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When deviants talk: the role of Dark Triad traits and moral reasoning in whistleblowing

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ORIGINAL PAPER



When deviants talk: the role of Dark Triad traits and moral reasoning in whistleblowing

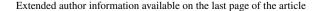
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Abstract

Whistleblowing is an effective means to uncover fraud and other misconduct in organizations. However, it is puzzling why some employees come forward despite numerous disadvantages, severe retaliation, and negative social perceptions of the whistleblower within and outside the firm. Understanding whistleblowing as an act of deviance can enrich explanations for whistleblowing in such dilemmas. Drawing on psychology literature, we look at the moderating effect of the Dark Triad (Machiavellianism, narcissism, and psychopathy), as well as moral reasoning on the factors behind the whistleblowing process. We surveyed 375 economics and business majors and found that both forms of deviance influence the decision process, making internal whistleblowing more likely. Dark Triad personalities are less influenced by adverse subjective norms and their attitude toward the consequences of whistleblowing. The negative impact of perceived retaliation on whistleblowing intention is lessened by high moral reasoning. Both types of deviations from the norm may foster whistleblowing, making it ex-post challenging to distinguish different types of whistleblowers. Importantly, we argue that specific policies, such as protection, may only serve one kind of whistleblower, disregarding the important influence of subjective norms, which may foster a more desirable type of whistleblower. Our research shows that deviant personality characteristics can counteract insufficient protection or negative cultural views on whistleblowing. These findings have direct practical implications for whistleblowing systems, corporate governance policies, and policymakers. Moreover, we contribute to an emerging stream of research that moves away from a purely pro-social view and toward a more comprehensive understanding of whistleblowing by introducing a holistic concept of whistleblowing as deviance.

Keywords Whistleblowing · Dark Triad (Machiavellianism, narcissism, psychopathy) · Moral reasoning · Fraud





1 Introduction

Whistleblowing as voice¹ behavior is an effective means to uncover fraud and other misconduct in organizations (ACFE, 2020; Baloria et al., 2017; Bowen et al., 2010; Call et al., 2018; Oelrich & Siebold, 2024; Wilde, 2017). However, given numerous deterring factors and disadvantages, such as severe retaliation (Alford, 2001; ERC, 2016; Park et al., 2020), lack of protection in many jurisdictions (Oelrich, 2019; Transparency International, 2022), and contradictory (social) perceptions of the whistleblower (Gibeaut, 2006; Grant, 2002; Kenny et al., 2019; Near & Miceli, 1985; Rauhofer, 2007; Stolowy et al., 2019), it is still puzzling *why* and *which* employees come forward.

In this paper, we address whether certain personalities are more likely to 'blow the whistle' on fraud. We draw on psychology and management literature to conceptualize whistleblowing as organizational deviance (Kölbel & Herold, 2019; Near & Miceli, 1985) in contrast to the dominating view of whistleblowing as purely prosocial (Bereskin et al., 2019; Seifert et al., 2010) and altruistic behavior (Arnold & Ponemon, 1991; Liyanarachchi & Newdick, 2009). This holistic view can explain employee whistleblowing in the presence of adverse legal, social, and organizational norms. A holistic concept of whistleblowing as deviance in line with early notions of whistleblowing as dissidence (Near & Miceli, 1985) may thus explain observed whistleblowing more adequately. Moreover, it also fits the perception of recent legal developments that selfless motives are not necessary characteristic of whistleblowing. For example, the European Parliament explicitly stated in its whistleblowing law: "The motives of the reporting persons in reporting should be irrelevant in deciding whether they should receive protection" (European Parliament, 2019: Art. 32).

Among different personality characteristics, the so-called Dark Triad personalities (D3) have gained increased interest from accounting and management scholars (e.g., Bounken et al., 2020; Majors, 2016; Mutschmann et al., 2022), where in particular narcissism has been studied individually (Chou et al., 2021; Church et al., 2020; Hayes & Reckers, 2020; Jalan, 2020; Kerckhofs et al., 2024; Marquez-Illescas et al., 2018; Olsen & Stekelberg, 2016; Olsen et al., 2014; Young et al., 2016). The D3 consist of a shared 'dark core,' consisting of aggressiveness, self-promotion, coldness on emotional levels, and low trust in others, but with three distinct personality traits: Machiavellianism (calculated social manipulation), narcissism (excessive ego and selfish behavior), and psychopathy (callous, impulsive, and predatory behaviors) (Book et al., 2015; Paulhus & Williams, 2002). Moreover, the D3 are also positively characterized as forceful, skilled negotiators, embracing challenges, charismatic, self-confident, enthusiastic, and are more willing to test limits and explore other alternatives (ACFE 2014; Jones & Paulhus, 2014).

¹ Voice can be defined as "verbal communication that is intended to improve rather than merely criticize" and "speaking up" (Burris et al., 2008: 912), which is the general idea of whistleblowing (e.g., Transparency International 2022).



They are mainly perceived as detrimental to firms, e.g., aggressive reporting or corrupt intentions (Harrison et al., 2018; Zhao et al., 2016; Johnson et al. 2013; Majors, 2016). According to Book et al., (2015: 30), the D3 are associated with "significant, deliberate harm to others, meaning they overlap well with the English meaning of 'evil'." Bailey (2015) finds that higher psychopathic scores are associated with academic misconduct among academic accountants, suggesting higher fraud tendencies. Boddy (2017) uses a case study of a psychopathic CEO to describe how the organization deteriorated over time. However, a recent stream of literature highlights their possible benefits to organizations, e.g., creativity and problem-solving skills (Church et al., 2020; Hayes & Reckers, 2020; Jalan, 2020; Shellenbarger, 2014; Spain et al., 2014) or higher professional skepticism (Hobson et al., 2020). For example, Chou et al. (2021) find that auditor narcissism could improve audit quality through greater auditor independence. This result is supported by Kerckhofs et al. (2024) observation that higher audit partner narcissism leads to more going concern opinions toward financially distressed clients. The influence of the D3 characteristics on positive and negative outcomes is complex, and it is thus unclear how they affect voice behaviors.

The D3 personalities are of practical relevance, as research suggests that their presence in the workplace has been documented recently (Lindquist, 2008; Shellenbarger, 2014), especially in accounting and higher-ranking positions (Amernic & Craig, 2010; Boddy, 2017; James, 2013). Their prevalence, relevance, and complexity thus necessitate a closer look at fraud and voice contexts such as whistleblowing. We look at the moderating effect of each D3 characteristic on considerations to blow the whistle, i.e., personal, social, and organizational influences. We test our hypotheses with a survey of accounting and business students (N = 375) from a large European university who assume the role of employees in an accounting context. The participating students are confronted with an observation of accounting fraud in a contextually rich setting. Throughout several sessions over an entire semester, we elicit our variables of interest and assessments of their personality.

We argue that several types of deviant personalities lead to higher whistleblowing because they moderate the relevance of antecedents in the whistleblowing process. Consistent with our hypotheses, we find that D3 personalities moderate the whistleblowing decision process in a way that can overcome adverse subjective norms and attitudes to whistleblowing. Such norms would otherwise reduce employees' likelihood of coming forward with information on fraud. Negative attitudes, such as that it is not part of the employees' role to report misconduct, are also less relevant in the decision process for D3 personalities. On the other hand, fears of retaliation seem more relevant, driven by the Machiavellian character who tends to act rationally and weighs costs and benefits.

We contrast this view of whistleblowing as deviant behavior with the traditional pro-social view linking whistleblowing with high morals (Arnold & Ponemon, 1991; Bereskin et al., 2019; Liyanarachchi & Newdick, 2009; Seifert et al., 2010). Despite different reasons, outcomes may be similar. To show that seemingly prosocial whistleblowing can ex-post not be distinguished from other 'deviant forms' of whistleblowing, we compare our findings from D3 whistleblowers against whistleblowing based on high moral reasoning. Comparisons show that higher levels of



moral reasoning increase the relevance of subjective norms yet decrease the effect of retaliation fears on the whistleblowing process. Therefore, our findings suggest that hindrances to whistleblowing can be overcome by different deviating personalities from the norm, albeit for different reasons. It is important to capture and distinguish these types in a unified framework, as they are influenced differently: 'Dark Triad whistleblowers' are less influenced by negative societal norms or norms in the workplace. Whereas 'moral whistleblowers' place more weight on these norms are less influenced by lack of protection and possible retaliation. Ex-post, both types are more likely to blow the whistle despite negative subjective norms and retaliation fears.

Our view of whistleblowing as an act of deviance, coupled with our example of D3 personality characteristics and moral reasoning, makes important contributions to accounting research and practice. First, we offer a more holistic approach to understanding whistleblowing as deviance. We thus contribute to the whistleblowing literature by broadening the discussion about whistleblowing beyond a purely pro-social act. Second, we extend psychology, accounting, and management literature on D3 personalities and highlight possible positive outcomes of these personalities in the context of whistleblowing on fraud. Third, our findings have practical implications, such as for firms' decisions to hire or retain employees with certain personality traits and politicians who decide on laws enhancing whistleblowing.

