Journal of Accounting Education 57 (2021) 100753

Contents lists available at ScienceDirect

Journal of Accounting Education

journal homepage: www.elsevier.com/locate/jaccedu

Online cheating at the intersection of the dark triad and fraud diamond

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ARTICLE INFO

Article history:
Received 28 March 2021
Received in revised form 29 August 2021
Accepted 31 August 2021
Available online 27 September 2021

Keywords:
Dark Triad
Fraud Diamond
Homework Assistance Websites

ABSTRACT

Academic misconduct is an issue that has plagued educators for as long as there have been formal performance assessments, and the technological advances in recent years have exacerbated an already vexing problem. Today's student has a broad array of resources available to assist in their learning process. Unfortunately, many of those resources can be used to actively circumvent that process. A variety of assignment assistance websites offer students fee-based access to content ranging from publisher-provided test banks and homework solutions to course specific material generated by the instructor. Unauthorized access to these materials constitutes academic fraud. In this study we evaluate student use of these websites by developing a comprehensive framework consisting of the Dark Triad constellation of personality traits and the Fraud Diamond elements. We find that each Dark Triad trait exerts a unique influence on the Fraud Diamond elements, which in turn are associated with students' intentions to access and use these websites.

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1. Introduction

According to the Oxford American Dictionary, fraud is "the intentional deception or misrepresentation that could result in some unauthorized benefit to oneself…" Academic fraud (misconduct) represents any activity in which a student claims credit for the work of someone else or misrepresents their work product in completing course requirements (Becker, Connolly, Lentz, & Morrison, 2006). Such misconduct may occur by copying exam answers, inappropriate collaboration, plagiarizing source materials, or using unauthorized resources including homework assistance websites such as Chegg.com, Course Hero, or Quizlet (e.g., Bain 2015; Becker et al., 2006; Kisamore, Stone, & Jawahar, 2007; Emerson & Smith, 2021), and investigators have identified at least three distinct classifications of cheating: direct exam cheating (copying or allowing others to copy), paper-based (e.g., plagiarism), and internet-based (e.g., online homework assistance platforms).

Academic misconduct is a perennial problem, and by many accounts, it is growing worse. Moreover, business students have generally been found to engage in these activities to a significantly greater extent than do their counterparts in other majors (e.g., McCabe, Butterfield, & Treviño, 2006). Even more distressing are reports that those who engage in academic dishonesty in school are more likely to perpetuate their unethical behavior in the workplace (e.g., Becker et al., 2006; Nonis & Swift, 2001). Other research suggests that students who cheat once are more likely to cheat again and again with

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https://doi.org/10.1016/j.jaccedu.2021.100753
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increasing frequency (Nonis & Swift, 2001). Unfortunately, rapid advances in technology and easy access to information, coupled with increased pressure to obtain degrees and certifications, have exacerbated an already problematic situation.

Given the significance of academic misconduct, the goal of this study is to gain a more comprehensive understanding of how and why it occurs by testing a model that predicts a synergy between personality elements of the Dark Triad with the situational influences defined by the Fraud Diamond.

Much of the extant research investigating academic misconduct has focused on either situational (i.e., academic culture, honor codes, etc.), demographic (i.e., age, gender, academic major, etc.) or personality (i.e., narcissism, Machiavellianism, locus of control, conscientiousness, etc.) variables. To gain a holistic understanding of academic dishonesty it is important to consider how these different perspectives interact (see e.g., Kisamore et al., 2007). Toward that end, this study examines the nature of the associations among a variety antecedent and mediating factors that have the potential to influence students' propensity to engage in a particularly troubling form of academic dishonesty, i.e., engagement of homework assistance website services. Specifically, we evaluate the impact of the Dark Triad psychological traits on student attitudes toward the use of these services within the context of the Fraud Diamond conceptual model.

In this paper, we explore the attitudes and behaviors of 209 undergraduate accounting students from two universities in the United States regarding the unauthorized use of homework assistance websites as viewed through the lens of the Fraud Diamond paradigm. In addition, we assess the role that psychopathy, narcissism, and Machiavellianism (the 'Dark Triad') may play in amplifying the proposed associations among the various constructs in our hypothesized model (Paulhus & Williams, 2002). We also investigate potential differences in student attitudes, perceptions, and behaviors related to this type of academic misconduct across gender, GPA, and university.

The balance of this paper is structured as follows. We begin by briefly discussing academic misconduct in the virtual environment, followed by a presentation of the theoretical framework that underlies our hypothesized model. We then outline our methodology followed by a discussion of the results. Afterward, we discuss the implications of our results and provide recommendations to educators. We conclude with an acknowledgement of the study's limitations and final remarks.

2. Academic misconduct in the virtual environment

By their very nature, outside (of class) assignments are a form of assessment that is particularly susceptible to academic misconduct (Arnold, 2016). Indeed, academic misconduct in the virtual environment has been of great concern ever since McMurtry (2001) first coined the phrase 'e-cheating' two decades ago. At that time, the primary concern was plagiarism due to the ease with which students could use copy and paste from the internet to misrepresent the work of others as their own (Bain, 2015). Consequently, new technologies (e.g., Turnitin) were developed to counter this innovation (Williams, Nathanson, & Paulhus, 2010). However, advancing technologies are accelerating the variety of available information, and enterprising companies are using the internet to sell access to that information to students (Emerson & Smith, 2021; MacGregor & Stuebs, 2012).

As recently as a few years ago one of the most pressing developments in the realm of academic misconduct was thought to be the unauthorized access to publishers' test banks where students could purchase course-specific material and use it to prepare for assessments (Cheng & Crumbley, 2018; Savage & Simkin, 2010). Students purchased these materials (without evaluating the ethicality of the purchase) and justified their use by claiming they were only using them as study aids – they rationalized that because they had no idea of what questions would ultimately be asked, they were innocent of any misconduct (Cheng & Crumbley, 2018). This seems like a reasonable rationalization, but researchers found that the use of such materials provided an unfair advantage of as much as thirty percent compared to those who did not purchase such materials (Cheng & Crumbley, 2018).

As technology has advanced, an entire industry has evolved around subverting the learning process by providing students (for a fee) easy access to the answers to every test bank and homework question delivered by every major publisher (Emerson & Smith, 2021). As incentives to succeed academically increase, there is a concomitant increase in the pressure for students to use tools such as homework assistance websites (Emerson & Smith, 2021; MacGregor & Stuebs, 2012). Moreover, the aforementioned technological advances have removed barriers and facilitated student access to previously restricted access information to an unprecedented degree. Consequently, the opportunity for students to cheat has increased to a level that is unfathomable to many faculty members.

3. Theoretical framework

3.1. Dark Triad

The Dark Triad is a constellation of distinct but related personality traits: psychopathy, narcissism, and Machiavellianism. Collectively these traits appear to influence all dimensions of the human experience, and each has been shown to have a strong inverse association with honesty and modesty (Harrison, Summers, & Mennecke, 2018). Moreover, individuals with high scores on Dark Triad traits have been shown to be more likely to engage in a variety of harmful and deceitful behaviors and exhibit a strong desire for status, money, and power. The Dark Triad has also been implicated in workplace fraud, interpersonal manipulation, and counterproductive work behaviors (Harrison et al. 2018; Jonason, Slomski, & Partyka, 2012;

O'Boyle et al., 2012). In the academic arena, both Kisamore et al., (2007) and Nathanson, Paulhus, and Williams, (2006) found that each of the elements of the Dark Triad was implicated in cheating. Other research has shown that business students typically have higher Dark Triad scores than other academic majors, leading scholars to theorize that it is the desire for power, money, and social dominance that drives this self-selection (Krick, Tresp, Vatter, Ludwig, & Wihlenda, 2016; Vedel & Thomsen, 2017).

The first element of the Dark Triad is narcissism. Narcissism is characterized by a need for admiration, a sense of self-importance and grandiosity, interpersonal exploitation, a preoccupation with fantasies about unlimited power, success, brilliance and beauty, a lack of empathy and displays of arrogance (Amernic & Craig, 2010).

