Main article

The joint effects of narcissism and psychopathy on accounting students' attitudes towards unethical professional practices

Charles D. Bailey

School of Accounting, James Madison University, MSC 0204, Harrisonburg, VA 22807, United States

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ABSTRACT

Nonclinical psychopathy and everyday narcissism have received some attention in accounting literature. Both personality traits belong to a constellation of "dark" personality factors that can motivate or allow unethical behaviors. Although both entail callousness and a sense of entitlement, they have relatively distinct characteristics and thus are not highly correlated. Hence, they may contribute jointly and independently to explain or predict behavior. This study extends Bailey (2017) by examining their effects jointly in a national survey of accounting majors and describes the levels in that population. While narcissism is significantly correlated with acceptance of unethical practices, its effect is weaker than psychopathy, and only in the case of nonfinancial narcissistic acts does it explain variance beyond what an individual's psychopathy explains. Narcissism in accounting majors is among the lowest of any population previously reported. Given that these traits are enduring, the participants are representative of practitioners. Implications for further research are discussed.

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1. Introduction

Consistent with the broader business literature, accounting research has seen a recent recognition of "dark" personality traits and their potential effects on unethical and fraudulent behavior.[1] Although the taxonomy is being refined, the uniting feature of these traits seems to be callousness (Paulhus, 2014). These constellations of traits possess different features, however, that are likely to be manifested differently in the workplace. The most established classification is the "Dark Triad" of narcissism, Machiavellianism, and psychopathy—all of which have received independent attention in accounting research. Two of them, narcissism and psychopathy, are the most distinct, while Machiavellianism and psychopathy are difficult to disentangle in everyday life (i.e., nonclinical settings, at lower levels).[2] Moreover, psychology researchers who introduced the Dark Triad classification have encouraged studying them together (Paulhus & Williams, 2002; Jones & Paulhus, 2017). Thus, the major purposes of this study are to examine their joint and separate effects[3] on attitudes of individuals entering the accounting profession, as well as to establish benchmark levels for narcissism, while replicating the psychopathy findings of Bailey (2017) and extending them to narcissism.

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[1] I argue that causality can be inferred from the correlations found in the study because psychopathy and narcissism are stable personality factors that have real effects on attitudes and behaviors. See, e.g., Harrison et al. (2018).

[2] As discussed below, this is the primary reason for excluding Machiavellianism from the current study.

[3] This language does not imply that an interaction between the two is hypothesized.

Narcissism encompasses personality traits of grandiose self-importance, entitlement, and callous disregard for others. It has received longer and more extensive attention in accounting literature than has psychopathy (including at least the twelve studies discussed below). This implies an expectation that its effects are substantial. Narcissism enjoys considerable plausibility, as it can be inferred from prominent photographs or elaborate signatures of CEOs, grandiose forecasts and extravagant lifestyles of corporate officers, etc. Actual examples of the damage done by narcissistic individuals also are easy to identify or envision.

Psychopathy, on the other hand, is characterized by a diminished conscience that makes one callous and manipulative, doing whatever is necessary to fulfil their desires. Often, psychopaths are charming and clever. Given their image from crime reports, they may appear on the surface to be a dangerous, but rare, phenomenon. A growing recognition exists, however, of "successful" psychopaths who are high on a dimension called "primary" psychopathy (an inclination to lie, remorselessness, callousness, and manipulativeness) and lower on "secondary" psychopathy (impulsivity, intolerance of frustration, quick-temperedness, and lack of long-term goals). Primary psychopathy has received less attention from accounting researchers than narcissism, but the research has shown an effect on a real-world behavioral outcome (Bailey, 2015) and an effect on accounting students' attitudes that presumably translates to ethical intentions (Bailey, 2017). Given the existing body of research on narcissism, it is plausible to expect that narcissism would have a similar effect on these same attitudes or other sets of antisocial attitudes.

The current study addresses the role of narcissism in shaping the ethical attitudes of accounting students, while controlling for the effects of psychopathy. As Jones and Paulhus (2017) note, "only a concurrent analysis can clarify any unique contributions of the triad members to outcome variables" (329). The current sample is a bit larger and more diverse than the one in Bailey's (2017) study of psychopathy, adds the Narcissistic Personality Inventory (hereafter NPI; Raskin & Hall, 1979), and elicits responses to two additional scenarios appealing to narcissistic traits. Bailey's (2017) ethical response items and the Levenson Self Report Psychopathy Scale are used as well.

Narcissism does not show nearly as substantial effects on acceptance of unethical behavior as does psychopathy. Although narcissism is significantly correlated with acceptance of Bailey's (2017) set of seven unethical, economically beneficial behaviors, the addition of psychopathy to the regression leaves narcissism non-significant. That is, narcissism does not explain variance in those attitudes over-and-above the effect of psychopathy. With respect to two added scenarios featuring non-economic narcissistic rewards, and using a similar analysis, narcissism alone again explains a small but statistically significant amount of variance. Psychopathy, when added to the model, explains a similarly small amount of additional variance, with both "dark" traits significant. The statistical patterns related to psychopathy are consistent with Bailey (2017); the psychopathy level again is quite low compared to other samples, the scores are consistent across academic class levels, and psychopathic trait level is correlated significantly with acceptance of unethical acts.

An important finding, and an encouraging one for the profession, is that the level of narcissism among accounting students is among the lowest reported for any population, and not statistically different from the lowest-scoring sample identified. Recent academic studies, and the popular press, have criticized Millennials as self-absorbed narcissists, but accounting students differ substantially from other business student populations.

The findings of this study help to direct future research into the effects of personality factors on the attitudes of accountants and accounting students. It is the first to study a diverse national sample of accounting students with respect to narcissism, and to jointly examine the effects of two members of the Dark Triad on this population.

The remainder of the paper proceeds as follows: The next section contains a review of the literature and the development of research questions and hypotheses. The methods and the results of the current study are then described, followed by a discussion of implications, limitations, and suggestions for future research.

2. Literature review and development of research hypotheses and questions

Research on "dark" personality variables is a fairly recent phenomenon, related to a resurgence of interest among psychologists in personality factors. Ashton and Roberts (2011) note that "[i]n contrast [to situational factors], the effects of individuals' internal, *dispositional* motivation, i.e., motivation as a stable personality trait or tendency … have not been examined in accounting settings" (p. 26, emphasis in the original). They further note that "[w]hile the 1960s to the mid-1980s were the 'dark age for personality,' … the situation changed dramatically 15–20 years ago …although accounting research has not reflected the trend" (p. 29).[4] Indeed, in her review of accounting research on judgment and decision-making, Bonner (2008, p. 101) minimizes the past role of personality characteristics.

Accounting researchers increasingly are recognizing the importance of personality traits. Kachelmeier (2010) introduced two individual-differences articles on accounting behavior in *The Accounting Review* with a hopeful note that research into personality factors may "peer inside the noise term [in regression analyses of organizational behavior] in what seems to be the beginnings of a fruitful avenue for future accounting research of archival, experimental, and other varieties" (p. 1127). In the area of fraud research, Trompeter, Carpenter, Jones, and Riley (2014) say:

Prior research has shown that personality matters in economic crimes. Further work in this area could help us to better understand the extent to which personality traits—by themselves—are important in understanding the fraudster, and it

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[4] Revelle, Wilt, and Condon (2011, p. 14) call the period from 1968 until 1990 the "dark ages of personality."

could serve as a springboard into understanding the effect of the 'person × context' interaction on fraudulent behavior. Research that examines individuals' innate psychological characteristics might be explored in hopes of developing a better understanding of the factors that drive the actions of white-collar criminals (p. 774).

2.1. Narcissism, psychopathy, and Machiavellianism: Commonalities and differences

Paulhus (2014) assesses the status of the ongoing research explicating the similarities and differences between the dark personalities, including the argument that "everyday sadism" should be added to psychopathy, narcissism, and Machiavellianism to expand the "Dark Triad" to a "Dark Tetrad." Table 1 (from Table 1 in Paulhus, 2014) indicates that the main commonality among these traits is callousness. Callousness, or lack of empathy, implies that each of these personalities is inclined to take unfair advantage of others, although the motivations and mechanisms for doing so will differ. In particular, narcissists experience a sense of self-importance and entitlement that would motivate greedy or self-serving actions; but narcissists are not as impulsive or manipulative as psychopaths, and are not inclined towards criminality.

Machiavellianism and psychopathy often lead to similar behavioral outcomes with respect to unethical attitudes and behaviors, making them difficult to disambiguate.[5] Machiavellianism, in keeping with its namesake, represents a set of philosophical attitudes, while psychopathy is an innate personality factor and possibly physiological in nature (Decety et al., 2013). Designing a study to disentangle their effects is beyond the scope of the current work. Jones and Paulhus (2017) do conduct such a study, and find that individuals higher on psychopathy are willing to go further in undertaking risk, while Machiavellians are more circumspect in their cost-benefit analysis. Similarly, Harrison, Summers, and Mennecke (2018) hypothesize, and find, that Machiavellianism is negatively related to an individual's perceived opportunity to commit a fraudulent act, but positively related to their motivation to do so.

