	-.001	.001	-.02	-.99	.32	-.003	.001
Age ²	< .001	< .001	.01	.25	.81	< .001	< .001
Age ² $\times$ Gender	< .001	< .001	-.04	-1.79	.07	< .001	< .001
Block	.91	.07		12.73	< .001	.77	1.05
Berkeley Guidance	.22	.05		4.04	< .001	.11	.33
Berkeley Growth	.27	.08		3.27	.001	.11	.42
Mills	1.09	.09		12.29	< .001	.92	1.27
Radcliffe	1.18	.07		16.66	< .001	1.04	1.32

Note. Oakland Growth is the reference group for the dummy coded sample source variable. Gender: -1 = men, 1 = women. LB: Lowerbound of 95% CI of b; UB: Upperbound 95% CI of b.

Figure 1a-c. Age-related change in hypersensitivity (a), willfulness (b), and autonomy (c)

Figure 2. Birth-cohort differences in age-corrected narcissism

Note. Error bars represent +/- 1 standard error in each narcissism facet