Machiavellianism is a personality trait characterized by a lack of empathy and a belief in the utility of manipulating others for one's own benefit and is manifested in a contempt for conventional morality (Krick et al., 2016; Williams et al., 2010). Machiavellians have been shown to "exploit a wide range of duplicitous tactics to achieve their self-interested goals" (Nathanson, Paulhus, & Williams, 2006, 100).

The third Dark Triad trait is psychopathy. Those scoring high in psychopathy are characterized by greedy risk-taking, deception, superficial charm, impulsivity, cold emotion, interpersonal manipulation, and a wide variety of misconduct – all accompanied by a lack of empathy and remorse (e.g., Nathanson et al., 2006; Wilson & McCarthy, 2011). Bailey (2017, 16) noted that one of the most troubling aspects of psychopathy is the lack of conscience psychopaths exhibit related to their bad acts, i.e., it reflects a radical form of rationality in that "psychopaths know right from wrong, but do not care."

It is important to note that when we make mention of psychopathy or psychopaths, we are actually referring to subclinical psychopathy. As described above, psychopathy is typified by pathological lying, impulsivity, conspicuous failure to accept responsibility for ones' actions, self-serving patterns of behaviors, as well as strong tendencies toward adolescent and adult criminal behavior (Hare, 1999; LeBreton, Binning, & Adorno, 2006). The difference between clinical and subclinical psychopathy is simply one of degree. LeBreton et al. (2006, 389) noted that "the subclinical psychopath experiences the same patterns of dysfunctional behaviors, affects, and cognitions; however, the pervasiveness and levels of impaired functioning are not as extreme because the individual manifests the symptoms at a commensurately lower level and rate." Fortunately for society, psychopathy (except for criminal tendencies) is generally considered to be a normally distributed variable (Woodmass & O'Connor, 2018), with only about one percent of the population exhibiting signs of clinical psychopathy, while estimates of the base rates of the subclinical variant range between five and fifteen percent of the general population (LeBreton et al., 2006).

The results of prior research into academic misconduct prompted Kisamore et al. (2007, 384) to state that "it is clear that cheaters tend to be impulsive, risk taking, attention seeking," and low in responsibility – all of which map onto our overall understanding of the Dark Triad.

3.2. Fraud Diamond

The Fraud Diamond framework developed by Wolfe and Hermanson (2004) represents an incremental modification to the Fraud Triangle theoretical model advanced by Cressey (1953). The Fraud Triangle was originally developed to "differentiate the fraud and its motivations from other forms of financially motivated crimes, such as theft and burglary" (Dorminey, Fleming, Kranacher, & Riley, 2012a). After an extensive series of interviews with incarcerated white-collar criminals, Cressey (1953) identified a set of commonalities among the perpetrators and their crimes that came to be known as the Fraud Triangle: perceived pressure, perceived opportunity, and rationalization. Harrison, Summers, and Mennecke (2018, 54) citing Albrecht, Albrecht, Albrecht, & Zimbelman, (2012), noted that "the fraud triangle is an interactionist framework and is typically framed as analogous to fire whereby motivation (heat), opportunity (fuel), and rationalization (air) must all exist for fraudulent acts to follow."

As noted above, the first leg of the Fraud Triangle was pressure. Pressure was conceptualized as a "non-shareable financial problem or motive that drives a person to commit fraud." In the nomenclature of the Fraud Diamond, the term pressure has been supplanted with motivation. Students might be motivated to cheat for a variety of reasons. It may be because they expect to be viewed by others as successful, a need to maintain a high GPA, or to meet the expectations of peers, family, or employers. (e.g., Kock & Davidson, 2003; Larkin & Mintu-Wimsatt, 2015). Moreover, students' perceptions of course difficulty, overall academic stress, professors' inconsistent application of academic rules, insufficient time to complete assignments, or beliefs that they cannot obtain their desired grade without cheating, can each serve as motivational elements (see e.g., Becker et al., 2006; Peterson, 2004).

The next element of the Fraud Diamond is perceived opportunity. According to Cressey (1953), motivation alone is insufficient to provoke fraud; one must also perceive that they can commit the act without being caught. Students may see opportunities to cheat when they witness others doing so without consequences. They may also believe there is an opportunity to engage in academic misconduct when their professors are aware of such behaviors and take no action against it. Students' motivations for cheating might also derive from the ease with which it can be accomplished, combined with a perception of a low likelihood of detection (Becker et al., 2006). Perceived opportunity often arises as a function of poor or non-existent controls intended to prevent the action. The key word is 'perceived'. The actual opportunity to cheat need not necessarily be present, the student only needs to *believe* that such an opportunity exists. Indeed, "perceived opportunity can exist in countless ways, limited perhaps only by students' imaginations" (Peterson 2004, 53).

Wolfe and Hermanson (2004) augmented Cressey's model with the addition of capability. Capability represents the individual's personal traits and abilities that are influential in the ultimate decision to commit fraud. As noted by the authors (pp. 38–39), "opportunity opens the doorway to fraud, and incentive and rationalization can draw the person toward it. But the individual must also have the capability to recognize the open doorway as an opportunity and to take advantage of it by walking through." With regard to academic misconduct, capabilities are related to the student's judgement that they have the requisite abilities to commit the act and the knowledge and skills necessary to represent the results as their own.

The final element of the Fraud Diamond is rationalization. Students must be able to internally legitimize their deeds before committing them. That is, students must be able to justify their actions as consistent with their own personal code of ethics. They might rationalize their actions based on perceptions of fairness or because they believe that their actions are acceptable and ethical. Lawson (2004) noted that the practicality of an act is often more salient than its ethicality. Students may also believe that if known acts of misbehavior are not typically penalized, then following the rules must not be important. Moreover, they may claim that if a particular behavior is not specifically prohibited it must therefore be allowed (e.g., Becker et al., 2006). This argument may be especially germane in the case of student use of homework assistance websites. Many faculty members are likely unaware of the extent to which the answers to publisher-provider content are readily available. This lack of awareness may align with a lack of restrictions against their use, thereby enhancing students' ability to rationalize their use. In addition, students may be able to rationalize their actions if they believe that their peers are engaging in the same behavior, that the professor has unrealistic expectations, or that the assignment's instructions are unclear (MacGregor & Stuebs, 2012). Lastly, Harrison et al. (2018) observed that rationalization plays a critical role in causal models related to fraud. Specifically, they note that the role of rationalization is distinct from that of opportunity, motive, or capability because it serves "as the final critical step in the reasoning processes leading to the development of unethical intentions and ultimately unethical actions" (Harrison et al., 2018, 55). Gino (2013) stated that people cheat more often than they are willing to admit, but at the same time strive to maintain a positive self-image by manipulating frames of reference, conjuring rationalizations, and shading their perceptions of reality in self-serving ways.

We believe that the Fraud Diamond and Dark Triad provide a viable theoretical foundation for our model of academic misconduct given previous research related to each overarching construct in both business and academic contexts. If the elements of the Fraud Diamond are present, financial fraud may not necessarily occur, but its likelihood is enhanced. Similarly, if the same elements are in place in an academic environment, cheating may not occur, but is more likely. Likewise, individuals scoring high in the components of the Dark Triad may not necessarily engage in misconduct, but the probability of deviant behavior is enhanced. Regardless of setting or individual proclivities, misconduct is context sensitive. As with financial fraud, cheating may be seen as a practical solution to a problem, and those with high scores on the Dark Triad elements may have a greater disposition to engage in proscribed behaviors given sufficient opportunity, motivation, capabilities, and the capacity for rationalization.

We expect that the individual-level psychological variables that comprise the Dark Triad will be associated with the elements of the Fraud Diamond in predictable ways. Moreover, we believe that rationalization arises as a function of the other three elements of the diamond and serves as the final step in the conceptual model that predicts both the intent to access online homework assistance as well as the act of engagement itself. Our theoretical model depicting our hypotheses is provided in Fig. 1 and described in the next section.