A consideration of the relationships between the "Dark Triad" members gives good reasons for focusing on psychopathy. Psychopathy is the "darkest" member, as assessed by scholars (e.g., Paulhus, 2014; Paulhus & Williams, 2002; Babiak & Hare, 2006, 124; Williams, Nathanson, & Paulhus, 2010) and impressions of laypersons (Rauthmann & Kolar, 2012). Jones (2014) finds, in an experiment considering all of the Dark Triad, that even the threat of punishment does not deter those higher on psychopathy from undertaking a high risk of losing someone else's money, although Machiavellians are deterred. Nathanson, Paulhus, and Williams (2006) find psychopathy to be the most predictive of classroom cheating.

2.2. Effects of psychopathy and narcissism on unethical behavior

The negative effects of psychopathy may be more readily grasped than those of narcissism, so I will cover them only briefly here. The link between psychopathy and unethical behavior lies in the fact that the essential feature of psychopathy is a lack of conscience (Hare, 1993). Psychopathy is not a form of insanity, but of radical rationality akin to pure *homo economicus.* Glenn, Koleva, Iyer, Graham, and Ditto (2010) propose, and their study supports the theory, that morality is not an important part of the identity of psychopathic individuals; that is, "[T]hey do not construe personal identities in moral terms" (p. 497) and are unconcerned with being, or being seen as, moral individuals. Self-reported psychopathy is associated with antisocial and criminal behavior (Riopka, Coupland, & Olver, 2015).

Narcissism may owe its influence on ethical behavior to its impact on ethical judgment. Unlike psychopaths, narcissists have an intact conscience, and an experiment by Jones and Paulhus (2017) supports the theory that narcissists need to deceive themselves rather than overtly embrace fraud. Regardless, ethical decision-making depends upon an ability to consider the rights and interests of others and subordinate one's own desires to the needs of the community, which is the essence of Kohlberg's developmental theory of ethical judgment.[6] The lowest level of judgment is based on self-interest, and adults normally develop at least to a "conventional," or "member of society," level of thinking (Rest, 1986). Cooper and Pullig (2013) find that, for individuals scoring high on the NPI, narcissism tends to dominate ethical judgment even in more religious individuals.

Nathanson et al. (2006, p. 106) find narcissism to be correlated with a concrete behavioral measure of academic cheating ($r = 0.09$, $p < .01$, one-tailed), although less so than subclinical psychopathy ($r = 0.11$, $p < .01$, one-tailed). Brown, Sautter, Littvay, Sautter, and Bearnes (2010) find narcissism to be negatively related to ethical intentions in two dilemmas—returning extra merchandise accidentally shipped to their company, and returning $100 cash in an envelope found at a football game. Adjusted R^2s for the two regressions were 0.04 and 0.13 respectively. Thus, in summary, the unfavorable effects of narcissism on ethical behavior appear to be small but statistically significant based on extant research.

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[5] McHoskey, Worzel, and Szyarto (1998) argue that the primary differences arise from the different groups that have studied them. They conclude that "MACH research has focused on intelligent and successful antisocial individuals, whereas psychopathy research has focused on less intelligent and successful antisocial individuals" (p. 207).

[6] This discussion assumes a rational, developmental view of ethical judgment consistent with Kohlbergian theory. I recognize intuitionist theory as a valid alternative viewpoint. If judgment in the current setting is intuitive rather than rational in nature, then the individual's view of self-interest versus society's interest (however it came about) still is relevant.

Table 1
Summary of "Dark Side" personality traits (Paulhus, 2014, p. 422).

Feature	Narcissism	Machiavellianism	Psychopathy	Sadism
Callousness	++	++	++	++
Impulsivity	+		++	
Manipulation	+	++	++	
Criminality		Only white-collar	++	
Grandiosity	++		+	
Enjoyment of cruelty				++

Note: A double plus sign indicates high levels of a given trait (top quintile) relative to the average population-wide level. A single plus sign indicates slightly elevated levels (top tertile). A blank entry indicates average levels of a trait.

2.2.1. Accounting research on narcissism

One vein of accounting research concerns the effects of narcissism indicators in corporate executives.[7] Young, Du, Dworkis, and Olsen (2015) offer an overview of the narcissism construct, consider how narcissism affects behavior in work settings, and present a framework for research into the effects of employee narcissism with respect to the design and performance of management control systems. Olsen, Dworkis, and Young (2014) examine the effects of narcissistic CEOs upon the types of earnings management, using as an indicator of narcissism "a composite measure based on the CEO's relative cash pay to the second-highest paid executive, the CEO's relative non-cash pay to the second-highest-paid executive, and on the size and composition of the CEO's picture in the annual report" (p. 249). Judd, Olsen, and Stekelberg (2017) examine the effects of indicators of CEO narcissism on audit fees and auditor regulations, using this same proxy. Using interviews held at analyst conferences as indicators of executive narcissism, Frino, Lim, Mollica, and Palumbo (2015) provide evidence that firms with more narcissistic CEOs tend to engage in the manipulation of accounts to present better earnings.

Olsen and Stekelberg (2015) "examine the effect of CEO narcissism on an *especially aggressive form* of corporate tax avoidance: tax sheltering. Narcissism is a multifaceted personality trait associated with a sense of superiority and a propensity to engage in questionable behavior. Narcissists *feel that they are above the law* and are aggressive in pursuing what they believe is theirs. Narcissists also possess heightened motivations to pursue rewards or desirable outcomes while only being weakly motivated to avoid negative outcomes. . . . [W]e document statistically and economically significant effects of CEO narcissism on the likelihood that the CEO's firm engages in corporate tax shelters" (p. 1, emphasis added).

Ham, Lang, Seybert, and Wang (2017) investigate the effects of CFO narcissism on financial reporting quality, using signature size as a proxy for narcissism. Using the same proxy, Ham, Seybert, and Wang (2018) investigate CEO narcissism's effect on investment performance. Schrad and Zechman (2012) investigate some negative effects of overconfidence, which they relate theoretically to narcissism.

In an experimental study using practicing auditors as participants, Johnson, Kuhn, Apostolou, and Hassell (2013) manipulate perceptions of client narcissism to study its effects on perceptions of audit risk. As hypothesized, they find perceptions of narcissistic client behavior to be positively related to auditors' overall fraud risk assessments. Further concerning perceptions about narcissistic individuals, Hayes and Reckers (2017) study generational difference in the response to perceived narcissism in subordinates who provide accounting estimates.

2.2.2. Differences across demographics and populations

Cultural differences in narcissism are substantial, a factor that would be important in an international or cross-cultural study (Foster, Campbell, & Twenge, 2003). The current study, however, is limited to the US, so I discuss only the immediately relevant factors.

2.2.2.1. Age and gender.
NPI scores consistently are lower for females than for males in a given population (Foster et al., 2003). The scores also tend to decline with age, as tends to be the case for other dark personality factors.[8] The age effect with respect to narcissism may result from experiencing failure and learning one's limitations (Foster et al., 2003).

2.2.2.2. Public vs. private universities.
One might expect that students at private universities would be more narcissistic than those at public institutions as a result of experiencing more privileged lives. While this is not a subject of the current research, the effect needs to be recognized and controlled for in the analysis. Traiser and Eighmy (2011) do find a significant difference, with a private-university NPI mean score was 19.43 and public-university mean of 15.71, a difference significant at $p < 0.001$. Their sample seems consistent with normal student populations, but is nonrandom and geographically limited to North Dakota and Minnesota. Brown, Akers, and Giacomino (2013) show no public-private effect in their sample of two universities in the Midwest.

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[7] A related line of research assumes that corporations themselves can have narcissistic personalities (Duchon & Drake, 2009; Amernic & Craig, 2010).

[8] Above, I call narcissism an "enduring" trait, but that does not require that the level be constant. As with any physical or mental trait, the level may change with age, but leave an individual's relative (rank-based) position about the same.

2.2.2.3. Business students vs. other disciplines. Westerman, Bergman, Bergman, and Daly (2012) collected NPI data from Millennial students (n = 536) at an AACSB-accredited comprehensive state university. They predict, and find, mean levels of narcissism to be higher for business students (M = 17.67, SD = 6.55) than for psychology students (M = 15.19, SD = 6.00), with similar patterns for male and female participants. Vedel and Thomsen (2017), in a sample of 487 newly enrolled students at a Danish university, again find that Economics/Business majors score highest on the Dark Triad, compared to political science, psychology, and law. Litten, Roberts, Ladyshewsky, Castell, and Kane (2018) find that empathy decreases with year of study for business students, but increases for psychology students

Specific data on accounting students is limited. Brown et al. (2013) study two universities in the US Midwest, with a sample of 120 accounting majors who are either candidates or members of Beta Alpha Psi honorary organization. The mean overall NPI score is 15.75, significantly lower than reported elsewhere for business majors; but, of course, the sample is limited in generalizability.