2 Background and hypothesis development

We conceptualize the whistleblowing process in line with the theory of planned behavior and belief influences (Ajzen, 1991; Bicchieri, 2006). We argue that increased whistleblowing can be understood as deviance in line with early notions of whistleblowing as "dissidence" (Near & Miceli, 1985). Dissidence and, thus, deviance may be supported by deviant personalities—characteristics that deviate from the norm (Kölbel & Herold, 2019). While Whistleblowing literature is mainly concerned with the pro-social aspect of such deviations and thus high morals (Arnold & Ponemon, 1991; Bereskin et al., 2019; Liyanarachchi & Newdick, 2009; Seifert et al., 2010), we draw attention to the D3 as another form of deviance.

Here, we argue that a stable deviant characteristic such as the D3 influences the relevance of antecedents in the whistleblowing process, i.e., a moderation effect: "moderator variables are typically introduced when there is an unexpectedly weak or inconsistent relation between a predictor and a criterion variable (e.g., a relation holds in one setting but not in another, or for one subpopulation but not for another)" (Barn & Kenny 1986: 1178). This is akin to a question of why some people blow the whistle, and others do not, despite similar attitudes and norms. The D3 as moderator has already been explored in accounting research in contexts of unethical behavior (e.g., Majors, 2016) and outside of accounting (e.g., Brown et al. 2010; Lan & Ma 2024; Selzer & Oelrich 2022). Our model is given below in Fig. 1.

Whether personality traits are better suited as moderators in the theory of planned behavior (TPB) (e.g., Barn & Kenny 1986) or as mediators (Ajzen, 1991), remains an open debate. We therefore test a competing model that conceptualizes personality



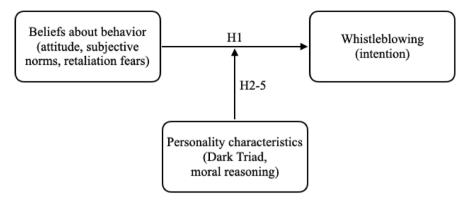


Fig. 1 Hypothesized model

characteristics as mediators, such that the relationship reads: personality characteristic \rightarrow beliefs \rightarrow whistleblowing. We report on our findings in the explorative analyses section.

2.1 The general whistleblowing process

We use as a framework Ajzen's (1991) theory of planned behavior that has been successfully applied in whistleblowing intention research, e.g., by Brown et al. (2016) on auditors' whistleblowing, Park and Blenkinsopp (2009) in police whistleblowing, Latan et al. (2018) on public accountant whistleblowing, or Chwolka and Oelrich (2020) on whistleblowing on fraud. According to TPB, behavior results from different beliefs about the behavior. These beliefs can be expressed in terms of attitude toward the behavior, which is "the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question" (Ajzen, 1991: 188), subjective norms (e.g., group and social norms), "the perceived social pressure to perform or not to perform the behavior" (Ajzen, 1991: 188), and perceived behavioral control over the behavior: "the perceived ease or difficulty of performing the behavior and it is assumed to reflect past experience as well as anticipated impediments and obstacles" (Ajzen, 1991: 188).

Whistleblowing literature has shown that attitudes influence whistleblowing (e.g., Chwolka & Oelrich, 2020; Culiberg & Mihelič, 2017; Latan et al., 2018; Park & Blenkinsopp, 2009; Watts & Buckley, 2017) as well as subjective norms, which can be thought of as more abstract societal norms, group norms within the firm or team, and norms within a social circle, such as friends and family (Mayer et al., 2013; Butler et al., 2020; Oelrich, 2023, Park & Blenkinsopp, 2009). Mayer et al. (2013) show this in the context of in-group norms regarding colleagues, whereas Butler et al. (2020) conceptualize norms as broader societal norms. Perceived behavioral control in our context reflects perceived retaliation and, thus, retaliation fears. Retaliation is found to have a strong effect on whistleblowing (e.g., Cassematis & Wortley, 2013; Nicholls et al. 2022; Oelrich, 2021; Park & Lewis, 2019); for the average person in our sample, we, therefore, assume that the decision-making process



is influenced by all three belief aspects: attitude, subjective norms, and retaliation. While a more positive attitude and positive subjective norms toward the behavior induce a higher whistleblowing intention, stronger fears of retaliation or lack of trust in the whistleblower system decrease whistleblowing intention. This leads to the following hypotheses:

Hypothesis 1a A positive attitude toward whistleblowing has a positive effect on whistleblowing intention.

Hypothesis 1b A more positive subjective norm toward whistleblowing has a positive effect on whistleblowing intention.

Hypothesis 1c Higher perceived retaliation has a negative effect on whistleblowing intention.

2.2 Influence of Dark Triad (D3)

As prominent examples of deviant personalities, we focus on the D3, consisting of the three subclinical personality traits Machiavellianism, narcissism, and psychopathy. According to prior research, they foster corrupt intentions (Zhao et al., 2016), unethical behavior (Harrison et al., 2018), and aggressive reporting in accounting (Majors, 2016). According to Jones and Paulhus (2014: 30), "ego-reinforcement is the all-consuming motive behind narcissistic behavior; psychopaths and Machiavellians are more motivated by instrumental or material gain." However, employees exhibiting stronger tendencies of these traits may benefit an organization. Evidence suggests auditors with stronger D3 characteristics are less impaired in professional judgment and independence (Hobson et al., 2020). Moreover, as James D. Ratley, former president of the ACFE (Association of Certified Fraud Examiners), said about psychopathic persons: "One of the reasons these people climb so high in the company is that they're very forceful." Nevertheless, these 'dark' personalities—on a subclinical level—are encountered in firms on all hierarchies (e.g., Amernic & Craig, 2010; Boddy, 2017; James, 2013; Shellenbarger, 2014).

2.2.1 Machiavellianism

In line with their manipulative behavior, Machiavellians show characteristics of a strategic planner, coalition former, and reputation builder (Jones & Paulhus, 2014). These traits can be advantageous for the organization, e.g., as they are skilled negotiators. Prior research associates Machiavellianism with unruly and unethical behavior (Dalton & Radtke, 2013; Granitz, 2003; Lowe & Reckers, 2024; McLaughlin, 1970; Murphy, 2012), which leads to the expectation that intentions to blow the whistle will be associated negatively with Machiavellianism. Indeed, Dalton and

² https://www.acfe.com/acfe-in-the-news-2014.aspx



Radtke (2013) find that higher Machiavellianism indirectly negatively affects on whistleblowing intention through perceived costs. Thus, Machiavellians do not directly dismiss whistleblowing as negative but exhibit rational cost—benefit analyses. Dalton (2021) finds that higher Machiavellianism is negatively associated with whistleblowing intentions independent of the seriousness of the observed wrong-doing. Since Machiavellians act cunningly and strategically, long-run consequences should be incorporated into their decision processes. Thus, fear of retaliation should significantly influence their decision process more than the decision of an average person. Moreover, according to Christie and Geis (1970), Machiavellians feel less discomfort, such that stopping wrongdoing via whistleblowing is not that important to them.

Machiavellians are insensitive towards the needs of others, disregarding others' views and opinions. Subjective norms should then be less relevant to their decision. Their attitude might not be as relevant as the 'end justifies the means.' If they think they can ally by (not) blowing the whistle, they would probably act accordingly, irrespective of what they think about the behavior (see literature review above).

Hypothesis 2a Machiavellian personality traits moderate the positive relationship between attitude and whistleblowing intention such that the influence of attitude on whistleblowing will be weaker.

Hypothesis 2b Machiavellian personality traits moderate the positive relationship between subjective norms and whistleblowing intention such that the influence of subjective norm on whistleblowing will be weaker.

Hypothesis 2c Machiavellian personality traits moderate the negative relationship between fear of retaliation and whistleblowing intention such that the influence of retaliation on whistleblowing will be stronger.

2.2.2 Narcissism

A narcissistic personality trait correlates positively to cognitive ability, but narcissists overestimate their competence, ability, and importance for managing tasks successfully (Paulhus & Williams, 2002). Narcissists make a good first impression with self-confidence and decisive characteristics, appearing enthusiastic and charming (Spain et al., 2014).

Narcissistic tendencies can have positive as well as negative effects on a firm. Narcissistic CEOs tend to bias their earnings announcements upward (Marquez-Illescas et al., 2018) and increase corporate tax sheltering (Olsen & Stekelberg, 2016). Still, they also seem to positively affect share prices (Olsen et al., 2014) and even supervisory control (Hayes & Reckers, 2020).