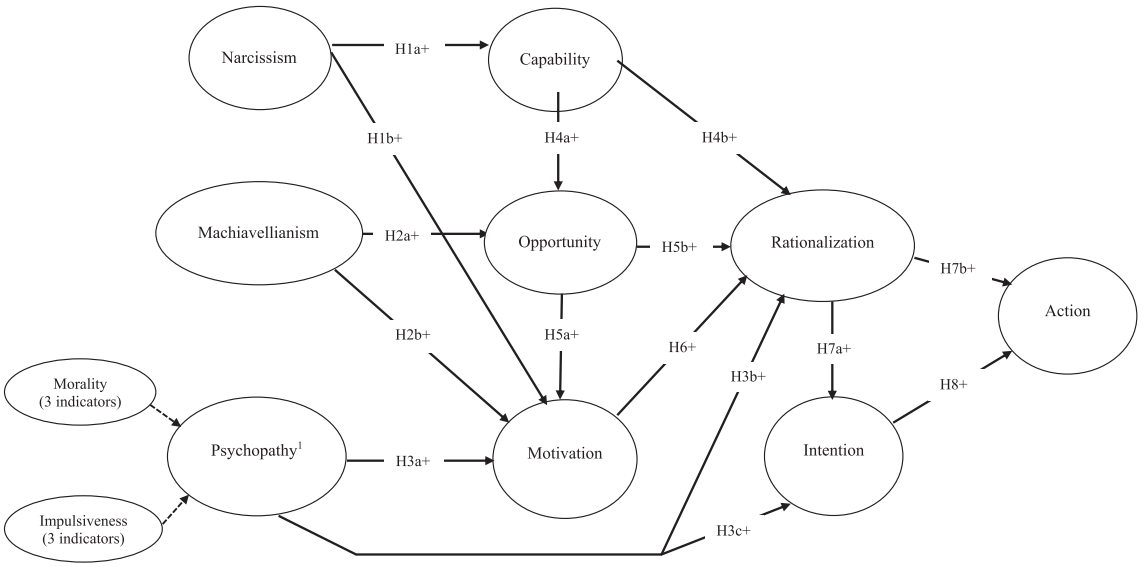


Fig. 1. Theoretical model with hypothesized paths. Notes: Indicators for all constructs except psychopathy omitted for ease of diagramming and interpretability. Table 2 shows individual indicators for each construct. [1]Second-order formative factor.

4. Hypothesis development

4.1. Background

Both the Fraud Diamond and the Dark Triad have been used individually as organizing frameworks to explicate academic misconduct (e.g., Bailey, 2017, 2019; Becker et al., 2006; Harrison et al., 2018; Nathanson et al., 2006; Williams et al., 2010). However, while Bailey (2017, 2019) investigated psychopathy and narcissism in tandem with the Fraud Triangle, the current study appears to be the first to combine all of the elements of the Dark Triad and Fraud Diamond conceptual frameworks into a single synergistic explanatory model as to describe student utilization of homework assistance website services. Our model complements and extends the work of Harrison et al. (2018) who used a similar framework to explain online consumer fraud. While we borrow heavily from the Harrison et al. (2018) model, we use a different analytical methodology (i.e., Partial Least Squares structural equations modeling vs. covariance-based SEM), conduct additional tests of moderation, provide details on total, direct, and indirect effects among the various constructs, hypothesize an opposite directional influence for one hypothesis, and add two additional hypotheses. Thus, our work represents an incremental contribution to the literature by modifying and extending the model developed by Harrison et al. (2018). Specifically, our model evaluates the unauthorized use of homework assistance websites by incorporating the Fraud Diamond and Dark Triad paradigms in a comprehensive framework in the context of ethical decision making and the theory of reasoned action (Ajzen, Fishbein, Lohmann, & Albarracîn, 2018; Harrison et al., 2018; Rest, Bebeau, & Thoma, 1999).

Rest et al. (1999) promulgated a theory of ethical decision making wherein the individual first arrives at an awareness of a moral dilemma, proceeds to develop an internal justification for the proposed action, followed by an intention to perform the act, and concluding with the action itself. We believe that this causal chain of events works in concert with the elements of the theory of reasoned action described by Ajzen et al. (2018, 2) who noted that the determinants of particular behaviors are "guided largely by a reasoned actioned approach which assumes that people's behavior follows reasonably from their beliefs, attitudes, and intentions." We further believe that an individual's psychological traits have a direct influence on their behavior and ethical decision-making processes. This leads us to posit that an individual's perception of opportunity, rationalization, motivation, and capability are each independently influenced by their levels of narcissism, Machiavellianism, and psychopathy when forming the intent to access prohibited homework assistance website services and whether or not they actually do so.

4.2. Narcissism

Those high in narcissism hold a sense of superiority over others and are self-enhancing, self-centered, and arrogant (Nathanson et al., 2006). Narcissists are oriented toward success and will engage in unethical behaviors as a means to realize it (Campbell & Foster, 2007). By definition, narcissists expect to achieve more than their peers, but often fall short of their expectations (Wallace & Baumeister, 2002). Consequently, they may need to cheat in order to reaffirm their perceptions of self-superiority. Moreover, "narcissists feel entitled to recognition for their intellectual superiority even when their academic accomplishments are mediocre. Therefore, attaining the plaudits they deserve may require cheating" (Williams et al., 2010, 294). Narcissists consistently embellish or overstate their abilities and their sense of intellectual superiority leads them to believe they have knowledge, skills, and abilities that they may not actually possess. Based on the foregoing we hypothesize that:

H1a: Narcissism is positively associated with the individual's perceptions that they have the requisite capabilities to use homework assistance websites.

Narcissists have delusions of grandeur with beliefs of unlimited intelligence and success, have a lack of empathy, and are prone to rash and unethical behavior (Amermic & Craig, 2010; Krick et al., 2016). Further, the narcissist's need for status and tendency to exaggerate their academic knowledge, combined with their need to retain their sense of self-importance and need for recognition may provide them with a motivation to cheat (Williams et al., 2010). Harrison et al. (2018, 58) noted that "narcissists are likely to engage in behaviors that will get them what they think they are entitled to. Narcissists think that they are owed more than others and will engage in behaviors, ethical or not, to accomplish this." Accordingly, we hypothesize the following:

H1b: Narcissism is positively associated with the individual's motivation to use homework assistance websites.

4.3. Machiavellianism

Niccolo Machiavelli's (1532) (Machiavelli, 1950) treatise on political power is founded in the presumption that moral men must sometimes use amoral and deceptive methods to obtain their desired outcomes. Thus, Machiavellians will place expediency before principle, believe in the effectiveness of manipulation, and adopt a cynical view of other's motives (O'Boyle et al., 2012).

Individuals high in Machiavellianism are extraordinarily goal-oriented and will pursue those goals by any means necessary including bending or breaking rules, lying, cheating, or through duplicity in their interpersonal relationships. They are focused on unmitigated achievement and winning at any cost (e.g., Jones & Paulhus, 2011; Nathanson et al., 2006; O'Boyle

et al., 2012). Machiavellianism has been implicated in a variety of unethical business behaviors and individuals high in the trait have been shown to be more likely to defraud others (e.g., Harrell & Hartnagel, 1976; Harrison et al., 2018; Tang, Chen, & Sutarso, 2008). Machiavellians are often cynical and amoral and will engage in deceit, artifice, fraud, dishonesty, and deception to achieve their goals – all of which increase the likelihood of academic misconduct (Nathanson et al., 2006; Williams et al., 2010). Machiavellians distrust others and are skeptical of others' intentions and motives and while they may lie and cheat, they may be hesitant to do so when they believe that others may witness the act (Christoffersen & Stamp, 1995; O'Boyle et al., 2012). For example, Cooper and Peterson (1980) found that individuals high in Machiavellianism were more likely to cheat when working alone, but less likely to do so when working in groups. Since accessing homework assistance websites is an activity that would typically be performed without witnesses, we expect that high levels of Machiavellianism will be associated with opportunity. Formally:

H2a: Machiavellianism is positively associated with perceived opportunity.[1]

As noted above, individuals high in Machiavellianism will use any means necessary to achieve their desired goals. Machiavellians have an innate desire for power and success in concert with their amorality and willingness to use "a wide range of duplicitous tactics to achieve their self-interested goals" all provide incentives to engage in academic misconduct (Nathanson et al., 2006, 100). Accordingly, it is likely that they will be motivated to obtain academic success using nefarious means if they believe they will not be detected. Thus, we believe that Machiavellians will be motivated to act in an unethical manner in order to promote their own self-interest (Harrison et al., 2018).