2.2.3. Is narcissism on the rise?

The NPI is a popular instrument in use for about 40 years. Thus, there are many samples and potential benchmarks to consider. Psychologist Jean Twenge and her colleagues have made a widely reported case that narcissism is increasing at an alarming rate among Millennials, labeling Americans born in the last few decades as "Generation Me." The trade books *Generation Me* (Twenge, 2006) and *The Narcissism Epidemic* (Twenge & Campbell, 2009) popularized the notion that today's youth have descended into a dangerous state of self-absorption. These works are built upon a large meta-analysis (Twenge, Konrath, Foster, Campbell, & Bushman, 2008), in which they study 85 college-student samples from the period 1979–2006. The range of mean scores is 13.61–21.54 on the scale of 0–40. Two charts from their article (Fig. 1) provide a good overview of the analysis, showing the overall mean to be around 16 and (according to their analysis, discussed further below) rising across time.

Trzesniewski, Donnellan, and Robins (2008) dispute the findings, by criticizing the sample selection and focusing on mean scores from college students in the 1980s, 1990s, and 2000s. Trzesniewski et al.'s (2008) results indicate a steady state, but Twenge and Foster (2008) respond to defend their original work. Donnellan, Trzesniewski, and Robins (2009) note, however, that extensive data analysis shows only a trend well below the threshold of even a "small" effect size. Wetzel et al. (2017) present evidence across three decades, from students at three universities, disputing the claim of increased narcissism and arguing that a slight *decrease* has occurred. Still, the issue seems unsettled, especially in light of the difficulty of displacing the highly popularized belief that Millennials are narcissistic, reinforced by anecdotal evidence.

2.3. Development of research questions and hypotheses

As discussed above, recent academic studies and the popular press have criticized Millennials as self-absorbed narcissists. For business students, Westerman et al. (2012) find an elevated mean score on the NPI at a comprehensive university in the Southeast, but a lower level for psychology students. Thus, to the extent that accounting students are typical of business students, one would expect them to show an elevated score. The mean score for accounting majors in Brown et al. (2013) lies between Westmoreland et al.'s (2012) business and psychology student samples. It is not clear that accounting students are "typically narcissistic," given the popular image of accountants as modest, technically oriented individuals. Moreover, Bailey (2017) finds accounting students to be low on the psychopathy scale, despite evidence that business students are generally higher on that aspect of the Dark Triad.

Although it appears that accounting students are an exception to the generally high levels of dark personality factors in business students, the purpose of the present study is to further establish the benchmark, not test an hypothesis. Given the mixed evidence discussed above, the limited concrete base of reference, and the exploratory nature of the research, it is best to express the following research question:

RQ1: How do accounting majors compare to other populations with respect to their level of narcissism (NPI scores)?

Any trend in NPI scores across academic class levels also would be of interest. An *increasing* cross-sectional trend in narcissism across rising ranks would be concerning, especially given that the trait generally diminishes with age. It would suggest that either the less-narcissistic students are leaving by attrition or the programs themselves are encouraging or engendering narcissistic traits in students. Westerman et al. (2012) imply that universities are contributing to such an increase in narcissism among students, although they do not present evidence of an increase across class levels. Krick et al. (2016) do *not* find support in their sample of German university students for the "indoctrination hypothesis" that advanced business training increases the Dark Triad, thus lending support for the alternative hypothesis of self-selection. If a decreasing trend (highest scores for juniors) were found, it would imply a favorable *attrition* of narcissists from the ranks of the profession. The extant research suggests the second research question:

RQ2: Do Accounting majors' scores differ across junior, senior, and graduate (or graduated) students?
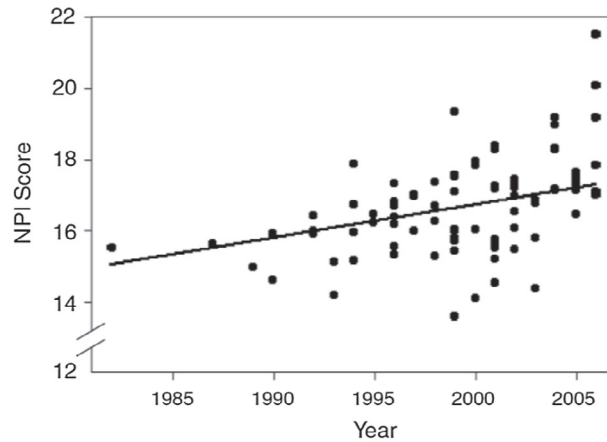
Figure 1 [of Twenge et al. 2008]
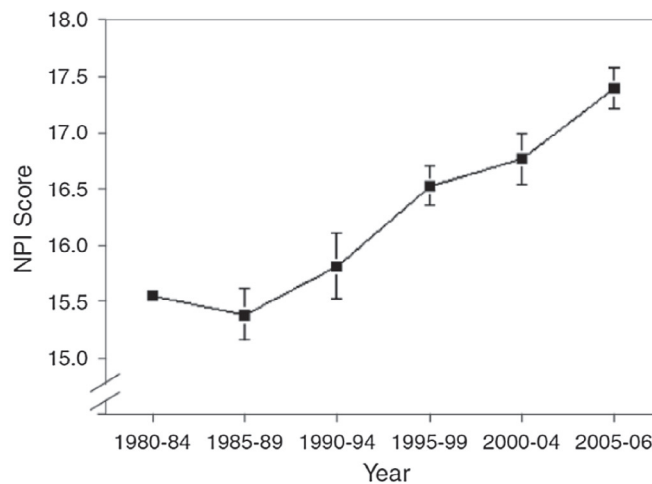College students' Narcissistic Personality Inventory scores, 1982–2006.

Figure 2 [of Twenge et al. 2008]
College students' Narcissistic Personality Inventory scores by time
period. Capped vertical bars denote ± 1 SE.

Fig. 1. Trends in NPI scores of college students, from Twenge et al. (2008, pp. 882–883).

Narcissism shares some characteristics of psychopathy and Machiavellianism, in particular callousness and manipulative-ness. Its sense of entitlement is likely to allow rationalizations of unethical acts for self-enrichment, which leads to the following substantive hypothesis:

H1a. NPI scores are positively correlated with the acceptance of economically beneficial unethical behaviors.

Given that psychopathic traits are shown to be correlated with greater acceptance of unethical practices, and that some commonality exists between psychopathic traits and narcissism (particularly callousness), it may be that the acceptance of unethical practices is due to the same underlying factor(s). That is, narcissism may explain nothing further once psychopathy is taken into account. This leads to the following substantive hypothesis:

H1b. NPI scores explain variance in the acceptance of economically beneficial unethical behaviors, over-and-above psychopathy scores.

In the case of actions that are ego- or prestige-enhancing, but do not produce clear economic benefits, narcissistic motives would likely be stronger in comparison to psychopathic motives. The following two hypotheses mirror H1a and H1b, for such actions:

H2a. NPI scores are positively correlated with the acceptance of prestige-enhancing unethical behaviors.

H2b. NPI scores explain variance in the acceptance of prestige-enhancing unethical behaviors, over-and-above psychopathy scores.

3. Methods

The study was conducted via a questionnaire (see Appendix) on the author's website, approved by the university's Institutional Review Board. The demographic data collected includes age in years (optional, to ensure anonymity), gender (optional), class standing (junior; senior; graduate student or earned bachelor's), and sponsorship of school (Public or Private, also optional).

The Levenson Self-Report Psychopathy Scale (Levenson, Kiehl, & Fitzpatrick, 1995; hereafter, LSRP) was chosen because of the existence of several supportive validation studies and the fact that it offers a well-validated primary-psychopathy factor, directly related to "successful" psychopaths' activities in a business setting. The LSRP's primary psychopathy scale requires responses to 16 items on a four-point scale from strong disagreement to strong agreement. For example, the first two items are "Success is based on survival of the fittest; I am not concerned about the losers" and "For me, what's right is whatever I can get away with." With each item being scored from 1 to 4, the scale range is 16–64 points.

The 40-item Narcissistic Personality Inventory (Raskin & Hall, 1979) was used to be consistent with past research. It underpins most of the research on narcissism and is the most common version by far (Twenge et al., 2008; Ackerman et al., 2011). Raskin and Hall's (1979) original list of 233 items was subsequently refined (e.g., Raskin & Hall, 1981) into the 40-item forced-choice measure widely used today (Raskin & Terry, 1988). The paired comparisons—each contrasting a narcissistic and a non-narcissistic response—are in the following form (using the first two in the instrument as examples):

1. A. I have a natural talent for influencing people.
   B. I am not good at influencing people.
2. A. Modesty doesn't become me.
   B. I am essentially a modest person.

Scoring is 1 for each narcissistic response and 0 for each non-narcissistic response, so the scale range is 0–40 points. Although conceived as a unitary construct, the NPI includes seven first-order components: Authority, Exhibitionism, Superiority, Vanity, Exploitativeness, Entitlement, and Self-Sufficiency (Raskin & Terry, 1988). Their value as individual constructs is unclear, however, and research continues to examine underlying factors that might offer improved predictive ability (e.g., del Rosario & White, 2005; Clarke, Karlov, & Neale, 2015).