Jalan (2020) proposes that narcissistic personalities are more likely to blow the whistle based on a notion of subjectivity that moves away from the pro-social perspective. The belief in their grandiosity and importance should simultaneously emphasize the narcissist's attitude toward whistleblowing while disregarding others'



attitudes (subjective norm). Narcissists' self-improvement motivation makes them unafraid to express their opinions (Liu et al., 2013). Narcissists assume they are exempt from organizational rules or norms and voice critical opinions concerning workplace rules, practices, and processes (Grijalva & Newman, 2015). O'Reilly and Chatman (2020) propose that narcissists often feel as if they do not receive the admiration and recognition they deserve. This could lead to narcissistic rage and moral outrage, building whistleblowers' motivations (Jalan, 2020), which could imply that they ignore norms and the negative consequences of reporting observed wrongdoing. Clinical and subclinical aspects of narcissism include excessive self-esteem, and the fiction of unlimited success (Campbell et al., 2011; Chatterjee & Hambrick, 2007). The narcissist's overestimation of their importance and success should also render them immune to signs of retaliation. Due to their excessive self-confidence, they are willing to take risks and see the chance of fame as greater than the risk of loss (O'Reilly & Chatman, 2020: 12), implying that narcissism weakens the fear of retaliation.

Hypothesis 3a Narcissistic personality traits moderate the positive relationship between attitude and whistleblowing intention such that the influence of attitude on whistleblowing will be stronger.

Hypothesis 3b Narcissistic personality traits moderate the positive relationship between subjective norm and whistleblowing intention such that the influence of subjective norm on whistleblowing will be weaker.

Hypothesis 3c Narcissistic personality traits moderate the negative relationship between retaliation fears and whistleblowing intention such that the influence of retaliation on whistleblowing will be weaker.

2.2.3 Psychopathy

Psychopaths, on a clinical level, are people without a conscience and without the capability to love or feel empathy for other people (Blair, 2001; Boddy et al., 2010; Dolan, 2008). This makes psychopaths particularly selfish (Boddy et al., 2010) and manifests in violent, anti-social behavior (Herve et al., 2004). Moreover, psychopathy leads to short-term decisions, always to maximize one's benefit (Boddy, 2006). Psychopaths tend to ignore future consequences and exhibit low self-control (Boddy, 2011; Jonason & Tost, 2010; Jones & Paulus, 2014). Thus, psychopaths (callous and impulsive) are motivated by short-term consequences and rewards and disregard possible adverse effects in the long run (Bounken et al. 2020; Jones & Paulhus, 2014). According to Spain et al. (2014), they test limits and perceive specific options as feasible that others would not. Their impulsiveness and disregard for long-run consequences should render possible effects of retaliation less relevant. Other aspects of psychopaths are low levels of empathy and anxiety (Boddy, 2011; Boddy et al., 2010; Paulhus & Williams, 2002). Due to their lack of empathy, they should be less influenced by other people's opinions of whistleblowing (subjective



norm). In addition, their attitude toward the behavior should be less relevant in the decision process as they are motivated by short-term outcomes.

Hypothesis 4a Psychopathic personality traits moderate the positive relationship between attitude and whistleblowing intention such that the influence of attitude on whistleblowing will be weaker.

Hypothesis 4b Psychopathic personality traits moderate the positive relationship between subjective norm and whistleblowing intention such that the influence of subjective norm on whistleblowing will be weaker.

Hypothesis 4c Psychopathic personality traits moderate the negative relationship between retaliation fears and whistleblowing intention such that the influence of retaliation on whistleblowing will be weaker.

2.3 Moral reasoning in the theory of Kohlberg

According to the neo-Kohlbergian theory of moral development, moral reasoning can be classified into several levels (Christensen et al., 2016; Kohlberg, 1974; Rest et al., 1999). Each level represents a different predominant reasoning process for evaluating events, situations, opportunities, or behavior. We are particularly interested in the post-conventional level, where the rights and reflections of others are considered, and rules are accepted when they result from a discourse or consideration. As a result, not all societal rules or laws are taken as "righteous" (Kohlberg, 1974; Rest et al., 1999). These reasoning processes can also be described as contractual legalistic and conscience or principle oriented. Not necessarily social rules are important, but principles abiding by a more universal logic (Kohlberg, 1974). Such higher levels of moral reasoning have been found to correlate to higher whistleblowing intention and behavior in accounting and management contexts (Arnold & Ponemon, 1991; Brabeck, 1984; Liyanarachchi & Newdick, 2009; Stolowy et al., 2019). However, whether this finding is due to a direct effect or whether the underlying influence process leads to these correlations is unclear.

People who judge a dilemma according to the post-conventional level should primarily be influenced by their principles or what they believe is fair in a group consensus. As such, attitude should be more important in their decision-making process than for the average person and societal and group norms that consist of the beliefs of significant others, according to Ajzen (1991). For people who strongly argue in line with this post-conventional reasoning, considerations by others would be more important, as they represent a social consensus about a behavior, regardless of (lack of) legal norms.

For individuals with high moral reasoning, whistleblowing may also be experienced as a "choiceless choice" (Alford, 2007). Research also suggests that such intrinsic motivations diminish the influence of negative consequences, such as adverse management reactions (Murphy et al., 2020), and higher moral reasoning may counteract peer pressure in auditing contexts (Ponemon, 1992). In line with



stronger consideration of the rights and needs of others, there is less room for consideration of negative impacts on oneself or if others discard one as a denunciator. Consequently, retaliation should play only a minor role.

Hypothesis 5a Higher levels of moral reasoning moderate the positive relationship between attitude and whistleblowing intention such that the influence of attitude on whistleblowing will be stronger.

Hypothesis 5b Higher levels of moral reasoning moderate the positive relationship between subjective norm and whistleblowing intention such that the influence of subjective norm on whistleblowing will be stronger.

Hypothesis 5c Higher levels of moral reasoning moderate the negative relationship between retaliation fears and whistleblowing intention such that the influence of retaliation on whistleblowing will be weaker.

3 Method and design

3.1 Sample description and questionnaire

We used students as survey respondents because they are a readily available respondent pool and are accountants and auditors of tomorrow. Students have already been shown to be an adequate substitute for professionals, such as investors (Elliott et al., 2007). Over one semester, we distributed the pen and pencil questionnaire among accounting and business students in lectures at a large European university. Participation was voluntary, but participants entered a lottery with cash prices. The prices were not associated with the answers to facilitate independent and honest answers. Each session took about 20 min, and students were identified across questionnaires with randomly generated numbers to ensure anonymity. After excluding empty questionnaires and those who did not pass the quality checks,³ we are left with 375 responses. Because the questionnaire was done on paper, respondents could skip questions or items. We performed a Little's MCAR test on all individual D3 items (Chi - Square = 285.996, df = 293, p = .604), all individual items of the Theory of planned behavior and whistleblowing intention (Chi - Square = 406.512, df = 394, p = .321), all items in the model excluding controls (Chi - Square = 1354.716, df = 1376, p = .654), as well as including controls (Chi - Square = 1462.334, df = 1486, p = .664). Given that all results are not significant, we have no reason to assume that values are systematically missing. We,

³ Quality checks included the scanning of questionnaires for systematic marks, inconsistencies, and indicators that students did not pay attention to the questionnaire. Most prominently, they included patterns (all ticks from left to right to left or always left/always middle throughout the survey) or strong indications that students did not pay attention, such as a drawing of a llama on every page and mostly missing ticks. When in doubt, both authors checked a questionnaire and jointly decided whether it should be inor excluded.



therefore, use a simple mean replacement (see suggestions by Hair et al., 2017, 2018). For all latent constructs, we use means across all items within construct to derive the instrument variable.

As Ahmad et al. (2014) proposed, we were careful to minimize several response biases and included a vignette instead of a theoretical questionnaire (see also Gronewold et al., 2013; Nelson et al., 2016). The vignette, items, and descriptive statistics for each item are in the Appendix.

3.2 Instruments

Our measures-of-fit indicate that our constructs are supported by the data (for a specific discussion, see below), as indicated by adequate Cronbach's alpha, rho_a, and rho_c>0.7, VIF well below 5.0 for both inner and outer model (Hair et al., 2017; Sarstedt & Mooi, 2019), and HTMT values below 0.85. The full item list, including measures-of-fit indicators (VIF, Cronbach's alpha, rho_a, rho_c), is in the Appendix and HTMT values in the correlation table.

3.2.1 Theory of planned behavior

All variables in the TPB are adapted from two prior studies by Brown et al. (2016) and Park and Blenkinsopp (2009) and measured on a five-point Likert response format with anchoring at the extremes. The dependent variable Whistleblowing intention is measured with six items ("She is going to report the incident internally"). The independent variable Attitude is conceptualized as the belief strength or consequence of a behavior and subjective evaluations of these consequences (Ajzen, 1991). We measure attitude towards whistleblowing with six items for belief strength ("To report the incident would help avoid damage to the company") and six corresponding items for evaluation ("To avert damage from the enterprise, is for her ..."). Subjective norms consist of six normative belief items ("Colleagues think she should report the incident") and six motivations to comply with these beliefs ("How important would the opinion of colleagues be to you in your decision?"). Aspects of retaliation are part of what Ajzen (1991) describes as behavioral controls, which consist of control beliefs ("Retaliatory measures by the direct superior are in my opinion ...") and perceived power ("Retaliation by the direct superior would complicate her reporting."). We use eight items that correspond to such Fears of retaliation. The full item list and corresponding fit indices are given in the Appendix.