H2b: Machiavellianism is positively associated with motivation.

4.4. Psychopathy

Psychopaths are typified by a conspicuous lack of empathy or remorse for their behavior, especially when those actions have negative consequences for others (O'Boyle et al., 2012). They take risks without consideration of the consequences and have been described as ruthless without any sense of personal responsibility for their actions (Williams & McCarthy, 2011). Psychopathy has been demonstrated to be associated with academic cheating (e.g., Nathanson et al., 2006; Williams et al., 2010), but it remains unclear the channel(s) through which this association is manifested.

Williams et al. (2010) presented three different motivations for students' academic misconduct: a desire for unrestrained achievement, a fear of punishment, and diminished moral inhibition. First, a desire for success uninhibited by conventional restrictions is related to egocentricity and a desire to obtain positive results without regard to fairness. Next, an insensitivity to the possibility of punishment and an "impoverished moral identity" have long been considered two of the primary characteristics of psychopathy (e.g., Jones & Paulhus, 2011; Williams et al., 2010). Thus, each of these deterrence or incentive motivations are plausibly related with psychopathy.

Moreover, Bailey (2017) offered two arguments as to why psychopathy would likely be associated with motivation. First, psychopaths are often depicted as selfish with an enhanced sense of entitlement. Second, the impulsive and risk-seeking nature of psychopaths may serve as motivators in and of themselves. Based on the foregoing, we predict the following:

H3a: Psychopathy is positively associated with motivation.

One of a psychopath's preeminent attributes is a fundamental lack of a conscience. This deficit facilitates fraudulent actions through their ability to rationalize any action – because they have no need to rationalize (Bailey, 2017). That is, individuals who score high on psychopathy do not view themselves in moral terms "and are not motivated to be, or be seen as, moral individuals" (Glenn, Koleva, Iyer, Graham, & Ditto, 2010, 497). Bailey (2010), using a sample of accounting students from the United States, found a significant correlation between the students' acceptance of fraudulent acts and their psychopathy scores. Stevens, Deuling, and Armenakis (2012) found that psychopathy facilitated unethical behavior through moral disengagement. This allows the individual to act in ways they know is wrong, while at the same time maintaining an acceptable self-image. This renders the issue of rationalization virtually irrelevant given the psychopath's ability to rationalize anything and everything (Bailey, 2017). Moreover LeBreton et al. (2006) noted that psychopaths believe that they are not bound by the ethical, moral, and social principles that form the fabric that binds our society together. Peterson (2004, 57), in an investigation focusing solely on the rationalizations provided by accounting students to a variety of unethical academic conduct, quoted a student who justified their behavior by stating "You want what is best for you, and helping your grade is in your best interest." Based on the preceding, we hypothesize the following:

H3b: Psychopathy is positively associated with rationalization.

Much of the same rationale that was used to support the hypothesis predicting a positive association between psychopathy and motivation is also valid to substantiate a predicted association between psychopathy and intention. Psychopathy has been directly implicated in unethical attitudes and behavior. For example, Bailey (2015) identified a causal link between psychopathy and the unethical publishing practices among accounting faculty, while Bailey (2017, 2019) identified links between psychopathy and students' acceptance of unethical professional practices. Moreover, Bailey (2015) found that the link between unethical behavior was completely mediated by the individual's acceptance of that behavior, and Bolin (2004) found that students low in self-control were more accepting of academic misconduct. Further, both Nathanson

[1] This hypothesis is in direct opposition to that predicted (and reported) by Harrison et al. (2018). We take this contrary view because their dependent variable was a proposed act of consumer fraud subject to public scrutiny.

et al. (2006) and Williams et al. (2010) found an association between psychopathy and scholastic cheating. These results are in line with the above-referenced theory of planned behavior and theory of reasoned action (Ajzen et al., 2018). Given the demonstrated association between psychopathy and a variety of maladaptive behaviors, it is reasonable to presume that these behaviors were first associated with an intent to perform them. While we expect that the influence of psychopathy on intention will be at least partially mediated by rationalization, we cannot discount the possibility that there may also be a direct unmediated path.[2] Accordingly, we predict the following:

H3c: Psychopathy is positively associated with intention.

4.5. Capability

Next, we consider links between the elements of the Fraud Diamond. We turn first to capability. Capability refers to the individuals' beliefs in their traits and abilities (Vousinas, 2019; Wolfe & Hermanson, 2004). Recall that we hypothesize that narcissism to be the only member of the Dark Triad directly associated with capability. Narcissists have an innate sense of superiority and believe that they are entitled to success (Nathanson et al., 2006). Moreover, they are often convinced of their own brilliance and importance which leads to unrealistic self-evaluations of their knowledge, skills, and abilities (John & Robins, 1994). As a consequence of narcissists' belief in their own superior skillset, they also believe that they have greater capability to exploit available opportunities compared to those that do not hold such beliefs (Harrison et al., 2018). In turn, this capability to exploit opportunities leads us to predict that:

H4a: Capability is positively associated with opportunity.

The belief that one possesses the essential skills and abilities to engage in academic misconduct will also lend that person to believe that they are less likely to be caught if they do so. McCabe et al. (2006, 296) suggested that "misconduct results from a rational calculus that represents a joint function of the perception of the likelihood that one will be caught and the perception of the severity of the penalties imposed for the misconduct." Conversely, "people who believe that they lack the skills required to perform a behavior may anticipate failure and thus may develop a negative attitude toward the behavior" (Ajzen et al., 2018, 55). However, if the individual pondering misconduct believes that their superior skills will insulate them from detection, they may also perceive that the rewards of the act are greater than the attendant risk and therefore better able to rationalize the activity as being in their self-interest (Harrison et al., 2018). Peterson (2004) noted that students may claim that they were only making the most expedient use of their time and that they should be able to use any available resource to get a good grade. One student in the study noted that "if the answers are publicly available, there is no reason accounting students can't use them," while another observed that "finding the easy way to success happens all the time" (Peterson, 2004, 59).

Based on the preceding, we predict the following:

H4b: Capability is positively associated with rationalization.

4.6. Opportunity

Opportunity is an essential and integral element in the individual's thought processes leading to academic misconduct. Opportunity represents the perpetrator's perception that there is a good chance that they will be able to intentionally exploit a situation for their own benefit and a concurrent belief in a low probability of detection and adverse consequences (Vousinas, 2019). The greater the perceived opportunity, the greater the perception that the unethical act can be successfully committed (Albrecht, Albrecht, Wareham, & Fox, 2006). Furthermore, a greater perception of success combined with a presumption of non-detection (or an assumption of low penalties if exposed) may lead the individual to evaluate the unethical behavior as a low-risk/high-reward scenario thereby increasing the individual's motivation to commit the act. Thus, we predict the following:

H5a: Opportunity is positively associated with motivation.

Before academic misconduct can occur, the perpetrator must believe that they have the opportunity to successfully complete the act. It is more likely that individuals will be able to rationalize their actions if the opportunities to engage in unethical conduct are plentiful and the potential of being punished seems remote. If the opportunities present themselves in the form of missing control mechanisms used to detect the perpetrators, the individual may find it easier to rationalize their behavior by shifting the blame for the act onto those who facilitated those opportunities (Ramamoorti, 2008). For example, one of the students quoted by Peterson (2004, 60), stated that professors' expectations that students would refrain from using readily available (although prohibited) materials was "...an impossible dream. The practice would put honest students at a disadvantage and only lead to a disregard for rules. They took the opportunity presented..." Another of the study's participants blamed the professor directly by stating "This is not wrong because the stupidity is on the side of the professor." Other students justified their misconduct by claiming that they were only acting in their own best self-interest and that no harm was caused to others through their actions. "It's not his fault that people cheat, but he doesn't take precautions so that

[2] Harrison et al. (2018) directly associated psychopathy only with rationalization. Our model also includes a direct path to intention based on the documented associations with acceptance of misconduct and the action itself. Of all the elements of the Dark Triad, psychopathy has been shown to be the most influential (Bailey 2015).

they can't. People are cheaters and he should be aware that if we can, we will." (Peterson, 2004, 59-60). Based on the foregoing, we predict that:

H5b: Opportunity is positively associated with rationalization.