The LSRP and the NPI are reasonably independent measures. Sellbom (2011, p. 447) finds that the NPI and the 26-item LSRP (which includes primary and secondary psychopathy) are correlated at only r = 0.26. Thus, it is reasonable to expect that the two scores may have independent, additive effects in explaining the variance in unethical behaviors or attitudes.

The attitudes towards unethical practices include the same set of eight questions used by Bailey (2017), rating the severity of the acts on a five-point Likert scale. The first represents an ethically neutral act, and the next seven represent unethical acts. The average response to the seven unethical acts forms the variable DISAPPROVAL. Two additional questions concerned actions designed to appeal to narcissistic tendencies, but not monetary benefits, rated on the same five-point Likert scale: (1) The CEO of a midsized management consulting firm publishes lies on his website to enhance his prestige. (2) A salesman sabotages a rival's sales to win the company's nonmonetary "Sales Rep of the Year" award. The average of these two responses forms the variable NARCACTS.

To address possible sequence effects of responding to the LSRP before the NPI (or vice-versa), I used two alternative sequences. In an alternate version, the sequence was changed so that the final parts (the two questions about non-financial narcissistic acts and the NPI) were positioned immediately after the demographics.

3.1. Participants

Recruitment of participants was by the same method as Bailey (2017), i.e., by soliciting faculty colleagues around the US to invite accounting majors at the junior class level or above to participate online (see Appendix for the solicitation message). The sample of 312 responses is independent from the sample used in Bailey (2017). A lottery awarded $100 prizes to one out of every twenty participants who entered by reporting separately, on a Google survey, that they had completed the

Table 2
Description of the universities represented, based on entries to the lottery.

Region of US	Responses	Percentage
Hawaii	2	0.7%
Midsouth	15	5.0%
Midwest	95	31.9%
Northeast	24	8.1%
Northwest	1	0.3%
South	20	6.7%
Southeast	87	29.2%
Southwest	28	9.4%
West	26	8.7%
Total	298	100.0%
Sponsorship	**Count**	**Percentage**
Private	67	22.5%
Public	231	77.5%
	298	100.0%

Notes: The number of students entering the lottery was 298, while 312 responded to the study. Thus, 14 (4.4%) did not choose to enter the lottery. The private universities include seven institutions in four regions; the public universities include 22 institutions in six regions.

anonymous questionnaire. Table 2 shows data from the 298 individuals who entered the prize lottery.[9] Based on that information, participants were from 30 universities throughout the US. Of these, 67 were from private universities (seven in four regions) and 231 from public universities (22 in six regions of the country). The sample, while not randomly selected, gives some assurance of generalizability to the US accounting student population. However, statistical conclusions about the population segments are not warranted; for example, the seven private and 22 public universities represent a small (and nonrandom) number of observations.

4. Analysis of results

The analysis begins with screening and validation of the raw data, a description of the data, and a factor analysis to validate the structure of the dependent variables. Descriptive results of the research questions and tests of the hypotheses then follow.

4.1. Data screening and validation

Respondents generally appeared to be well motivated. Although responses were voluntary and anonymous, and participants understood that the faculty member inviting them to participate would not know whether they did so, they likely felt a personal connection. In addition, the $100 prizes were a sign of goodwill and perceived as fun. Comments were favorable, supportive, and appreciative, and no one commented that the questionnaire was overly long.

Nonetheless, it is important to screen for confused, inaccurate, or inattentive responses. To do so, I used criteria similar to Bailey (2017). Specifically, I screened for instances in which the ethical (if economically dubious) act of "Work[ing] overtime to ship everything possible before the end of the year to meet the annual budget target" was rated as *less acceptable* than one or more of the other acts, all of which an accounting student should recognize as unethical. Twenty-two (7%) failed this criterion. In addition, I considered a cutoff for responses taking too little time. The advertised time demand was about 10 min, and the mode also was about 10 min. Thirteen participants took between 5 and 6 min, which seems within normal human limits, and their response showed no anomalies. A sharp drop-off in time then occurred for three respondents, but they already were eliminated by the consistency check. Thus, of the 312 responses, 22 were deleted, leaving a net usable sample of 290.

4.2. Descriptive statistics

Descriptive statistics of the research data appear in Table 3, with demographic variables in Panel A. The modal age is 21, the median 22, and the mean 23.16; a histogram shows the distribution. Female participants represent 44.6%, and public universities represent 77.1% of the sample. Juniors, seniors, and graduate (or graduated) represent 25.5%, 53.1%, and 21.4% respectively, and those sample sizes are respectable with a minimum of 62.

Table 3, Panel B, shows descriptive statistics of the continuous response variables. LSRP scores range from the scale's minimum of 16 to a moderately high 47 on the 64-point scale. NPI ranges from the scale's minimum of zero to a moderately high 34 on the 40-point scale. Of the first eight items rated on the (un)acceptability scale (from Bailey, 2017), as well as the two "narcissistic" items, responses generally covered the five-point scale range. Table 3, Panel C, shows the distribution of responses to all ten of these items. The pattern of responses is as expected for the eight scenarios. Participants recognized the first item ("Work overtime...") as distinctly different from the others, with only 1.0% finding it completely unacceptable and 84.5% con-

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[9] Only 298 students entered the lottery, as 14 (4.4%) chose not to enter.

Table 3
Descriptive statistics.

Panel A: Demographic variables

Age in years		
N	Valid	284
	Missing	6
Mean		23.16
Median		22.00
Mode		21
Std. Deviation		4.921
Minimum		19
Maximum		55
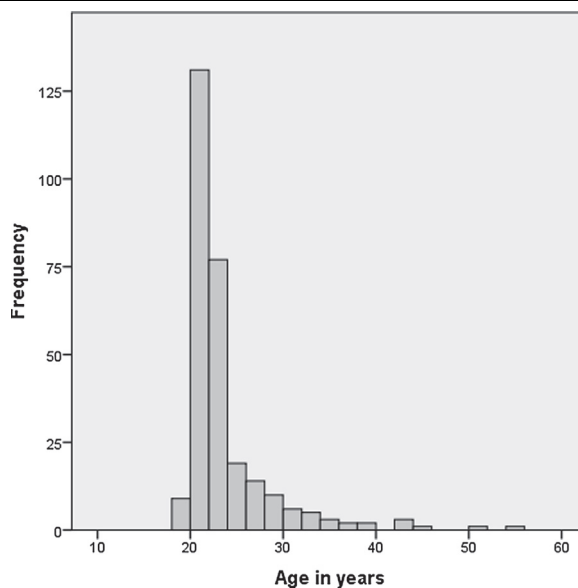
Gender				
		Frequency	Percent	Valid Percent	Cumulative %
Valid	Female	129	44.5	44.6	44.6
	Male	160	55.2	55.4	100.0
	Total	289	99.7	100.0	
Missing		1	.3		
Total		290	100.0		

Sponsor				
		Frequency	Percent	Valid Percent	Cumulative %
Valid	Public	222	76.6	77.1	77.1
	Private	66	22.8	22.9	100.0
	Total	288	99.3	100.0	
Missing		2	.7		
Total		290	100.0		

Academic class				
		Frequency	Percent	Valid Percent	Cumulative %
Valid	Junior	74	25.5	25.5	25.5
	Senior	154	53.1	53.1	78.6
	Graduate	62	21.4	21.4	100.0
	Total	290	100.0	100.0	

(*continued on next page*)

Table 3 (continued)

Panel B: Continuous variables

	Min.	Max.	Mean	SD
LSRP (Levenson's Self-Report Psychopathy Scale)	16	47	26.88	6.141
NPI (Narcissistic Personality Inventory)	0	34	14.13	6.811
Acts to rate as to DISAPPROVAL:				
Work overtime to ship and meet the annual budget.	1	5	1.74	0.933
Bury scrap expense.*	2	5	4.34	0.724
Delay billing to hide amount owed.*	1	5	4.14	0.943
Postpone writing off spoiled, worthless inventory.*	1	5	4.24	0.823
Not report $500 paycheck error in your favor.*	2	5	4.48	0.841
Steal a check (skimming).*	2	5	4.85	0.494
Claim duplicate reimbursement for a business trip.*	1	5	4.33	0.975
Sell the company's client list to a competitor.*	1	5	4.87	0.452
Narc1: Lie for image enhancement.	1	5	4.60	0.922
Narc2: Cheat for nonmonetary award.	1	5	4.19	1.030
DISAPPROVAL*	2.43	5.00	4.467	0.4278
NARCACTS: Average of Narc1 and Narc2	1.00	5.00	4.39	0.813

 * *Note*: DISAPPROVAL is the average of these seven items. N = 290. There are no missing observations for any of these variables. Scale ranges ore 16–64 for LSRP, 0–40 for NPI, and 1–5 for all others in the table.