In line with prior accounting research and research on whistleblowing, we measured items from TPB as single reflective constructs (e.g., Black et al. 2022; Brown et al., 2016; Latan et al., 2018). Since other studies use a different approach (e.g., Park & Blenkinsopp, 2009: single reflective multiplicative index, Tornikoski & Maalaoui 2019: higher order formative and reflective), we also calculated an alternative model with formative indicators. Results are inferentially the same, and we thus assume that our results are not driven by the specific model variant.



3.2.2 Dark Triad, Machiavellianism, narcissism, psychopathy

We measure each D3 aspect with the self-administered Short Dark Triad (SD3) instrument developed by Jones and Paulhus (2014), which incorporates many aspects of the 'gold-standard' tests for each aspect without straining the participants excessively. The instrument consists of 27 statements, 9 for each aspect: Machiavellianism ("Make sure your plans benefit yourself, not others"), narcissism ("People see me as a natural leader"), and psychopathy ("People often say I'm out of control"). Answers are given in a five-point response format with anchoring at the extremes (1 = strongly disagree, 5 = strongly agree). Some items are reverse coded. The full item list and corresponding fit indices are given in the Appendix. In line with prior explorations of the D3 in accounting research (e.g., Majors, 2016) and the notion of a shared "core" (Jones & Paulhus, 2014: 30), we explore the overall D3 score as well as its subscales.

3.2.3 Moral reasoning

For moral reasoning, we use the defining issues test (DIT), a self-administered test developed by Rest et al. (1999), which measures a person's moral reasoning according to Kohlberg's moral development levels (pre-conventional, conventional, and post-conventional). Here, we use a modified version of the DIT, the accounting-DIT (ADIT) (Welton & Guffey, 2008; Welton et al., 1994). In contrast to the DIT, the ADIT scoring procedure is freely available and transparent in its application. In the test, participants are confronted with four business specific ethical dilemma situations. For example, respondents are asked whether some critical private travel expense reimbursements should be approved by the accountant. Afterward, they are given 12 thoughts in line with different levels of moral reasoning and asked to state whether and how much these influenced their decision. A consideration relevant on the post-conventional (highest) level is: "[Decision depends on ...] Would it be fair to other employees [...]?". Importance for each consideration is recorded on a 5-point answering format with "no" (1), "little" (2), "some" (3), "much" (4), and "great" (5) importance.

Additionally, participants are then asked to rate the four most important considerations. This is used to calculate the *P-Score* (*ADIT*), a measure in DIT research (Bailey et al., 2010). It indicates the relative importance participants give to the post-conventional level. It can take on values of 0 to 95, where a higher value means more importance is given to the post-conventional level. Our *P-Score* (*ADIT*) mean value of 29.59 (SD=11.57) is comparable to other studies using the P-Score based on the ADIT questionnaire (e.g., Welton & Guffey, 2008: 32.10). However, if participants do not indicate a level three consideration as one of their four most important aspects—despite high agreement with this item—it will not be counted toward their *P-Score* (*ADIT*). A second drawback is that if respondents did not complete the questionnaire or did not indicate all their four most important items, the P-Score cannot be calculated. This results in a loss of several responses.

We, therefore, used an alternative measure to capture the post-conventional reasoning. Over the four scenarios, we have 15 items that correspond to moral reasoning on a post-conventional level. These are used for our construct of moral reasoning.



Reliability is slightly lower than the other constructs with $\alpha = 0.490$. This does not change significantly when we look at the different stages within the level (Kohlberg, 1974) separately, with stage 5 at 0.498 and stage 6 at 0.513. Because construct reliability measures are usually not added to the construct and often only a *P-Score* is presented (e.g., Rest et al., 1999; Welton & Guffey, 2008), we cannot cross validate its adequacy. Yet, given the complex nature and the different scenarios used in the instrument, these values seem reasonable, and we use the measure in our analyses. As a control, we also report results using the *P-Score* (*ADIT*), which are inferentially the same.

3.2.4 Control variables

We elicited several sociodemographic aspects as control variables: self-identified gender (0 = male, 1 = female), age (years), practical experience in accounting related work (years), and university courses taken that are related to accounting (number of courses).

4 Results

We use partial least squares structural equation modeling to test for the moderations. A model with all moderations added simultaneously inadvertently increases the maximum number of path connections by 12 (instead of 1). Given our sample size, such a model might be too complex to reduce type II errors (e.g., Hair et al., 2017 on \mathbb{R}^2 rules of thumb). Yet, gathering even more business students in class as participants was pragmatically infeasible. Hence, we only add one moderation at a time (e.g., narcissism moderates attitude). We employ a standard bootstrapping (n = 5000) procedure, path-weighting scheme, and standardized product indicator for moderation effects in line with literature recommendations (Hair et al., 2011, 2017, 2018). As an additional control, we use the PROCESS extension of SPSS to calculate the moderation effects. Results are inferentially the same.⁴

Correlation statistics are given in Table 1. Heterotrait-monotrait-ratio (HTMT) are all < 0.85 (except for D3 Traits), indicating discriminant validity, i.e., that latent constructs have a stronger relationship with their indicators than with the ones from other constructs (Hair et al., 2018: 60–61). In line with prior large-scale studies on D3 traits (Rogoza et al., 2020), we find that the D3 are best explained by three distinct constructs. The individual constructs correlate significantly and show high HTMT values, which is expected because the D3 share a common attribute core (Paulhus & Willams, 2002).

 $^{^4}$ We also establish measurement invariance of the composite models (MICOM) as well as multigroup invariance of coefficients via a multigroup analysis (MGA) (Hair et al., 2018) for the control variables gender, age, work experience, and accounting courses taken. We find no significant differences within and across groups for compositional invariance (MICOM: all p > 0.05). MGA analyses for each group compared to the general model's path coefficients are not significant (MGA: all p > 0.05). This means that the groups did neither understand the constructs differently nor are the path coefficients different across, for example, male and female respondents. Thus, they do not alter the results and are not further discussed.



0.063 0.093 9.000 0.060 0.174 0.132 0.115 0.185 0.122 0.018 0.053 0.085 0.111 4 090.0 0.157 0.093 0.151 0.111 0.177 0.089 0.147 0.080 0.005 0.224 Ī 13 0.224*** <0.000) 0.114 0.092 0.180 0.173 0.116 0.243 0.003 0.086 0.161 12 0.113 0.056 0.245 0.163 0.082 0.005 0.264 0.247 0.087 0.222 (0.943)0.112) Ξ 0.153 0.137 0.109 0.139 0.003 0.079 0.094 0.944) -0.0800.420 -0.0820.113) 0.178) 0.097 10 0.316 0.266 0.266 0.417 -0.1040.330 0.276 0.383 0.340 0.490 0.060 (0.241)(0.459)0.020 (767)(0.253)6 -0.190** 0.320 0.272 0.286 1.069 0.617 0.014 0.262 0.655 0.723 0.030 0.073 (0.757)(0.737)(700.0)-0.051(0.424)(0.388) ∞ 0.485*** (<0.000) -0.126*0.232 9260 0.375 0.282 0.693 -0.030-0.040(689.0)(0.393)(0.041)(0.053)(0.091)0.287 0.301 0.498*** 0.244** -0.238*** <0.000) 0.062 (0.225) -0.116^{+} 0.238 0.269 0.283 0.401 0.961 0.714 0.001) 0.029 (0.663)0.015 (0.065)0.8259 (<0.000)).880*** < 0.000) -0.236** 0.734*** (<0.000) 3.717** -0.119^{+} (0.831)(0.726)(0.001)(0.082)0.092 (0.293) 0.015 0.318 0.336 0.8100.397 -0.028(0.212)(0.065)-0.062-0.065(0.321)(0.013)0.206* (0.042)(0.601)(0.647)(0.928)(0.927) 0.129^{+} 0.099 0.005 0.293 0.782 0.279 0.235 4 -0.183*0.320 0.433 0.726 0.038 0.039 0.026 0.108 0.079 (0.142)-0.059(0.735)-0.015(0.564)(0.722)(0.702)(0.276)(0.269)-0.0223 0.318*** (<0.000)(0.985)(0.402)-0.079(0.218)0.015 (0.819) -0.056(0.376)(0.362)-0.056(0.398)(0.032)-0.021(869.0)(0.401)0.104 0.047 0.500 0.78I0 0.411*** 0.291*** -0.217**< .0.000) <0.000) 0.130*0.000 0.010 0.104 0.152 (0.011)-0.086-0.002(0.002)(0.883)(0.212)0.1230.430(0.102)(0.978)0.594(Max) (5.00)2.750 (4.00) (4.41)2.888 (5.00) (4.56)(4.75)(4.86) (5.00)3.667 3.292 2.629 2.111 3.133 Table 1 Correlation matrix (09) 6 22.076 (1.75) (1.38)3.019 (1.11) (1.00)(1.00)3.590 3.267 2.688 2.692 (1.48 (1.67)2.903 2.149 (1.00 3.106 0.487 0.420 (10) (18) soning ADIT blowing Attitude retali-Triad Machia P-score Gender Fear of Psycho Whistle vellian-Narcisation sism Moral pathy Dark ism struct Work exp Con-Age 12 13 10