4.7. Motivation

Motivation, incentive, or pressure is the catalyst that drives the unethical act. The list of reasons or circumstances that may motivate academic fraud is extensive. Students may feel pressure to cheat from peers, employers, or parents to earn and sustain a high level of academic performance, or because they want to be perceived as intelligent and successful (Becker et al., 2006; Kock & Davison, 2003). For example, Peterson (2004) reported that some students reasoned that if the answers are available to anyone who has the ingenuity to figure out how to find and use them, they should be praised for their cleverness rather than punished. Students might also be motivated to engage in academic misconduct because they do not believe they were given sufficient time to prepare, because they have no interest in the subject matter, or believe that the subject matter is beyond their abilities without unauthorized assistance. Students may cheat because they believe it is a victimless offense, or simply because they are lazy (Larkin & Mintu-Wimsatt, 2015). Moreover, in particularly competitive majors such as accounting, students may be motivated to cheat simply to maintain parity with their peers. When others take advantage of resources that an otherwise ethical student typically would not, this abstention may be costly.

Regardless of the motivation, if the individual believes that the benefits (e.g., higher GPA, time efficiency, self-esteem issues, etc.) exceed the perceived costs (i.e., probability of detection balanced against severity of penalties likely to be imposed), the individual will be more likely to adjudicate the act as in compliance with their internal ethical code. Thus, we predict that:

H6: Motivation is positively associated with rationalization.

4.8. Rationalization

Rationalization is the final step in an individual's ethical decision-making process before that person develops the intent to engage in the unethical activity and/or actually perform it. It represents the process of justifying the action by reconciling it with their own moral code (Cressey, 1953). As shown in Fig. 1, we contend that the rationalization process is a function of the joint influence of the individual's perceived capabilities, opportunity, and motivation. Once a person has successfully resolved any internal conflict between his/her internal moral code and the act, the cognitive foundation for his/her beliefs has been established, and intent and action are assumed to flow as a consequence (Ajzen et al., 2018).

The theory of reasoned action asserts that a person's behavioral intentions can be explained and predicted as a function of their beliefs regarding that behavior, but there is no requirement that the beliefs be legitimate (Ajzen et al., 2018). Moreover, once the beliefs regarding a particular behavior have been formed, intentions are presumed "to follow in a reasonable and consistent fashion" (Ajzen et al., 2018, 53). The determination to engage in academic misconduct is a uniquely personal decision driven by uniquely personal considerations, and Harrison et al. (2018, 61) citing Ajzen (1991) noted that these "considerations are considered to be the central driver of behavioral intention." Thus, we predict that:

H7a: Rationalization is positively associated with intention.

As we hypothesized above, after an individual has successfully rationalized the action, the path is clear from the intent to perform to the action itself. However, we cannot discount the possibility that the internal evaluation and rationalization of the act occurs simultaneous with the act itself.

H7b: Rationalization is positively associated with action.

4.9. Intention

Intention has long been identified as an antecedent to action (Ajzen et al., 2018; Rest et al., 1999). Indeed, when discussing the theories of reasoned action and planned behavior, Ajzen et al. (2018) note that intentions are determined by an individual's attitudes regarding the behavior. These attitudes are derived from their beliefs related to a variety of situational, behavioral, and control influences which in turn are a directly related to a broad range of background factors. Most importantly however, the authors (p. 54) state that "intention is the immediate antecedent of actual behavior." Accordingly,

H8: Intention is positively associated with action.

5. Methods

5.1. Participants

The respondents are a convenience sample of 209 accounting majors from two U.S. universities: one public university in the South (n = 104), and one public university on the East Coast (n = 105). The business schools at these universities are accredited by the Association to Advance Collegiate Schools of Business (AACSB) and both possess supplemental AACSB accounting accreditation. The study's instrument package was approved by each university's Institutional Review Board

as well as the human subjects committee and data collection was administered online using Qualtrics. The questionnaire instructions provided students assurances of anonymity. We varied scale ordering to mitigate common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

As an incentive to complete the instrument package, students were given the opportunity enter a drawing to win a $100 Amazon gift card at the conclusion of the survey. Those who wished to participate were directed to an independent website to enter their name and email address. The winner was randomly selected from those participants who chose to participate (nearly all of those who completed the survey also entered the drawing). This procedure ensured that survey responses could not be individually identified.

The demographic profile of the respondents a relatively broad cross-section of undergraduate students. A total of 89 of those reporting gender were males, and 120 were females. Over 95 percent of the students reporting age (218/247) were between 19 and 24 years old. With respect to academic level, 19 (9%) were freshmen, 38 (18%) were sophomores, 68 (33%) were juniors, and 84 (40%) were seniors.

The final sample represented 35% of the 595 targeted accounting majors at both institutions whose responses were received within the five-week response period allowed for inclusion in the study. To assess non-response bias, we took a two-pronged approach. First, we conducted independent sample t-tests to measure the significance of mean score differences between the first 50 respondents and the final 50 respondents on each of nine primary study scales as suggested by Oppenheim's (1966, 34) early-late hypothesis. Second, we conducted independent sample t-tests to assess the significance of mean score differences between the 50 respondents who took the least time to complete the survey versus the 50 who took the most time. For both sets of analyses, Bonferroni-adjusted probability values indicated no significant mean score differences between groups ($p < .05$), giving us reasonable assurance that non-response bias was not a significant issue associated with the study.

6. Measures

6.1. Dark Triad elements

We measured Machiavellianism and narcissism using four-item scales developed by Jonason and Webster (2010). These scales are components of the authors' Dirty Dozen Scale which measures all three elements of the Dark Triad. The Dirty Dozen Scale has subsequently been adapted for numerous cultures and languages. For each scale, students are asked to indicate the extent to which they agree with each statement on a scale that ranges from "strongly disagree" to "strongly agree". The instructions also indicate that there are no right or wrong answers, and students are requested to give their honest reaction to each statement.

To measure psychopathy, we utilized Harrison et al.'s (2018) adaptation of the Levenson Self-Report Psychopathy Scale (Levenson, Kiehl, and Fitzpatrick, 1995). Harrison et al.'s (2018) version of the scale consists of six items, three that measure morality (i.e., primary psychopathy), and three that measure impulsiveness (i.e., secondary psychopathy). These two first-order factors are predicted to be measures of a higher-order general psychopathy factor. The instructions for these items are identical to those for the above-noted Machiavellianism and Narcissism scales. We chose to use Harrison et al.'s (2018) measure in lieu of Jonason and Webster's (2010) four-items in order to have a more comprehensive measure of psychopathy construct, a decision motivated by Bailey's (2017; 2019) findings that psychopathy is the primary factor associated with unethical behavior among college students.

6.2. Fraud Diamond elements

To measure capability, we adapted Harrison et al.'s (2018, 63) three measurement items to address procurement of online assistance for assignment completion.[3] Our opportunity and motivation measures each included two adapted items from Harrison et al. (2018) and three from Becker et al. (2006, 45). We adapted three of the rationalization items from Harrison et al. (2018) and one from Becker et al. (2006). We included the adapted Becker et al. (2006) items for each measure as they specifically tied academic dishonesty to the classroom environment. The instructions for these items were identical to those stated above for the Dark Triad scales. While Harrison et al. (2018) and Becker et al. (2006) reported favorable psychometric properties for their scales, we conducted independent assessments for these, as well as the intention and action items discussed below, and reported our findings in the Results section that follows.

6.3. Intention and action

We also adapted Harrison et al.'s (2018) three-item scale to measure intention, in this case a student's intention to acquire an assignment solution online. Again, the instructions for this scale were identical to those for the above-referenced scales.