Panel C: Details of responses to evaluated acts.

Frequencies of responses to scenario actions:

Response	Work OT to ship	Hide Scrap	Delay Billing	Postpone Write-down	Keep $500	Skim Check	Claim Duplicate Reimb.	Sell Customer List	Lie for Image	Cheat for Award
Completely acceptable	145	0	1	2	0	0	3	1	11	7
Moderately acceptable	100	10	27	15	21	3	23	0	6	23
Unclear	23	13	24	14	3	8	18	7	4	20
Moderately unacceptable	19	134	116	138	81	18	76	20	47	98
Completely unacceptable	3	133	122	121	185	261	170	262	222	142
Percentages of responses to scenario actions:										
Completely acceptable	50.0	0.0	0.3	0.7	0.0	0.0	1.0	0.3	3.8	2.4
Moderately acceptable	34.5	3.4	9.3	5.2	7.2	1.0	7.9	0.0	2.1	7.9
Unclear	7.9	4.5	8.3	4.8	1.0	2.8	6.2	2.4	1.4	6.9
Moderately unacceptable	6.6	46.2	40.0	47.6	27.9	6.2	26.2	6.9	16.2	33.8
Completely unacceptable	1.0	45.9	42.1	41.7	63.8	90.0	58.6	90.3	76.6	49.0

sidering it completely or moderately acceptable. The next seven, "unethical," items are generally condemned as completely unacceptable; but the three involving financial reporting instead of theft (hide scrap, delay billing, postpone writedown) are split between moderately and completely unacceptable. The last two items rated as to (un)acceptability are the two narcissistic items (Lie for Image, Cheat for Award), and they receive a pattern of responses similar to the economically-motivated items.

The numbers and percentages of participants who consider the unethical items completely or moderately *acceptable* is nonetheless worrisome, but is a testimony to the willingness of individuals to answer sensitive questions frankly when assured anonymity.

4.3. Consideration of the ORDER variable

Regarding the order of presentation (see Methods, above), I tested for differences in the variables LSRP, NPI, DISAPPROVAL and NARCACTS at $\alpha = 0.10$. The LSRP score was slightly lower when that instrument came first (26.10 vs. 27.66, $p = .03$), and NARCACTS higher (expressing more disapproval of the narcissistic acts) when NPI came first (4.50 vs. 4.29, $p = .03$).[10] These differences warrant appropriate consideration of ORDER in the analyses below.

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 [10] Neither difference seems to reflect a self-presentation bias. That is, the LSRP scores are lower when participants have seen less material that might indicate they are being assessed on dark personality traits; and responses are more disapproving of the narcissistic acts when they respond at the very beginning, also before possible sensitization to the research topic.

4.4. Factor analysis of (dis)approval responses

The hypotheses concern two key measures intended to represent both economically- and non-economically-motivated narcissistic acts. To assess and confirm the structures, I conducted a factor analysis of the ten related response items. In an exploratory factor analysis with principal component analysis and varimax rotation, three factors emerge, as shown in Table 4. The factors are clearly interpretable: the first consists of financial-statement manipulation, the second consists of asset appropriation, and the third consists of narcissistic acts. Thus, the participants seem to understand, and distinguish among, the items, in the way intended. Most importantly, the narcissistic factor is a distinct addition to the study.

4.5. Replication of results from Bailey's (2017) psychopathy study

As shown in Table 3, Panel B, the mean (and SD) of the 290 LSRP scores in the current study are 26.88 (6.141),[11] even lower than the 28.05 (6.033) for the similarly collected sample of 253 reported in Bailey (2017). The difference of 1.17 points is statistically significant ($t = 2.23$, two-tailed $p = .026$), but the effect size is small (Cohen's $d = 0.19$) and the samples come from different sets of universities. As shown in Table 5, the two samples are ranked adjacently by LSRP, and the current sample has the statistically lowest mean of any student sample of which I am aware ($\alpha = 0.05$).

Also consistent with prior research (Bailey, 2017), the LSRP scores do not differ significantly across academic class levels. An ANCOVA of CLASS (junior/senior/graduate) × GENDER, with age as a covariate (not tabulated here but same as the analysis of NPI reported below) shows no significant difference across ranks ($p = .232$). The CLASS × GENDER interaction is not significant, but, consistent with other samples and the parallel analysis of NPI reported below, the main effect of gender is significant and the age covariate is significant. With respect to the possible effect of ORDER of presentation, I performed alternative analyses including ORDER as a covariate or as a factor, as well as separate ANCOVAs for each order, and consistently found no significant CLASS difference.

Finally, the results of Bailey's (2017) third research question, concerning the correlation between LSRP and acceptance of unethical practices, also are substantively replicated. A regression (untabulated) including the original variables of LSRP, age, gender, and class level, plus ORDER, show that LSRP is again significant ($p < .001$) and explains about 11% of the variance in DISAPPROVAL, compared to 13% in Bailey (2017). While age was significant in the earlier sample ($p = .03$; variance explained, 1.8%), none of the control variables are significant in the current sample.

4.6. Narcissism: new research-question results and hypothesis tests

The main incremental contributions of the current study concern the levels and effects of narcissism, as measured by the NPI. The analyses to address the research questions and test the research hypotheses consider demographic covariates where appropriate. The potential effects of both gender and age are well established, so these two variables are consistently included.

Another variable, public vs. private sponsorship, has been implicated by some research (discussed above), and was of possible interest as a control variable. Thus, I conducted *t*-tests between public and private institutions for the variables LSRP, NPI, responses about the severity of the acts (DISAPPROVAL and NARCACTS), as well as age and gender. None were significant at $\alpha = 0.10$, two-sided. Thus, I have excluded the public–private sponsorship variable from further analyses.

4.6.1. Comparison of NPI scores to others reported in the literature (RQ1)

The overall mean NPI score of the current sample is 14.13, with SD of 6.811 (Table 3, Panel B). Twenge et al. (2008) provide a meta-analysis of 85 samples college-student scores, collected over the period 1979–2006. The graphs in Fig. 1 show an increasing trend across time, which is the main finding of their analysis. The current sample clearly is on the low side of reported scores, even from the early period. Only two of the 85 reported sample means are as low as the current sample and the current sample does not statistically differ from them.

Because of the large number of studies of US students using the NPI, I have judgmentally selected twelve samples for discussion (see Table 6), including the available studies of business students, along with examples of the highest and lowest scores from other published articles.[12] The samples are ordered from lowest to highest NPI scores. Interestingly, the studies in Exline, Bushman, Baumeister, Campbell, and Finkel (2004) include one of the highest and one of the lowest scores. Both samples are equally balanced as to gender and approximately 19 years of age. The studies reported by Wallace and Baumeister (2002) include two of the lowest scores, from introductory psychology students at a private research university in the Midwest.

Most notably, the mean of the current sample is not statistically different from the only two samples that are nominally lower, as indicated by the *t*-tests in Table 6. The only previous study of accounting majors (Brown et al., 2013) is significantly higher than the current sample ($p = .029$). The general sample of undergraduate business majors (Westerman et al., 2012) is substantially higher ($p < .001$, with a medium effect size of Cohen's $d = 0.52$).

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[11] As noted above, the mean LSRP scores differ slightly depending on the order of presentation of the LSRP and NPI scores. This difference does not affect the ranking in Table 3.

[12] Of the six samples with means above of 18.5 from Twenge et al. (2008), shown in Fig. 1, only Exline et al. (1999) is from a published source.

Table 4
Factor analysis of disapproval responses.

Rotated component matrix			
	Component		
	1	2	3
Hide scrap	0.443	**0.518**	−0.059
Delay billing	−0.047	**0.804**	0.058
Postpone writedown	0.098	**0.793**	0.032
Keep $500	**0.649**	0.241	0.081
Skim check	**0.667**	0.002	0.194
Duplicate reimbursement	**0.617**	0.128	0.089
Sell customer list	**0.617**	−0.087	−0.040
Lie for image	0.073	−0.016	**0.823**
Cheat for award	0.114	0.072	**0.818**

Notes: Coefficients > 0.5 are bold. Extraction method is principal component analysis; rotation method is varimax with Kaiser normalization. Interpretations of the factors: (1) financial statement manipulation; (2) asset appropriation; (3) nonfinancial narcissistic acts. See Appendix for the wording of survey questions.

Table 5
Comparison of PSYCHOPATHY Scores, Past and Current US Studies.