Table 1 (continued)

Con- struct	M (Min)	Mn (Max)	П	2	3	4	5	9	7	∞	6	10	11	12	13	14
Acc. know	1.024	1 (4)	-0.027 (0.563)	-0.055 (0.386)	-0.053 (0.324)	0.030 (0.566)	0.059	-0.063 (0.433)	0.039	0.139 (0.123)	-0.131 (0.186)	-0.131 -0.018 0.053 (0.186) (0.786) (0.436)	0.053	-0.085 (0.186)	0.111 (0.218)	

Correlations are depicted below the diagonal with p-values in brackets and HTMT values above the diagonal. Cronbach's alpha is shown in italic on the diagonal line. M=mean. Mn=Median. Acc. know. = accounting knowledge. Min indicates lowest value of construct and Max is the highest value of the construct in the sample +p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

 Table 2
 Base model and extensions

lable 2 base model and extensions	SHOILS								
	(1)		(2)		(3)		(4)		Hypotheses
DV: whistleblowing intention	Coef. β (SD)	p-value	Coef. β (SD)	p-value	Coef. β (SD)	p-value	Coef. β (SD)	p-value	
Attitude	0.365***	<0.000	0.350***	<0.000	0.346*** (0.052)	< 0.000	0.355***	<0.000	H1a accepted
Subj. Norm	0.141** (0.055)	0.010	0.113*	0.024	0.118* (0.050)	0.017	0.114* (0.051)	0.025	H1b accepted
Retaliation	-0.196** (0.072)	0.006	-0.170** (0.061)	9000	-0.156* (0.064)	0.014	-0.153* (0.060)	0.011	H1c accepted
Dark Triad	I	I	0.232 (0.177)	0.191	I	I	I	I	I
Machiavell	I	1	ı	I	-0.127 (0.150)	0.399	-0.134 (0.156)	0.390	I
Narcissism	I	I	I	I	0.084 (0.106)	0.430	0.093 (0.106)	0.380	I
Psychopathy	I	I	ı	I	0.133 (0.087)	0.127	0.133 (0.085)	0.117	I
Moral development	I	1	0.090 (0.113)	0.427	0.087 (0.114)	0.446	0.085 (0.114)	0.459	I
Gender	I	I	ı	I	I	I	-0.017 (0.042)	0.683	I
Age	I	I	ı	I	I	I	0.038 (0.044)	0.393	I
Work experience	I	I	I	I	I	I	-0.089^{+} (0.051)	0.081	I
Accounting knowledge	1	1	1	I	1	I	0.016 (0.039)	0.689	I



Table 2 (continued)

	(1)		(2)		(3)		(4)		Hypotheses
DV: whistleblowing intention	Coef. β (SD) p -value	p-value	Coef. β (SD) p -value	p-value	Coef. β (SD) p -value	p-value	Coef. β (SD) p -value	p-value	
R^2	0.234	<0.000 0.292	0.292	<0.000 0	0.294	< 0.000	0.303	<0.000	
$adj.R^2$	0.227	< 0.000	0.282	<0.000	0.281	< 0.000	0.282	< 0.000	
SRMR	0.120		0.103		0.095		0.092		
N	375		375		375		375		

The base model (1) is extended by the composite Dark Triad score (2) or the individual scores (3, 4) and control variables (4). Results are attained using partial least squares bootstrapping with n = 5000 re-samples and path-weighting scheme. SD=standard deviation $+p < 0.10; \ *p < 0.05; \ **p < 0.01; \ **p < 0.001$

Table 3 Moderation effects of Dark Triad characteristics

Dependent variable whistleblowing intention

		_						
	Coef. (<i>β</i>)	SD	<i>p</i> -value	R^2	p -value R^2	adj.R ²	<i>p</i> -value <i>adj.R</i> ²	Hypotheses
Dark Triad mo	deration effec	ts						
Dark Triad × attitude	-0.290***	0.064	< 0.000	0.401	< 0.000	0.393	< 0.000	No hyp
Dark Triad × subj. norm	-0.283***	0.053	< 0.000	0.417	< 0.000	0.409	< 0.000	No hyp
Dark Triad × retaliation	-0.300+	0.161	0.063	0.415	< 0.000	0.407	< 0.000	No hyp
Machiavelliani	sm moderatio	n effect	S					
Machiavel- lianism × attitude	-0.242+	0.140	0.084	0.337	< 0.000	0.328	< 0.000	H2a accepted
Machiavell. × subj. norm	-0.252*	0.107	0.018	0.359	< 0.000	0.350	< 0.000	H2b accepted
Machiavell. × retaliation	-0.177*	0.083	0.033	0.304	< 0.000	0.294	< 0.000	H2c accepted
Narcissism mod	deration effec	ts						
narcissism × attitude	-0.230	0.155	0.137	0.340	< 0.000	0.331	< 0.000	H3a rejected
narcissism ×	-0.220**	0.075	0.003	0.343	< 0.000	0.334	< 0.000	H3b accepted

0.341 0.310

0.020 0.340

0.020 0.338

0.435 0.317

< 0.000

< 0.000

< 0.000

< 0.000

0.300

0.331

0.329

0.308

< 0.000

< 0.000

< 0.000

< 0.000

H3c rejected

H3a accepted

H3b accepted

H4c rejected

Direct effects are omitted along with full tables and goodness of fit statistics to conserve space. Each moderation is calculated using a separate regression, including attitude, subjective norm, and fear of retaliation, as well as direct effect of moderator variable and moderation effect. Results are attained using partial least squares bootstrapping with n=5000 re-samples and path-weighting scheme. Attitude, subjective norm, and fear of retaliation effects do not change significantly across any of the models and are always significant (p < 0.05). Direct effects of all Dark Triad aspects are not significant (p > 0.10). Exceptions (psychopathy) are discussed in the relevant section. SD=standard deviation

The overall model is given in Table 2. As hypothesized, the 'average' person exhibits a decision process that involves significant considerations for all belief factors on whistleblowing. Attitude (H1a), subjective norms (H1b), and retaliation fears (H1c) all play a significant role in the decision to blow the whistle (Table 2, 1). The direct effects of D3 overall and each characteristic, as well as moral reasoning are not significant (p > 0.10, Table 2, 2 to 4) direct effects on whistleblowing intention.



subj. norm

narcissism ×

attitude

subj. norm

retaliation

-0.179

Psychopathy moderation effects psychopathy $\times -0.223*$ 0.

psychopathy \times -0.213*

psychopathy × 0.189 retaliation

0.188

0.096

0.092

0.242

⁺p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

Table 4 Moderation effects for moral reasoning

		·					
Coef. (<i>β</i>)	SD	<i>p</i> -value	R^2	p -value R^2	adj.R ²	<i>p</i> -value <i>adj.R</i> ²	Hypotheses
0.323	0.242	0.182	0.347	< 0.000	0.338	< 0.000	H5a rejected
0.348+	0.192	0.069	0.344	< 0.000	0.336	< 0.000	H5b accepted
0.372*	0.160	0.020	0.318	< 0.000	0.309	< 0.000	H5c accepted
-0.099	0.077	0.189	0.245	< 0.000	0.226	< 0.000	H5a rejected
0.177*	0.073	0.015	0.244	< 0.000	0.226	< 0.000	H5b accepted
0.201**	0.077	0.009	0.262	< 0.000	0.244	< 0.000	H5c accepted
	0.323 0.348 ⁺ 0.372* -0.099 0.177*	0.323	0.323	0.323 0.242 0.182 0.347 0.348+ 0.192 0.069 0.344 0.372* 0.160 0.020 0.318 -0.099 0.077 0.189 0.245 0.177* 0.073 0.015 0.244	0.323 0.242 0.182 0.347 <0.000	0.323 0.242 0.182 0.347 <0.000	0.323 0.242 0.182 0.347 <0.000

Direct effects are omitted along with full tables and goodness of fit statistics to conserve space. Each moderation is calculated using a separate regression, including attitude, subjective norm, and fear of retaliation, as well as direct effect of moderator variable and moderation effect. Results are attained using partial least squares bootstrapping with n=5000 re-samples and path-weighting scheme. Attitude, subjective norm, and fear of retaliation effects do not change significantly across any of the models and are always significant (p < .05). Direct effects of moral reasoning are not significant (p > .10), exceptions are discussed in the relevant section

Results are robust to control variables (Table 2, 4). The control variables are also not significant, except for work experience, which seems to have an overall negative effect on whistleblowing intention ($\beta = -0.089, p = .081$). The moderation analyses are given in Tables 3 and 4 and are discussed separately below.