[3] Harrison et al. (2016, 63) premised their Fraud Diamond questions centered on the opportunity to earn an additional $100 from overstating the condition of a tablet computer in an online advertisement.

To measure reported engagement of homework assistance website services, we asked students how often (on a four-point scale ranging from 1 = never to 4 = many times) in their college career they have: (1) used online homework assistance; (2) heard of a peer who has provided assignment solutions to an online assistance website (e.g., Chegg); and/or, (3) personally provided assignment solutions to an online assistance website.

6.4. Control variables

Prior research has shown demographic variables such as gender, age, educational level, academic ability, etc. to be related to a variety of specific behavioral outcomes (e.g., Jones, Norman, & Wier, 2010; Herda & Lavelle, 2012; Herda & Martin, 2016). We incorporated five demographic control variables to evaluate their potential influence on the tested associations between the Dark Triad factors, Fraud Diamond factors, and cheating intentions and actions. These control factors appear as constructs 1–5 in Table 1.

The inter-scale correlations reported in in Table 1 indicate that none of the correlations between the control variables and the primary study constructs were significant. Becker (2005) and Boehm, Dwertmann, Bruch, and Shamir (2015) reasoned that unnecessary control variables could potentially create biased parameter estimates, and excluding unnecessary controls maximizes the power of structural modeling tests by decreasing the number of estimated parameters. This motivated us to exclude of all controls from further analysis.[4]

7. Research design

Data must be evaluated for common method variance when collected from self-report instruments, particularly when independent and dependent variable data are gathered from the same individual (Podsakoff et al., 2003). We conducted Harman's single factor test (Harman, 1976) to assess whether a single factor accounted for most of the covariance in the model. While some studies have suggested the Harman approach may fail to detect the presence of common method bias, recent research supports its efficacy (Babin, Griffin, & Hair, 2016; Fuller, Dickerson, Atinc, & Babin, 2016). By means of principal components factor analysis of the sample data we identified several explanatory factors, thus rejecting the single factor explanation. Additionally, the measurement model discriminant validity tests (reported below) provide additional assurance that common method bias is not a significant problem in the present study.[5]

We analyzed the hypothesized theoretical model by means of Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 3.3 software. Ali, Kim, & Ryu, (2016, 220), citing Hair, Hult, Ringle, and Sarstedt (2017) note that PLS-SEM is an established technique for examining structural models, has been widely used in a number of research studies, and "has been increasingly popular ... because of its ability to model latent constructs under conditions of non-normality and small to medium sample sizes." We followed the recommended two-step process of first testing the validity and reliability of the measurement model, then testing the structural linkages (Anderson & Gerbing, 1988).

8. Results

8.1. Measurement model assessment

For the measurement assessment, we applied the confirmatory composite analysis (CCA) approach for variance-based SEM (Hair, Howard, & Nitzl, 2020), which is similar to the CFA (confirmatory factor analysis) process usually applied to confirm covariance-based measurement models (Hair, Risher, Sarstedt, & Ringle, 2019). We first tested the measurement model for convergent validity by means of factor loadings, Average Variance Extracted (AVE), and Composite Reliability (CR). As Table 2 illustrates, with four exceptions, the individual item loadings on their respective factors exceeded Chin, Peterson, and Brown's (2008) suggested minimum value of 0.6.[6] The AVE for each construct measures the extent to which the latent construct accounts for the overall amount of variance in the indictors (Ali et al., 2016). With the exception of Impulsiveness and Action, the AVE for each construct exceeded Fornell and Larcker's (1981) minimum 0.50, thus demonstrating adequate convergent validity. Ali et al. (2016) state that composite reliability refers to the level to which the construct indicators point to the

[4] As Table 1 reports, school was one of the control variables. The potential impact on responses due to geographic and cultural differences among students at the two schools motivated us to conduct a supplemental series of analyses of variance to identify significant inter-school score differences for any of the primary study constructs. Two significant differences emerged, i.e., students at one school reported a significantly lower narcissism and intention to engage the services of a website for homework assistance than their peers from the other school. However, supplementary analyses not reported in tabular form indicated that these differences did not moderate the associations reported among the primary study constructs, thus motivating us to report the results from analyses using aggregated data from the two schools.

[5] In addition, acceptable discriminant validity is supported by the test results reported in Table 3 below.

[6] As Table 2 reports, the Morality item that reads "Success is based on survival of the fittest; I am not concerned about the losers" had a loading of 0.577. The Impulsiveness item that reads "I don't plan anything very far in advance" had a loading of 0.541. The Rationalization item that reads "Faculty usually don't detect using online homework assistance" had a loading of 0.544. The Actions item that read "Personally provided assignment solutions to an online assistance website" had a loading of 0.524. We retained these items so that there would be three indicators for both constructs to ensure that for subsequent analyses the structural model would be identified (Hair et al., 2019). Moreover, though not reported in tabular form, excluding any one of these items did not significantly impact the results of the measurement or structural model tests.

Table 1
Inter-scale correlations.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. School[1]	–														
2. Gender[2]	**−0.280**	–													
3. Age[3]	0.142	−0.201	–												
4. Academic Level[4]	0.093	−0.046	***0.677***	–											
5. GPA[5]	**−0.262**	0.232	***−0.383***	−0.212	–										
6. Machiavellianism	−0.012	−0.003	−0.048	−0.069	−0.021	–									
7. Morality	0.067	−0.220	−0.088	−0.090	−0.110	***0.404***	–								
8. Impulsiveness	0.110	0.000	−0.040	−0.048	−0.114	***0.295***	***0.354***	–							
9. Narcissism	−0.168	−0.038	−0.045	−0.033	0.060	***0.412***	***0.342***	0.139	–						
10. Motivation	−0.059	−0.006	0.032	0.082	−0.166	0.155	**0.254**	***0.321***	0.195	–					
11. Capability	0.033	−0.045	−0.069	0.014	0.158	0.055	0.046	−0.032	0.170	0.207					
12. Rationalization	−0.057	−0.074	0.040	0.067	−0.037	0.250	***0.311***	0.204	***0.345***	***0.577***	***0.348***	–			
13. Opportunity	−0.080	0.155	−0.079	0.001	0.178	0.204	0.016	0.024	0.166	0.231	***0.436***	***0.374***	–		
14. Intention	−0.199	0.102	−0.053	−0.030	0.028	**0.261**	***0.400***	***0.307***	***0.350***	***0.555***	0.180	***0.606***	0.223	–	
15. Action	−0.040	0.075	−0.100	0.073	0.116	0.184	0.157	0.114	0.222	***0.425***	***0.339***	***0.509***	***0.397***	***0.382***	–

Bolded correlations significant at $p < .05$; ***Bolded and italicized*** correlations significant at $p < .01$.
[1] Coded '1' if Eastern school (n = 105), '2' if Southern School (n = 104).
[2] Coded '1' if male (n = 89) and '2' if female (n = 120).
[3] Coded '1' if under 20 (n = 45), '2' if 20–21 (n = 110), '3' if 22–24 (n = 44), and '4' if over 24 (n = 8).
[4] Coded '1' if freshman (n = 19), '2' if sophomore, (n = 38), '3' if junior (n = 68), and '4' if senior (n = 84).
[5] Coded '1' if 3.00 or lower (n = 28), '2' if 3.01–3.50, and (n = 48), and '3' if over 3.50 (n = 116).

Table 2
Convergent validity assessment.