Source	Population	N	Mean	SD	t^*	$p(t)$
Bailey (2015)	Accounting professors, US and Canada	545	22.58	4.54	11.48	.000
Glenn et al. (2010)	Adult volunteers at yourmorals.org	2157	26.60	7.54	0.606	.545
Current study	National sample of US accounting majors	290	26.88	6.14	—	—
Bailey (2017)	National sample of US Accounting majors	253	28.05	6.03	2.23	.026
Walters, Brinkley, Magaletta, and Diamond (2008)	Male and female federal prison inmates	1972	28.70	7.60	3.90	.000
Levenson et al. (1995)	Students, University of Calif. Davis	487	29.13	6.86	4.56	.000
Tsang and Salekin (2019)	Students at a southeastern US university	1257	29.45	8.02	5.12	.000
Brinkley, Schmitt, Smith, and Newman (2001)	Minimum-security state prisoners	549	32.99	8.19	11.15	.000

[*] *Note:*The t-tests are two-tailed, comparing each sample to the current study. A study by Gummelt et al. (2012) is omitted because it contains anomalies, including an incorrect statement of the number of items on the scale. The authors were unable to locate their data in response to my inquiries and those of the editor.

Table 6
Student NPI Scores for the Current Study and Other Selected US Studies.

Source	Population	N	Mean	SD	t	$p(t)$
Wallace and Baumeister (2002), Study 2	IPS[*] at a Midwestern university	71	13.61	6.73	0.58	.564
Wallace and Baumeister (2002), Study 4	IPS at a Midwestern university	74	14.11	6.61	0.02	.982
Current study	National sample of US accounting majors	290	14.13	6.81	—	—
Cramer (1995)	First-year students at a small liberal arts college	118	14.2	**	0.22	.819
Exline et al. (2004), Study 4	IPS at a private research university in Ohio	241	14.56	6.49	0.91	.362
Westerman et al. (2012)	IPS at comprehensive state university	131	15.19	6.00	1.53	.126
Donnellan et al. (2009)	Undergraduate students, University of California Davis	2405	15.58	6.89	3.39	<.001
Wallace and Baumeister (2002), Study 3	IPS at a Midwestern university	54	15.74	8.33	1.54	.125
Brown et al. (2013)	Accounting majors (candidates/members of Beta Alpha Psi) at a state university and a private university in the Midwest	120	15.75	**	2.19	.029
Wallace and Baumeister (2002), Study 1	IPS at a Midwestern university	74	16.02	7.73	2.07	.039
Exline et al. (2004), Study 1	IPS at a large state university in the Midwest	276	17.2	6.60	4.19	<.001
Westerman et al. (2012)	Undergraduate business students at AACSB-accredited comprehensive state university.	405	17.67	6.55	6.91	<.001
Exline et al. (2004), Study 5	IPS at a large state university in the Midwest	120	19.37	6.62	7.15	<.001

[*] *Note:*IPS = Introductory psychology students. The t-tests are two-tailed, comparing each sample to the current study. The examples are judgmentally selected for discussion, from the large number of existing studies. See Twenge et al. (2008) for 81 other studies not listed here. The other five NPI scores greater than 19 that Twenge et al. (2008) list are from unpublished studies with small samples. [**]SD not reported; t-test based on value of 6.81.

4.6.2. Differences in NPI across academic class level (RQ2)

Foster et al. (2003) find that NPI declines with age, so age must be treated as a covariate in the analysis across ranks. In addition, males tend to be higher on the NPI scale. Table 7 shows an ANCOVA of academic CLASS × GENDER, with age as a covariate. The cell sizes are reasonably large, and a variance ratio of just under 2 indicates acceptable homogeneity of vari-

Table 7
ANCOVA of CLASS × GENDER with age.

Panel A: Descriptive statistics				
Dependent variable: NPI Score				
Class	Gender	Mean	Std. Deviation	N
Junior	Female	14.38	6.912	40
	Male	16.55	6.951	31
	Total	15.32	6.965	71
Senior	Female	12.18	6.253	62
	Male	15.28	7.396	89
	Total	14.01	7.095	151
Graduate student/Earned Bachelor's	Female	11.12	5.270	25
	Male	13.56	5.588	36
	Total	12.56	5.548	61
Total	Female	12.66	6.366	127
	Male	15.13	6.961	156
	Total	14.02	6.801	283

Panel B: Tests of between-subjects effects					
Dependent variable: NPI Score					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1465.398	6	244.233	5.821	0.000	0.112
Intercept	5248.517	1	5248.517	125.100	0.000	0.312
Age	692.178	1	692.178	16.498	0.000	0.056
Class	165.907	2	82.953	1.977	0.140	0.014
Gender	284.016	1	284.016	6.770	0.010	0.024
Class × gender	33.542	2	16.771	0.400	0.671	0.003
Error	11579.429	276	41.954			
Total	68709.000	283				
Corrected Total	13044.827	282				

Notes: $R^2 = 0.112$ (Adjusted $R^2 = 0.093$).; Gender 0 = Female, 1 = Male.

ance. The effect of CLASS can be interpreted independently of GENDER, given that the interaction is not significant. As expected, AGE is significant and ($p < .001$), and GENDER is significant ($p = .010$). They explain 5.6% and 2.4%, respectively, of the variance in NPI scores, based on the partial eta squared statistics. After adjusting for AGE and GENDER, however CLASS is not significant, despite the decline in unadjusted scores from 15.32 in juniors, to 14.01 in seniors, to 12.56 in graduate students (Table 7, Panel A). Thus, there is no evidence of a change across academic class level from either *abnormal* developmental reasons or attrition. This is similar to the findings for LSRP reported by Bailey (2017) and replicated in this sample.

4.6.3. Economic misconduct: effects of NPI alone and in addition to LSRP scores (H1a and H1b)

The tests of H1a and H1b employ a linear regression with DISAPPROVAL as the dependent variable. Given that the response scale is in terms of DISAPPROVAL, the expected coefficients of both NPI and LSRP are negative.

H1a posits that NPI score is correlated with the acceptance of economically beneficial unethical behaviors. H1b posits that NPI will explain variance over-and-above the effects of psychopathy (LSRP scores) found in Bailey (2017). These hypotheses are tested in a hierarchical regression in which block 1 includes NPI and the covariates age and gender. Block 2 adds LSRP as an independent variable.[13]

As shown in Table 8, the model after entering NPI, age and gender (Model 1) has an adjusted R^2 of only 0.033, and NPI has a significant coefficient ($p = .036$). NPI explains 1.6% of the variance in DISAPPROVAL (based on partial r^2). With the addition of LSRP in Model 2, NPI no longer is significant, but LSRP is highly significant, explaining 10.6% of the variance in DISAPPROVAL and increasing adjusted R^2 by 0.099. Hence, H1a is supported, but H1b is not. The variance explained by NPI is small, and it does not explain significant variance beyond what is explained by LSRP.[14]

4.6.4. Prestige-enhancing fraud: effects of NPI alone and in addition to LSRP scores (H2a and H2b)

The tests of H2a and H2b also employ an hierarchical linear regression, with NARCACTS (the average response to the two narcissistic acts) as the dependent variable. Given that ORDER affects NARCACTS, ORDER should be included in the model along with AGE and GENDER. Table 9 shows that Model 1 (including NPI and covariates AGE, GENDER, and ORDER) has an adjusted R^2 of 0.032, with NPI score significant ($p = .007$). The addition of LSRP in Model 2 increases the adjusted R^2 by

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[13] An interaction between narcissism and psychopathy may seem plausible, as the effect of one might exacerbate the effect of the other. However, an interaction term in the model is not significant and does not alter the conclusions.

[14] No interaction between NPI and LSRP is hypothesized, but the term is not significant if added ($p = .32$).

Table 8
Tests of H1a and H1b.

Model	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics				
				R^2 Change	F Change	df1	df2	Sig. F Change
1	0.043	0.033	0.42320	0.043	4.205	3	279	0.006
2	0.145	0.132	0.40085	0.101	32.971	1	278	0.000

Coefficients; Dependent Variable: DISAPPROVAL

Model[*]		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations and Partial r^2		
		B	Std. Error	Beta			Zero-order	Partial	Partial r^2
1	(Constant)	4.364	0.150		29.027	0.000			
	Age	0.010	0.005	0.116	1.913	0.057	0.154	0.114	0.013
	Gender	−0.040	0.051	−0.046	−0.769	0.443	−0.078	−0.046	0.212
	NPI Score	−0.008	0.004	−0.130	−2.104	0.036	−0.169	−0.125	0.016
2	(Constant)	4.969	0.177		28.048	0.000			
	Age	0.007	0.005	0.081	1.400	0.163	0.154	0.084	0.007
	Gender	0.009	0.049	0.010	0.173	0.863	−0.078	0.010	0.000
	NPI Score	0.001	0.004	0.009	0.137	0.891	−0.169	0.008	0.000
	LSRP Score	−0.025	0.004	−0.361	−5.742	0.000	−0.372	−0.326	0.106

[*] Model 1 includes NPI score. Model 2 includes NPI score and LSRP score.

0.01, to 0.042. LSRP explains slightly more variance (1.4% versus 1.1%, based on partial r^2 values). NPI remains marginally significant (p = .076) and LSRP is significant (p = .048).[15] These p-values of NPI and LSRP can appropriately be halved, given that the tests are directional. Thus, both H2a and H2b are supported, because narcissism has a small but significant effect on attitudes in this arena, and that effect persists after taking into account the effect of psychopathy, with a similar magnitude.