4.1 Dark Triad (D3) overall

In addition to the individual D3 characteristics, we test the overall construct and its moderating effects. As shown in Table 3, Panel A, we find that $DarkTriad \times attitude$ has similar effects as hypothesized for its individual aspect (H2a, H4a), as it decreases the overall relevance of one's attitude towards whistleblowing with $\beta = -0.290, p < .000$. Very high levels of D3 render the influence of attitude irrelevant, as shown in the spotlight analysis in Fig. 2 (top left). The effect is similar for the interaction of $DarkTriad \times subjectivenorm$ with $\beta = -0.283, p < .000$ (H2b, H3b, H4b). Very high levels of D3 may even reverse the effect, cf. Fig. 2 (top right). We also find weak support for the hypothesized interaction of $DarkTriad \times retaliation$ with $\beta = -0.300, p = .063$ (H2c). However, as we expected different outcomes depending on the specific sub-characteristic, these findings are difficult to interpret. Overall, higher levels of D3 may increase the relevance of retaliation fears in the decision-making process, as shown in Fig. 2 (bottom left).



⁺p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

4.2 Machiavellianism

All three moderations (Table 3, Panel B) are significant and in the expected We find the weakest support for Machiavellianism \times attitude with $\beta = -0.242, p = 0.084.$ $Machiavellianism \times subjective norm$ Machiavellianism \times retaliation are significant with = -0.252, p = 0.018=-0.177, p=0.033, respectively. People who are higher on Machiavellianism seem less influenced by their attitude or subjective norm, in line with hypotheses 2a and 2b that Machiavellians are manipulative and unsympathetic toward the needs and interests of others and that other people are only a 'means to an end.' Their attitude toward the behavior is also less relevant since 'the end justifies the means.' If they see an advantage in becoming a whistleblower, it does not matter whether they view it as a pro-social behavior or as their duty. Retaliation considerations are also very relevant in their decision, in line with hypothesis 2c. These findings align with the view that Machiavellians tend to act rationally, weighing potential costs and benefits. They evaluate possible consequences more in line with the rational homo oeconomicus. All interactions are shown as spotlight analyses in Fig. 3.

4.3 Narcissism

The interaction of $narcissism \times attitude$ (p = 0.137) and $narcissism \times retaliation$ (p = 0.341) are not significant in contrast to $narcissism \times subjective norm$ with $\beta = -0.220, p = 0.003$, as given in Table 3, Panel C. A narcissistic personality seems less influenced by others' evaluations, such as group and societal norms on whistleblowing. This is in line with our hypothesis that narcissists are less concerned with considerations of what others think (Hypothesis 3b), which we illustrate in Fig. 4.

4.4 Psychopathy

Psychopathic personalities are associated with a lack of empathy, short-term orientation, and impulsive behavior. Therefore, our hypotheses for psychopathic characters assumed that all factors should be less relevant in the decision process (Hypothesis 4a to 4c). We find support (Table 3, Panel D) for our hypotheses regarding psychopathy × attitude ($\beta = -0.223, p = 0.020$) and psychopathy × subjectivenorm $\beta = -0.213, p = 0.020$, but not for psychopathy × retaliation (p = 0.435). In line with their impulsive and erratic character and lack of concern for and needs of others, they are less influenced by attitudes and subjective norms on whistleblowing. We also plot these interactions in Fig. 5, which shows that respondents are no longer influenced by subjective norms and attitudes at high levels of psychopathic characteristics.



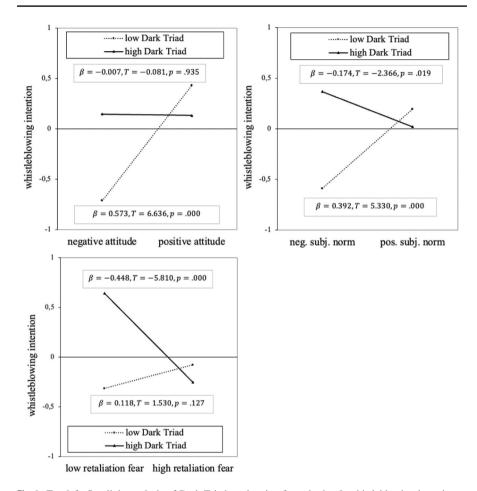


Fig. 2 Top left: Spotlight analysis of Dark Triad moderation for attitude \rightarrow whistleblowing intention at -1 Standard Deviation (SD) and +1SD. Top right: Spotlight analysis of Dark Triad moderation for subjective norms \rightarrow whistleblowing intention at -1SD and +1SD. Bottom left: Spotlight analysis of Dark Triad moderation for retaliation \rightarrow whistleblowing intention at -1SD and +1SD.

4.5 Moral reasoning

In addition to the D3 aspects, we contrast our findings with the dominant view of whistleblowing as pro-social behavior and thus look at moral reasoning as a moderating factor. We hypothesized that moral reasoning would increase the relevance of attitude (H5a) and subjective norms (H5b) and reduce the prohibiting effect of retaliation fears (H5c). In line with stronger consideration of the rights and needs of others, there is less room for consideration of negative impacts on oneself or if others discard one as a denunciator. Such reasoning also emphasizes one's attitude and others' beliefs of what is right, regardless of the rules in place.



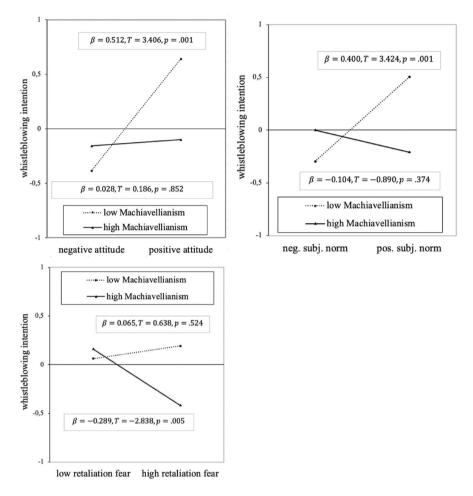
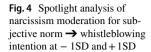
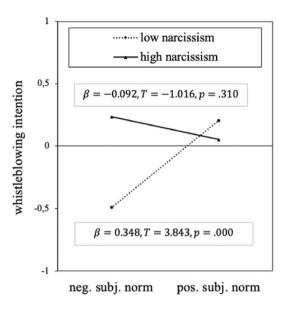


Fig. 3 Top left: Spotlight analysis of Machiavellianism moderation for attitude \rightarrow whistleblowing intention at -1SD and +1SD. Top right: Spotlight analysis of Machiavellianism moderation for subjective norms \rightarrow whistleblowing intention at -1SD and +1SD. Bottom left: Spotlight analysis of Machiavellianism moderation for retaliation \rightarrow whistleblowing intention at -1SD and +1SD

As shown in Table 4, we find support for our hypotheses regarding moralreasoning \times subjective norm with $\beta=0.348, p=0.069$ and moralreasoning \times retaliation with $\beta=0.372, p=0.020$. Thus, people who reason in line with post-conventional moral reasoning are more strongly influenced by subjective norms, regardless of formal legal norms. They are also less inhibited by their fears of retaliation, which is in line with the idea that they are driven by a desire to "do the right thing," regardless of the costs. These effects are shown graphically in Fig. 6. We find no significant interaction for moralreasoning \times attitude (p=0.182). In our control analysis using the *P-Score ADIT* measure, we similarly find support for both interactions. In this regression, the P-Score ADIT also has a direct positive effect on whistleblowing intention ($\beta=0.100, p=0.030$).







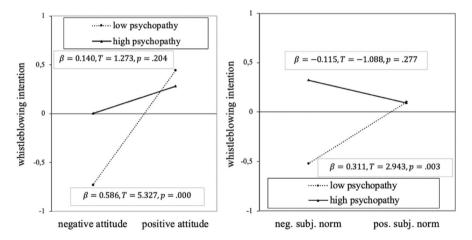


Fig. 5 Left: Spotlight analysis of psychopathy moderation for attitude \rightarrow whistleblowing intention at − 1SD and + 1SD. Right: Spotlight analysis of psychopathy moderation for subjective norms \rightarrow whistleblowing intention at − 1SD and + 1SD

4.6 Exploratory analysis: moral reasoning and Dark Triad (D3)

We also look at the connection between moral reasoning and the D3 traits. As we have no prior hypotheses, these analyses are rather exploratory. We look at the D3 as core construct as well as its aspects, Machiavellianism, narcissism, and psychopathy. While moral reasoning is thought to develop over time and is subject to change during adulthood (e.g., Christensen et al., 2016; Kohlberg, 1974; Rest et al., 1999),



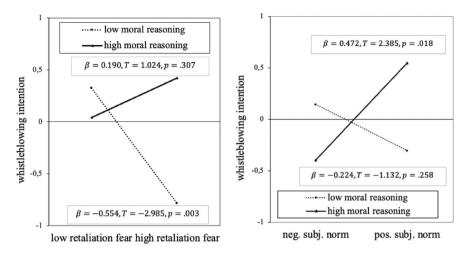


Fig. 6 Left: Spotlight analysis of post-conventional moral reasoning moderation for retaliation \rightarrow whistleblowing intention at -1SD and +1SD. Right: Spotlight analysis of post-conventional moral reasoning moderation for subjective norm \rightarrow whistleblowing intention at -1SD and +1SD

personality traits are thought to be rather stable in contrast (Jones & Paulhus, 2014). We thus model the D3 as influence on moral reasoning.