Construct	Scale items[1]	Loadings	AVE[2]	CR[3]
Machiavellianism	I tend to manipulate others to get my way.	0.847	0.547	0.827
	I have used deceit or lied to get my way.	0.739		
	I have use flattery to get my way.	0.724		
	I tend to exploit others towards my own end.	0.633		
Psychopathy[4] (Morality)	Success is based on survival of the fittest; I am not concerned about the losers.	0.577[5]	0.542	0.776
	For me, what's right is whatever I can get away with.	0.799		
	In today's world, I feel justified in doing anything I can get away with to succeed.	0.810		
Psychopathy[4] (Impulsiveness)	I don't plan anything very far in advance.	0.541[5]	0.438	0.697
	I quickly lose interest in tasks I start.	0.684		
	When I get frustrated, I often "let off steam" by blowing my top.	0.744		
Narcissism	I tend to want others to admire me.	0.847	0.528	0.815
	I tend to want others to pay attention to me.	0.768		
	I tend to seek prestige or status.	0.618		
	I tend to expect special favors from others.	0.651		
Capability	I have the ability to represent the acquired solutions as my own work.	0.751	0.543	0.779
	I am skillful enough to explain acquired assignment solution calculations to others.	0.632		
	If I wanted to, I am confident that I have the resources needed to obtain solutions online.	0.815		
Opportunity	In general, it would be easy to get online assistance for assignments.	0.762	0.661	0.886
	It is easy for someone to take advantage of online assignment assistance resources.	0.738		
	Many students in my class have used online homework assistance	0.872		
	Using online homework assistance occurs frequently at our school	0.872		
Motivation	I would benefit by obtaining the solution to my assignment online.	0.804	0.582	0.847
	I have something to gain by obtaining the solution to my assignment online.	0.766		
	In some classes, I can't get the grade I want without using online homework assistance	0.715		
	I do not have enough time to complete some assignments without using online homework assistance	0.764		
Rationalization	I can justify obtaining solutions online.	0.866	0.608	0.817
	In this circumstance, it is acceptable to acquire the assignment solution online.	0.882		
	Faculty usually don't detect using online homework assistance.	0.544[5]		
Intention	If I were to submit an assignment for grading, I would first acquire the solution online.	0.923	0.824	0.934
	I intend to acquire the solution online before submitting it for grading.	0.902		
	If I submit an assignment solution for grading, I plan to first acquire it online.	0.899		
Action	Used online homework assistance	0.907	0.494	0.734
	Heard of a peer who has provided assignment solutions to an online assistance website (e.g., Chegg).	0.620		
	Personally provided assignment solutions to an online assistance website.	0.524[5]		

[1] The following scale items were excluded due to low loadings on their respective constructs: Motivation - I have a difficult time keeping up with my classes; Rationalization – I believe that it is appropriate to obtain assignment solutions online; [2]Average Variance Extracted; [3]Composite Reliability; [4]Composite Reliability for second-order construct Psychopathy = 0.740. [5]Item retained so that there would be three indicators to ensure that the structural model would be identified (Hair et al., 2019).

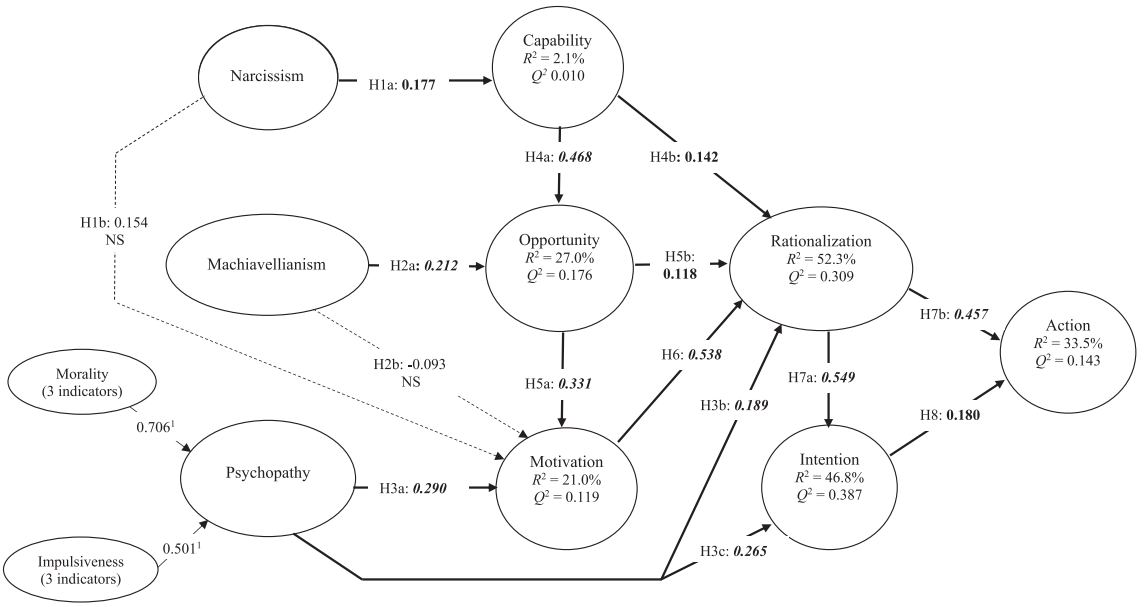


Fig. 2. Final structural model. (Solid Lines Represent Statistically Significant Paths). [1] factor loading; Italicized and bolded path coefficients significant at $p < .01$, bolded coefficients significant at $p < .05$.

latent construct. The data support this measure of internal consistency, with values ranging from 0.697 to 0.934, the values for eight of the 10 constructs falling precisely within the 0.70 to 0.90 range that Hair et al. (2019) defined as satisfactory to good.[7]

The weights of the first order Morality and Impulsiveness constructs on the second order Psychopathy construct (illustrated in Fig. 2 below) supported the latter's conceptualization as a second-order reflective-formative factor.[8] The weight for the Morality factor was 0.706 (t-value = 15.878; $p < .01$), and the weight for the Impulsiveness factor was 0.501 (t-value = 10.642; $p < .01$).

We next conducted discriminant validity tests to assess construct distinctiveness, i.e., the extent to which individual constructs were empirically different from each other (Hair et al., 2019). As Table 3 Panel A indicates, the square root of the AVE (diagonal values) for each construct is larger than its corresponding squared inter-construct correlation coefficients, which suggests adequate discriminant validity according to this criterion proposed by Fornell and Larcker (1981). However, Hair et al. (2019), Henseler, Ringle, and Sarstedt (2015) and others raised concerns over the reliability of this assessment criterion under conditions in which there are only slight differences in indictor loadings on a specific construct. Henseler et al. (2015) recommended the heterotrait-monotrait (HTMT) ratio of correlations as an alternative. Hair et al. (2019, 9) defined the HTMT ratio as "the mean value of the item correlations across constructs relative to the (geometric) mean of the average correlations for the items measuring the same construct." Henseler et al. (2015) suggested a conservative upper threshold HTMT value of 0.85 to 0.90 as suggestive of adequate discriminant validity. The HTMT ratios in Table 3 Panel B provide further support for the discriminant validity of this study's constructs.[9]

8.2. Structural model evaluation

The results of our hypothesis tests and structural model assessment appear in Table 4. We conducted this assessment by examining the standardized structural (i.e., beta) coefficients and their corresponding t-values calculated using Hair et al.'s (2017) 5,000 resample bootstrapping procedure, as well as by calculating R^2, effect size (f^2), and predictive relevance (Q^2) metrics suggested by Hair et al. (2019). As Table 4 illustrates, narcissism had a significant positive association with capabil-

[7] The Composite Reliability of 0.697 for Action, though technically below 0.700, is considered acceptable for exploratory research, and the 0.934 value reported for Intention is below 0.95, the latter value considered problematic due to item redundancy (Hair et al., 2019).

[8] See Sarstedt, Hair, Cheah, Becker, and Ringle (2019) for a discussion of higher order reflective-formative models. Whereas the indicators in a reflective model are highly correlated and interchangeable (Wong 2019), this is not the case with formative factors. As Rodgers and Guiral (2011, 26) state, "In formative indicators, the "unobservables" are considered effects rather than causes. An example of formative indicators is a theoretical variable "formed" from one or more observables." In the present study, the items that comprise the each of the first-order factors (i.e., Morality and Impulsiveness) are highly correlated and interchangeable with one another but not with those of the other first-order factor, and the second order Psychopathy factor is presumed to be caused by the observable measurement items from each first-order factor.