5. Discussion

This is, to my knowledge, the first study to include a national sample of accounting students responding to the NPI. At the same time, it includes Levenson's Self-Report Psychopathy Scale, allowing a study of the joint effects of these two "dark" personality factors, as well as replication of the results from Bailey (2017).

It is encouraging to see that, as in the case of psychopathy (Bailey, 2017 and the current study), the level of narcissism in accounting students is quite low. This is despite studies indicating rising narcissism in Millennials and a high level in business students. The effects of narcissism on students' assessment of the acceptability of ethically questionable or criminal acts also is much weaker than that of psychopathy.

As with psychopathy, the level of narcissism also does not differ significantly across academic ranks, after taking into account the effect of age (which leads to a decline within the general population). Thus, in keeping with the overall low level in my sample, I find an exceptionally low level in the graduate student (or graduated) sample.

With respect to the effect of narcissism on attitudes about unethical acts, I analyze the responses to a seven-question instrument concerning economically motivated behaviors, and then two scenarios designed to appeal to narcissistic tendencies. For the economically motivated behaviors, narcissism has a weak but significant effect when tested in a regression along with covariates. When psychopathy is added as a predictor, however, it explains a larger amount of variance and leaves the narcissism variable non-significant. Regarding acceptance of the narcissistic unethical behaviors with non-economic benefits, the regression with narcissism and demographic covariates again shows narcissism to have a weak but significant effect. When psychopathy is added to the predictors, it shows a similarly weak effect, but does not "explain away" the effect of narcissism. This indicates that narcissism has predictive value over-and-above psychopathy in situations that appeal primarily to a narcissist.

The relatively weak effects of narcissism may seem surprising, given the amount of attention the trait has received in accounting literature. When one considers narcissism's key features in comparison to those of psychopathy, however, the difference in effect is less surprising. It seems likely that narcissism is a less direct cause of unethical behavior than psychopathy. Narcissists may be more "accidental" fraudsters than "predatory" fraudsters (Dorminey, Fleming, Kranacher, & Riley, 2012). That is, given that they do not lack a conscience, they are less likely to intentionally set out to commit fraudulent or unethical acts. Psychopaths, however, are likely to be the criminal type where "arrogance and a criminal mindset replace the original Fraud Triangle's antecedents of [both] pressure and rationalization" (Dorminey et al., 2012, 566).

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[15] No interaction between NPI and LSRP is hypothesized, but the term is not significant if added (p = .77).

Table 9
Tests of H2a and H2b.

Model	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics				
				R^2 Change	F Change	df1	df2	Sig. F Change
1	0.046	0.032	0.80820	0.046	3.342	4	278	0.011
2	0.059	0.042	0.80394	0.013	3.956	1	277	0.048

Coefficients; Dependent Variable: NARCACTS

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations and Partial r^2		
		B	Std. Error	Beta			Zero-order	Partial	Partial r^2
1	(Constant)	4.302	0.314		13.710	0.000			
	Age	−0.001	0.010	−0.007	−0.114	0.909	0.035	−0.007	0.000
	ORDER	0.217	0.096	0.132	2.248	0.025	0.127	0.134	0.018
	Gender	0.139	0.098	0.084	1.410	0.160	0.061	0.084	0.007
	NPI Score	−0.020	0.007	−0.168	−2.724	0.007	−0.144	−0.161	0.023
2	(Constant)	4.700	0.371		12.678	0.000			
	Age	−0.003	0.010	−0.020	−0.335	0.738	0.035	−0.020	0.000
	ORDER	0.236	0.096	0.144	2.445	0.015	0.127	0.145	0.021
	Gender	0.171	0.099	0.104	1.728	0.085	0.061	0.103	0.011
	NPI Score	−0.014	0.008	−0.118	−1.783	0.076	−0.144	−0.106	0.011
	LSRP Score	−0.018	0.009	−0.132	−1.989	0.048	−0.139	−0.119	0.014

5.1. Limitations and opportunities for further research

This study is exploratory in nature, with limited testing of theory, but the findings can stimulate, and help guide, further research. This section discusses some of the limitations and offers suggestions for continued investigation of the effects of narcissism.[16] Narcissism is an important factor. In some sub-populations of accountants, it may be higher, and in some other situations or conditions it is likely to have a larger effect than seen here.

Further research should consider situations in which narcissism might interact with other factors to produce unethical behavior. It seems likely that narcissistic traits would create some incentive (in the form of a personal need), and some basis for rationalization (a sense of worthiness and self-importance) and at high levels these could lead to fraud.

This study captures a reference sample within the US, and cannot statistically account for the fact that the samples from different student populations differ widely, as seen in Fig. 1 and Table 6. A closer evaluation of the demographic or institutional factors would be of interest for a future study. What are the factors that might explain why accounting students are so different from other business students? For example, Asians tend to score lower on the NPI (although I estimate the current sample to be only 11% Asian). Men tend to score higher than women, and (as with other dark personality factors) scores tend to diminish with age (Foster et al., 2003).

At lower levels of narcissism, such as found in the current student sample (and hopefully extending to practicing accountants in general), narcissism may not pose a serious threat. However, the levels in populations such as higher management may be more predictive of negative effects. Given that researchers are finding effects of narcissism in archival studies, based on indications from annual reports, statements made to analysts, etc., that possibility is worth exploring in experimental studies.

I have argued that the findings should be generalizable to practicing accountants, given the enduring nature of personality traits, but I am unaware of any data on narcissism of accounting practitioners. Further research about individuals who gravitate to certain areas of practice or to leadership positions in the profession would be of interest.

The current study considers only the effect of narcissism on attitudes towards unethical practices, and these attitudes are related to rationalization. As Harrison et al. (2018) demonstrate, narcissism also can be an *incentive* to fraud because narcissists overestimate their ability to successfully carry out fraud. Where the effects studied are either actual fraudulent acts or perceptions of opportunity or ability to commit such acts, narcissism may show a greater effect.

Narcissists, who tend to be overconfident of their abilities, are motivated strongly by opportunities to demonstrate their superiority (Wallace & Baumeister, 2002). In a capital investment task not directly related to ethical behavior, Dworkis (2013) finds that narcissistic managers outperform their less narcissistic counterparts under a low bonus threshold, but the result is reversed under a high bonus threshold. In certain situations, such as making their business unit appear superior, managers might adopt risky, unethical behaviors.

Finally, another interesting question is whether the factors or subcomponents of narcissism may offer better predictive ability than the total NPI (del Rosario & White, 2005; Clarke et al., 2015). The questions of the utility and the very nature of

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[16] For suggestions relevant to psychopathy, see Bailey (2017).

these factors are under debate, but the emerging literature may reveal opportunities for research. Some of the factors may be neutral, or even negatively related to fraud, or their effects may be situation-specific.

Acknowledgements

Appendix. Experimental materials

The following solicitation email was sent to numerous colleagues in the US:

Dear [first name],

I am writing to ask a favor of a few friends around the country. If possible, I would greatly appreciate your inviting accounting majors to participate in a study that I am conducting, funded by the [university name]. You may view the materials at [URL of preview], and I would value your comments whether or not you refer participants.

If you are agreeable, please use the text below to invite accounting majors, copying me with your message:

[Dear Students]

I am forwarding this invitation to you as a favor to a colleague, because I believe you will be interested. It is strictly voluntary (not a part of any course requirement), and I will not know whether or not you respond, except potentially to verify your student status if you win a prize.

Accounting majors at the junior class level or above are invited to participate in a research study that will require only five minutes and will pay prizes of $100 to one of every 20 participants, randomly chosen. Your responses will be completely anonymous. To ensure your anonymity you will be told, at the conclusion of the questionnaire, how to certify that you participated and enter the prize pool. The questions concern your social attitudes, beliefs, and views about the acceptability of certain accounting and business practices. Only 500 participants are needed, so time is limited. The study is approved by the Institutional Review Board of [university] and is at [URL of survey] (access from a computer, not a phone, please). If you have further questions, contact Professor [author's name] at [email address].

Sincerely,

[Your name]

Agreement to Participate

Please access by computer, not a phone. Thanks!

To participate in this academic study, you must be an accounting major with an *.edu* e-mail address, invited by a faculty member, but *not* be a current student of Dr. xxxxxxx xxxxxx of The University of xxxxxxxx. *Please choose the following: I* [do not meet] *these criteria.* (Must change to certify that you *meet* them.)

Explanation and Consent to Participate

This is a nonprofit academic study, funded by The University of xxxxxx. It is purely to enhance the understanding of accounting students' attitudes and opinions. You will be contributing to the body of knowledge in your field, and the results are expected to be available via publication. The Institutional Review Board of the University of xxxxxx has reviewed this research and found it to be exempt from the full federal regulations.[1]

To participate, you would complete an online **questionnaire taking about 10 minutes**, and you may withdraw at any time without penalty. **Your responses will be completely anonymous**, and I will not disclose individual responses to anyone. Only aggregate data will be reported.