The correlation analyses (Table 1) between D3 and each aspect and moral reasoning already indicate that there are no significant relationships (all p > 0.10). As such, it is not surprising that we find no relationship in the regression analysis, either. We use the same approach as for the other regressions. For D3 on moral reasoning for example, we find that the influence with $\beta = -0.276$, T = 0.627, p = 0.531, and $R^2 = 0.076$, p = 0.221, is not significant. This is similar for each of the individual D3 traits (p > 0.10). Thus, there is no evidence of a connection between D3 and moral reasoning, indicating that these constructs are not only different from each other but overall separate and not connected.

4.7 Exploratory analysis: Dark Triad (D3) as mediation

Given competing notions in prior research and different conceptualizations of personality traits as either moderators or mediators in the TPB (e.g., Barn & Kenny 1986; Ajzen, 1991), we test for a mediation. Here, one might also think of personality characteristics as directly influencing beliefs, which then influence whistleblowing intentions (Fig. 7).

While we conceptualize these characteristics as moderators, prior research has also used moral reasoning as a mediator (e.g., Dalton & Radtke, 2013 or Christensen et al., 2016 for a review on morals). As an alternative approach, we thus test our model as mediation. We leave the model as is but include no moderations.



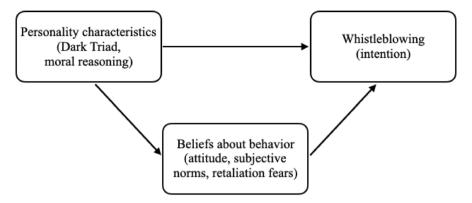


Fig. 7 Alternative mediation model

Instead, we use the D3 and moral reasoning as mediators and direct influence with the same regression approach.

Overall, we find no evidence for such a relationship. Both the direct and mediation effects are not significant (all p > 0.10). Except for the influence of D3 on fears of retaliation, which is significant only at p = 0.090 with $\beta = 0.433$, T = 1.698, and R^2 for this path with 0.187, p = 0.020. Yet, there seems to be no indirect effect. That is, no indirect effect of D3 on whistle-blowing intention (p = 0.285) and no specific indirect effect for D3 \rightarrow retaliation \rightarrow whistleblowing intention (p = 0.114) and therefore no indication that would suggest a partial mediation. Similarly, moral reasoning is significant with $\beta = 0.365$, T = 2.032, p = 0.042, but not significant overall with $R^2 = 0.133$, p = 0.163 for the specific path. Yet, it speaks to our hypothesized positive relationship between moral reasoning and attitude (H5a). Overall, these results are at most suggestive and justify further research.

5 Discussion

Whistleblowing is an important tool for corporate governance, but insufficient protection and negative cultural, societal, or corporate views could make it unattractive for people to come forward. Our study on D3 personalities and moral reasoning provides new explanations for *who* currently blows the whistle.

Drawing on the TPB for decision-making processes, we find that the 'average' person, deciding to take information forward internally, is influenced by their attitude toward the behavior, what others think of it, e.g., friends, family, and colleagues, and their perceived fear of retaliation in the process. This is in line with prior research (e.g., Brown et al., 2016) and highlights that the decision to blow the whistle can be well described with such beliefs as antecedents.

However, neglected in the literature until now is that these beliefs influencing the whistleblowing process may be altered in their relevance to the decision maker based on their specific characteristics. In our example of D3 and moral



reasoning, we find that respondents high on Machiavellian characteristics are less influenced by their attitude and subjective norms (e.g., group and social norms), while retaliation becomes more relevant. Our results also support the idea that for narcissists, the others' beliefs (subjective norms) are less relevant in their whistle-blowing decision. We find that respondents with psychopathic tendencies exhibit less focus on their attitude toward whistleblowing. Moreover, we also find psychopathic personalities indifferent towards subjective norms. Thus, a disregard for such norms seems to be the core that all D3 personalities share. Due to specific histories, people may not see whistleblowing as a positive behavior but as denunciation. Social norms that see whistleblowing as negative behavior could prevent an average employee from blowing the whistle while not stopping D3 personalities from doing so.

In direct contrast to the D3 core, moral reasoning alters the decision process differently, as our study reveals. Respondents who are high on moral reasoning show more concern for the perceptions of others—subjective norms are important for their decisions. Moreover, we find that retaliation becomes less relevant to them. Thus, if subjective norms see whistleblowing as positive behavior, they would be more likely to whistle blow, regardless of the consequences. In everyday working life, such people would feel more harm when they remain silent. This might also explain why prior studies found a direct influence of moral reasoning on whistleblowing (Arnold & Ponemon, 1991; Brabeck, 1984; Liyanarachchi & Newdick, 2009).

When only observed empirically, it could be difficult to distinguish between moral and D3 whistleblowing. Both types of deviance can be an explanation for whistleblowing in countries with negative social norms toward and firms with corporate attitudes against whistleblowing, as well as a lack of protection from retaliation (e.g., for Germany or South Africa see Gibeaut, 2006 or Rauhofer, 2007; for China and India see Oelrich & Erlebach, 2021).

To summarize, with our study, we add to prior literature (Chen & Lai, 2014; Kölbel & Herold, 2019; Smaili & Arroyo, 2019; Watts & Buckley, 2017) by supporting the idea that whistleblowers are not just a specific type of person and that we do not need to rely on 'heroes.' Instead, whistleblowers can emerge from diverse personalities with differing motives. We argue that these disparate findings can be summed up under the concept of whistleblowing as deviance. This can be help explain current whistleblowing under circumstances of lack of protection from retaliation and negative subjective norms. Our concept allows for a more holistic approach to studying whistleblowing and thus serves to extend whistleblowing research.

Using the D3 as examples of deviance, we also extend psychology, accounting, and management literature on these characteristics. In contrast to prior literature that generally stresses the negative influence of D3 traits, we highlight potential positive outcomes of these personalities in the context of whistleblowing on fraud. We thereby contribute to the nascent literature that looks at the 'bright side' of D3 aspects and their constructive and resilient features that can lead to positive outcomes, for example, in auditing (Church et al., 2020). Our findings apply to a range of employees, such as accountants, controllers, or auditors, as all of them should have the knowledge to identify fraud.



Moreover, our findings have direct practical implications. Because of the generally negative connotation of some of these characteristics, firms may be inclined not to employ certain personalities. We caution that this can lead to adverse, unintended consequences. Deviance can also be understood as enabling, creative, and productive (e.g., Mainemelis, 2010; Spain et al., 2014), challenging dominant norms, and being resilient against fears and pressures. Our findings suggest that personalities prone to deviance in both directions can be beneficiary from a corporate governance view and thus draw attention to the idea that such deviant personalities currently 'counter' insufficient protection, severe retaliation, or negative cultural or corporate norms that might hinder other employees from reporting misconduct.

Lastly, our results highlight that policymakers need to be careful in how whistleblowing is fostered. A focus on protection may influence some, but not all, and maybe not the type of whistleblower society desires. When whistleblowing is not narrowly understood as motivated by pro-social or altruistic motives, legal frameworks need to account for this reality, which is already incorporated in recent legal developments. For example, the European Union abandoned the notion that whistleblowing needs to be based on selfless motives. Instead, the outcome is relevant: does it serve the public interest (European Parliament, 2019)? Also important for policy in our view is that influencing social, societal, and group norms may be a relevant yet underutilized avenue to foster 'desirable' whistleblowing.

Our analysis is subject to several limitations. Methodologically, we cannot rule out self-reporting and common-method biases entirely. However, assuring anonymity, administering the test across several lectures, and taking recommendations by Ahmad et al. (2014) into account, we are confident that our results are not driven by these biases, especially since we administered the questionnaire across several sessions. Our sample is a hypothetical questionnaire, and some students may not have the necessary job experience to immerse themselves fully in the scenario. In terms of instruments, we used shorter versions (e.g., SD3 test), which may weaken some relationships. We also conceptualize morals in terms of Kohlberg's model of moral development. Although this model dominates business research (Bailey et al., 2010; Christensen et al., 2016), there are alternatives to look at morals, for example, from a moral foundation perspective (Andersen et al., 2015). Most importantly, we looked here at the intention to blow the whistle after observing wrongdoing and not actual behaviors. However, prior research suggests that influencing variables are similar between intention and behavior research in whistleblowing, yet effect sizes must be interpreted cautiously (Oelrich, 2021).