Participation is strictly **voluntary and is not a requirement of any class**. The faculty member who referred you will not know whether you participated, except possibly to verify the identity of lottery winners.

After completing the questionnaire, you will be instructed how to enter the prize pool, by sending a separate e-mail message. Out of every 20 participants, a cash prize of $100 will be randomly awarded.

Please respond: I [do not accept] these terms. You must select "accept" to proceed.

If you want clarification before agreeing, e-mail xxxxxxxx@xxxxxx.edu .

I appreciate your participation in this experiment!

> Prof. xxxxxxxxxxxxxxx
> School of Accountancy
> xxxxxxxxxxx
> xxxxxxxxxxxx

[1] For details, you may contact the Institutional Review Board, irxxxxxxxxxx.edu. The project has been assigned the IRB ID #2584.

[Accept Terms and Begin]

Thanks! There are four demographic questions and 64 attitudinal questions. Remember, there are <u>no right or wrong answers to the attitudinal questions,</u> <u>except to respond exactly according to your belief.</u>

Your answers will not be sent until you click "Submit" at the end.

Please click here to proceed to the <u>questionnaire</u>.

First, please provide the following information about yourself and your professional experience:

Age in years   (optional but appreciated)

Gender: ○ Female   ○ Male   ○ Prefer not to disclose

Your class standing: ○ Junior   ○ Senior   ○ Graduate student or earned Bachelor's

Sponsorship of your school: ○ Public   ○ Private

The next questions concern your approval or disapproval of a variety of acts. The practice of "earnings management" has received considerable attention in recent years. At year-end, if corporate performance is not meeting expectations, managers often look for ways to affect or "adjust" the earnings, or to otherwise make the financial statements look better. In each of the cases below, assume that:

- Management has a *strong personal incentive to increase reported earnings*, such as ensuring a large bonus or a positive performance evaluation; and

- If the act is questionable or even illegal, *the chance of detection and punishment is very small.*

For each of the eight acts described below, please decide whether, in your own mind, the action is…

- Completely acceptable
- Moderately acceptable
- Unclear
- Moderately unacceptable
- Completely unacceptable

1. Work overtime to ship everything possible before the end of the year to meet the annual budget target. [Choose...]

2. Bury most of scrap expense in other expense accounts to avoid scrutiny of excessive scrap costs. [Choose...]

3. Ask a consulting firm to delay invoicing for a large amount of work already done until next year. [Choose...]

4. Postpone writing off spoiled, worthless inventory. [Choose...]

An employee might benefit financially from many other actions, such as the following. Assume the individual strongly needs the money for reasons such as family financial distress, and is very unlikely to be caught.

5. Choose not to report excessive payment of $500 included in a paycheck, due to a

clerical error. `Choose...`

6. Deposit a check, received in payment of a written-off account, to one's own personal bank account. `Choose...`

7. Claim duplicate reimbursement for lodging related to a business trip, when one's spouse also claims reimbursement for the same expense from their employer.
`Choose...`

8. Sell the company's client list to a competitor. `Choose...`

The remaining questions concern your personal attitudes and beliefs. Response options for the next questions are:

▦ Disagree strongly
▦ Disagree somewhat
▦ Agree somewhat
▦ Agree strongly

9. Success is based on survival of the fittest; I am not concerned about the losers.
`Choose...`

10. For me, what's right is whatever I can get away with. `Choose...`

11. In today's world, I feel justified in doing anything I can get away with to succeed.
`Choose...`

12. My main purpose in life is getting as many goodies as I can. `Choose...`

13. Making a lot of money is my most important goal. `Choose...`

14. I let others worry about higher values; my main concern is with the bottom line.
`Choose...`

15. People who are stupid enough to get ripped off usually deserve it. `Choose...`

16. Looking out for myself is my top priority. `Choose...`

17. I tell other people what they want to hear so that they will do what I want them to do.
`Choose...`

18. I would be upset if my success came at someone else's expense. `Choose...`

19. I often admire a really clever scam. `Choose...`

20. I make a point of trying not to hurt others in pursuit of my goals. `Choose...`

21. I enjoy manipulating other people's feelings. `Choose...`

22. I feel bad if my words or actions cause someone else to feel emotional pain.
`Choose...`

23. Even if I were trying very hard to sell something, I wouldn't lie about it. `Choose...`

24. Cheating is not justified because it is unfair to others. `Choose...`

Please **Submit responses and continue...**

Next, please consider the acceptability of the following two actions, using the same scale of *Completely Acceptable* to *Completely Unacceptable* that you used earlier:

1. Dave is CEO of a midsized management consulting firm. His personal data on the corporate website includes two items that are untrue but enhance his prestige both with customers and inside the firm: (1) that he had served as Professor of Management at a major state university, although he actually was an occasional part-time instructor; and (2) that he received a purple heart for injuries suffered in the First Gulf War—a story lent some credibility by a limp he actually sustained in a motorcycle accident.

   [Choose...]

2. Larry is a salesman whose employer awards a "Sales Rep of the Year" prize to the top performer. The prize is not monetary, but provides recognition in the form of a celebration party, internal newsletter mentions, and a premier parking space for the year. To ensure winning the prize this year, Larry manages to undermine a large sale by his chief rival, using a friend employed by the rival's customer.   [Choose...]

The remaining items require that you choose between two responses for each item:

3.   ○ I have a natural talent for influencing people.
     ○ I am not good at influencing people.

4.   ○ Modesty doesn't become me.
     ○ I am essentially a modest person.

5.   ○ I would do almost anything on a dare.
     ○ I tend to be a fairly cautious person.

6.   ○ When people compliment me I sometimes get embarrassed.
     ○ I know that I am good because everybody keeps telling me so.

7.   ○ The thought of ruling the world frightens the hell out of me.
     ○ If I ruled the world it would be a better place.

8.   ○ I can usually talk my way out of anything.
     ○ I try to accept the consequences of my behavior.

9.   ○ I prefer to blend in with the crowd.
     ○ I like to be the center of attention.

10. ○ I will be a success.
     ○ I am not too concerned about success.

11. ○ I am no better or worse than most people.
     ○ I think I am a special person.

12. ○ I am not sure if I would make a good leader.
     ○ I see myself as a good leader.

13. ○ I am assertive.
     ○ I wish I were more assertive.

14. ○ I like to have authority over other people.
    ○ I don't mind following orders.

15. ○ I find it easy to manipulate people.
    ○ I don't like it when I find myself manipulating people.

16. ○ I insist upon getting the respect that is due me.
    ○ I usually get the respect that I deserve.

17. ○ I don't particularly like to show off my body.
    ○ I like to show off my body.

18. ○ I can read people like a book.
    ○ People are sometimes hard to understand.

19. ○ If I feel competent I am willing to take responsibility for making decisions.
    ○ I like to take responsibility for making decisions.

20. ○ I just want to be reasonably happy.
    ○ I want to amount to something in the eyes of the world.

21. ○ My body is nothing special.
    ○ I like to look at my body.

22. ○ I try not to be a show off.
    ○ I will usually show off if I get the chance.

23. ○ I always know what I am doing.
    ○ Sometimes I am not sure of what I am doing.

24. ○ I sometimes depend on people to get things done.
    ○ I rarely depend on anyone else to get things done.

25. ○ Sometimes I tell good stories.
    ○ Everybody likes to hear my stories.

26. ○ I expect a great deal from other people.
    ○ I like to do things for other people.

27. ○ I will never be satisfied until I get all that I deserve.
    ○ I take my satisfactions as they come.

28. ○ Compliments embarrass me.
    ○ I like to be complimented.

29. ○ I have a strong will to power.
    ○ Power for its own sake doesn't interest me.

30. ○ I don't care about new fads and fashions.
    ○ I like to start new fads and fashions.

31. ○ I like to look at myself in the mirror.
    ○ I am not particularly interested in looking at myself in the mirror.

32. ◎ I really like to be the center of attention.
    ◎ It makes me uncomfortable to be the center of attention.

33. ◎ I can live my life in any way I want to.
    ◎ People can't always live their lives in terms of what they want.

34. ◎ Being an authority doesn't mean that much to me.
    ◎ People always seem to recognize my authority.

35. ◎ I would prefer to be a leader.
    ◎ It makes little difference to me whether I am a leader or not.

36. ◎ I am going to be a great person.
    ◎ I hope I am going to be successful.

37. ◎ People sometimes believe what I tell them.
    ◎ I can make anybody believe anything I want them to.

38. ◎ I am a born leader.
    ◎ Leadership is a quality that takes a long time to develop.

39. ◎ I wish somebody would someday write my biography.
    ◎ I don't like people to pry into my life for any reason.

40. ◎ I get upset when people don't notice how I look when I go out in public.
    ◎ I don't mind blending into the crowd when I go out in public.

41. ◎ I am more capable than other people.
    ◎ There is a lot that I can learn from other people.

42. ◎ I am much like everybody else.
    ◎ I am an extraordinary person.

Comments and feedback will be appreciated (please do not identify yourself):

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