To our knowledge, we are the first to look at all three D3 personalities as moderators in a single study on whistleblowing. It would be interesting to see how these personalities influence morally ambivalent decision-making processes in other workplace domains. Especially interesting would be a further investigation if the influence of social norms depends on the type of whistleblower, as our results suggest. Possible extensions could be external whistleblowing and whistleblowing on different types of misconduct or acceptance of corporate



values and compliance efforts. How do decision-making processes change when the manager, controller, or internal auditor exhibits such D3 traits, especially as recipients of tips? More generally, our paper highlights the sustained potential of combining psychology and management accounting and control (for a recent review, see Wibbeke & Lachmann, 2020) to make sense of and influence employee behaviors.

Appendix

Appendix: Items and instruments used

All materials were translated to English by the authors from the original language in which the questionnaire was distributed for this manuscript.

The moral reasoning ADIT can be found in Welton et al. (1994) and Welton and Guffey (2008). The remaining instruments used for this study are given in Tables 5, 6, 7, 8, and 9.

Case description

Andrea completed her MBA in business administration one year ago. Shortly afterward, she got a good job within a listed company in the electrical engineering industry and is now part of the accounting department.

Today, she does some routine tasks, including copying documents for the files. In the photocopier, she finds documents that someone has probably not yet picked up. When she takes a look at them, she notices the high fees of various external consultants. She quickly makes copies of these and goes back to her workplace. On closer inspection, she was not sure what this was all about. If her suspicions are correct, it could even be a major case of corruption that could cost the company millions. On the other hand, the receipts could also be genuine. She finds it

Table 5 Whistleblowing questionnaire

	8 1						
#	Internal whistleblowing intention (1 = strongly disagree; 5 = strongly agree)	M	SD	VIF	α	CR rho_a	CR rho_c
IWB1	She is going to report the incident internally	3.64	1.05	1.56	0.714	0.722	0.810
IWB2	She will report the incident internally	3.21	1.01	1.53			
IWB3	She is prepared to report the incident internally	3.63	0.98	1.25			
IWB4	She plans to report the incident internally	3.54	1.01	1.49			
IWB5	She considers it her duty to report the incident internally	3.60	1.11	1.21			
IWB6	It makes her a better employee if she reports the incident internally	2.95	1.21	1.05			

Item scales adapted from Brown et al. (2016), Chwolka and Oelrich (2020), and Park and Blenkinsopp (2009)



Table 6 Attitude questionnaire

#	Attitude: belief strength (b) (1 = strongly disagree; 5 = strongly agree)	M	SD	VIF	α	CR rho_a	CR rho_c
To report t	he incident,						
ATT_B1	would help avoid damage to the company	3.67	0.94	1.48			
ATT_B2	would help maintain the integrity and values of the profession	3.42	1.01	1.33			
ATT_B3	would be the morally appropriate response	3.64	1.00	1.42			
ATT_B4	would be the employee's obligation	3.58	1.04	1.26			
ATT_B5	would be in the public interest	3.31	1.04	1.44			
ATT_B6	would help to contain or prevent corruption	3.89	1.05	1.43			
	valuation of these consequences (e) portant at all; 5=very important)				0.781	0.785	0.828
ATT_E1	To avert damage from the enterprise, is for her	3.78	0.93	1.53			
ATT_E2	Preserving the integrity and values of the profession is for her	3.51	0.93	1.51			
ATT_E3	To choose the morally appropriate reaction is for her	3.90	0.97	1.52			
ATT_E4	To keep the obligations of an employee is to her	3.59	0.94	1.43			
ATT_E5	To protect the interest of the public is for her	3.07	0.93	1.42			
ATT_E6	To contain or prevent corruption, is for her	3.74	0.97	1.61			

Item scales adapted from Brown et al. (2016), Chwolka and Oelrich (2020), and Park and Blenkinsopp (2009)

Table 7 Social and group norms questionnaire

#	Subjective norm: normative belief over the behavior (n) (1 = strongly disagree; 5 = strongly agree)	M	SD	VIF	α	CR rho_a	CR rho_c
SN_N1	The direct superior thinks she should report the incident	4.31	0.85	1.55			
SN_N2	The department head thinks she should report the incident	4.07	0.87	1.64			
SN_N3	Colleagues think she should report the incident	2.86	1.09	1.42			
SN_N4	Friends think she should report the incident	2.42	1.27	3.31			
SN_N5	Family members think she should report the incident	2.55	1.35	4.83			
SN_N6	The partner thinks she should report the incident	2.92	1.36	3.24			
3	e norm: motivation to comply (m) nportant at all; 5 = very important)				0.726	0.708	0.787
How impo	ortant would the opinion of the following persons be to you in	your de	cision?				
SN_M1	Direct superior	3.79	0.98	2.43			
SN_M2	Head of department	3.81	0.97	2.60			
SN_M3	Colleagues	3.10	0.99	1.38			
SN_M4	Friends	3.07	1.11	4.62			
SN_M5	Family members	3.11	1.15	5.90			
SN_M6	Partner	3.21	1.07	3.52			

Item scales adapted from Brown et al. (2016), Chwolka and Oelrich (2020), and Park and Blenkinsopp (2009)



Table 8 R	tetaliation fears questionnaire						
#	Perceived behavioral control: control belief (c) (1 = very unlikely; 5 = very likely)	M	SD	VIF	α	CR rho_a	CR rho_c
PBC_C1	Retaliatory measures by the direct superior are in my opinion	2.11	1.15	2.20			
PBC_C2	Retaliatory measures by colleagues are in my opinion	2.11	1.14	1.27			
PBC_C3	I consider retaliatory measures by the company to be	1.81	1.14	2.48			
PBC_C4	I consider retaliatory measures by top management to be	1.76	1.19	2.28			
	behavioral control: perceived power over this as gly disagree; 5 = strongly agree)	spect (p)		0.782	0.785	0.589
PBC_P1	Retaliation by the direct superior would complicate her reporting	2.65	1.01	1.83			
PBC_P2	Retaliation by colleagues would complicate her reporting	2.19	1.08	1.23			
PBC_P3	Retaliatory measures by the company would complicate her reporting	2.96	0.94	4.01			
PBC_P4	Retaliatory measures by top management would complicate her reporting	2.95	0.91	4.17			

Item scales adapted from Brown et al. (2016), Chwolka and Oelrich (2020), and Park and Blenkinsopp (2009)

difficult to follow up on her own because she lacks access to the necessary additional documents.



#	Instruction: Please indicate how much you agree with each of the following statements (1 = strongly disagree; 5 = strongly agree)	M	SD	VIF	α	CR rho_a	CR rho_c
Machiavellia	nism						
MACH1	It's not wise to tell your secrets	3.31	1.05	1.10	0.714	0.769	0.783
MACH2	like to use clever manipulation to get my way	2.25	1.14	1.65			
МАСН3	Whatever it takes, you must get the important people on your side	3.12	1.10	1.57			
MACH4	Avoid direct conflict with others because they may be useful in the future	3.33	1.11	1.23			
MACH5	It's wise to keep track of information that you can use against people later	2.84	1.16	1.99			
МАСН6	You should wait for the right time to get back at people	2.22	1.27	1.62			
MACH7	There are things you should hide from other people to preserve your reputation	3.32	1.04	1.38			
MACH8	Make sure your plans benefit yourself, not others	2.89	1.10	1.29			
MACH9	Most people can be manipulated	3.91	1.01	1.30			
Narcissism							
NARC1	People see me as a natural leader	2.90	0.93	1.43	0.693	0.719	0.785
NARC2	I hate being the center of attention. (R)	2.95	1.10	1.27			
NARC3	Many group activities tend to be dull without me	2.86	1.01	1.22			
NARC4	I know that I am special because everyone keeps telling me so	2.43	1.08	1.56			
NARC5	I like to get acquainted with important people	3.28	1.06	1.32			
NARC6	I feel embarrassed if someone compliments me. (R)	2.88	1.16	1.22			
NARC7	I have been compared to famous people	1.89	1.05	1.60			
NARC8	I am an average person. (R)	3.05	1.17	1.43			
NARC9	I insist on getting the respect I deserve	3.88	1.04	1.28			
Psychopathy							
PSYCH1	I like to get revenge on authorities	1.79	0.94	1.77	0.723	0.756	0.802
PSYCH2	I avoid dangerous situations. (R)	2.72	1.09	1.14			
PSYCH3	Payback needs to be quick and nasty	2.00	1.11	1.41			
PSYCH4	People often say I'm out of control	1.61	0.89	1.64			
PSYCH5	It's true that I can be mean to others	2.97	1.17	1.67			
PSYCH6	People who mess with me always regret it	2.35	1.08	1.93			
PSYCH7	I have never gotten into trouble with the law. (R)	2.14	1.45	1.22			
PSYCH8	I enjoy having sex with people I hardly know	1.92	1.12	1.49			
PSYCH9	I'll say anything to get what I want	1.83	0.99	1.35			
Dark Triad composite scale				0.810	0.845	0.828	

Scales developed by Jones and Paulhus (2014). Reversals are indicated with (R)



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Ethical approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards. Ethics Board approval statement or similar is attached.

Informed consent Informed consent was obtained from all individual participants included in the study.

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