[9] As Table 3 Panel B indicates, the HTMT ratio for motivation and rationalization is 0.913, just over the upper threshold range specified by Henseler et al. (2015). However, the differences in indictor loadings on both constructs are not slight, and as indicated in Table 3 Panel A, the Fornell-Larcker criterion for discriminant validity between these two constructs is satisfied.

Table 3
Discriminant validity assessment.

Panel A: Fornell-Larcker criterion	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1. Action	**0.703**									
2. Capability	0.389	**0.737**								
3. Impulsiveness	0.125	−0.050	**0.662**							
4. Intention	0.471	0.224	0.302	**0.908**						
5. Machiavellianism	0.199	0.117	0.249	0.288	**0.740**					
6. Morality	0.138	0.034	0.354	0.432	0.421	**0.736**				
7. Motivation	0.542	0.332	0.243	0.591	0.176	0.255	**0.763**			
8. Narcissism	0.247	0.161	0.116	0.320	0.411	0.284	0.250	**0.726**		
9. Opportunity	0.421	0.485	0.010	0.269	0.260	0.051	0.350	0.214	**0.813**	
10. Rationalization	0.567	0.381	0.218	0.641	0.277	0.342	0.681	0.340	0.392	**0.780**

Note: The bolded values on the diagonal are the square root of the Average Variance Extracted and the off-diagonal values are correlations.

Panel B: Heterotrait-Monotrait (HTMT) ratio	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1. Action	–									
2. Capability	0.558	–								
3. Impulsiveness	0.349	0.159	–							
4. Intention	0.562	0.285	0.513	–						
5. Machiavellianism	0.254	0.184	0.514	0.347	–					
6. Morality	0.227	0.182	0.719	0.573	0.655	–				
7. Motivation	0.677	0.468	0.478	0.718	0.223	0.366	–			
8. Narcissism	0.362	0.263	0.273	0.398	0.570	0.500	0.320	–		
9. Opportunity	0.518	0.645	0.162	0.297	0.305	0.133	0.418	0.273	–	
10. Rationalization	0.762	0.590	0.423	0.785	0.390	0.515	0.913	0.479	0.523	–

ity, thus supporting H1a. However, the association between narcissism and motivation was non-significant, failing to support H1b.[10]

Machiavellianism had a significant positive association with opportunity, but a non-significant (negative) association with motivation, supporting H2a but not H2b. All of the hypotheses related to psychopathy (H3a – H3c) were supported as psychopathy had significant positive associations with motivation, rationalization, and intention. In turn, Capability had significant positive associations with opportunity and rationalization, supporting H4a and H4b. H5a and H5b were also supported as opportunity had significant positive associations with both motivation and rationalization. Motivation had a significant positive association with rationalization as H6 predicted. H7a and H7b were also supported as rationalization had significant positive associations with intention as well as action. Finally, a significant positive association was identified between intention and action as predicted by H8.

The f^2 effect-size metric captures how the removal of a particular predictor construct would affect an endogenous construct's R^2 value (Hair, Hult, Ringle, & Sarstedt, 2013). Cohen (1988) categorized f^2 values of 0.02, 0.15, and 0.35 as small, medium, and large effect sizes. Ali et al. (2016) suggested that, along with statistical significance (p) values, f^2 values should be reported as a substantive significance measure. Table 4 shows that among the significant paths, there were nine small, two medium, and two large effect sizes.

Hair et al. (2019, 12) noted that the predictive accuracy of a PLS path model can also be calculated using the Q^2 statistic. The authors, referencing Shmueli, Sarstedt, Hair, Cheah, Ting, Vaithilingam, & Ringle, (2019) and Sarstedt, Ringle, and Hair (2017), stated that Q^2 "combines aspects of out-of-sample prediction and in-sample explanatory power", and specify that "Q^2 values should be larger than zero for a specific endogenous construct to indicate predictive accuracy of the structural model for that construct". The authors further suggest that as a rule of thumb, Q^2 values higher than 0, 0.25, and 0.50 represent small, medium, and large predictive accuracy "of the structural model for that construct" (p. 12).

Fig. 2 illustrates the results of our structural model tests as well as the regression coefficients, cumulative adjusted R^2 values, and Q^2 statistics for each dependent variable. Of particular note, 52.3% of the variance in rationalization was explained by its direct and indirect associations with the Dark Triad elements and its Fraud Diamond antecedents. Similarly, 46.8% of the variance in intention was explained by the aforementioned factors and rationalization. Moreover, 33.5% of the variance in action was explained by its antecedents.

The Q^2 values illustrated in Fig. 2 indicate small predictive relevance for capability, opportunity, motivation, and action, while the Q^2 values for rationalization and intention indicate medium predictive relevance. The size differences among the individual Q^2 values notwithstanding, all indicate acceptable predictive relevance.

8.3. Mediation (indirect effects)

As reported above, H1b and H2b were not supported because contrary to prediction, there was no significant direct association between either narcissism or Machiavellianism, and motivation. However, to better understand the mediating effects

[10] Though not reported in tabular form, the association between narcissism and motivation was in the predicted direction and significant at $p < .10$.

Table 4
Structural model tests of hypotheses.

Hypothesized path	Beta	T-value	Hypothesis supported (Y/N)	f square
1a. Narcissism → Capability	0.177	2.099*	**Y**	0.027[1]
1b. Narcissism → Motivation	0.154	1.953	**N**	0.021
2a. Machiavellianism → Opportunity	0.212	2.629**	**Y**	0.058[1]
2b. Machiavellianism → Motivation	−0.093	1.200	**N**	0.008
3a. Psychopathy → Motivation	0.290	3.566**	**Y**	0.090[1]
3b. Psychopathy → Rationalization	0.189	3.573**	**Y**	0.083[1]
3c. Psychopathy → Intention	0.265	4.492**	**Y**	0.118[1]
4a. Capability → Opportunity	0.468	9.218**	**Y**	0.290[2]
4b. Capability → Rationalization	0.142	2.438*	**Y**	0.031[1]
5a. Opportunity → Motivation	0.331	4.455**	**Y**	0.129[1]
5b. Opportunity → Rationalization	0.118	2.080*	**Y**	0.026[1]
6. Motivation → Rationalization	0.538	9.839**	**Y**	0.458[3]
7a. Rationalization → Intention	0.549	11.833**	**Y**	0.497[3]
7b. Rationalization → Action	0.457	6.683**	**Y**	0.182[2]
8. Intention → Action	0.180	20.284*	**Y**	0.030[1]

* $p < .05$, ** $p < .01$.
[1] small effect size; [2] medium effect size, [3] large effect size.

Table 5
Significant indirect effects of dark triad traits and fraud diamond factors designated outcomes.

Predictor construct	Predicted outcome construct				
	Opportunity	**Motivation**	**Rationalization**	**Intention**	**Action**
Dark Triad Traits:					
Narcissism	0.083*	NS	0.133**	0.074*	0.074*[1]
Machiavellianism	NA	0.071*	NS	NS	NS
Psychopathy	NA	NA	0.156**	0.190**	0.239**
Fraud Diamond Factors:					
Capability	NA	0.155**	0.139**	0.154**	0.156**
Opportunity	NA	NA	0.178**	0.163**	0.165**
Motivation	NA	NA	NA	0.296**	0.299**
Rationalization	NA	NA	NA	NA	0.099*

NS = not significant; NA = Not Applicable; * = significant at $p < .05$; ** = significant at $p < .01$.
[1] The reported effect (0.074) is the sum of the following indirect effects: Narc → Capability → Rationalization → Action (0.012); Narc → Capability → Rationalization → Intention → Action (0.002); Narc → Capability → Opportunity → Rationalization → Action (0.004); Narc → Capability → Opportunity → Rationalization → Intention → Action (0.001); Narc → Capability → Opportunity → Motivation → Rationalization → Action (0.007); Narc → Capability → Opportunity → Motivation → Rationalization → Intention → Action (0.001); Narc → Motivation → Rationalization → Action (0.038); Narc → Motivation → Rationalization → Intention → Action (0.009). Interested readers can calculate the other illustrated indirect effects in a similar manner by using the path coefficients on Fig. 2 to trace, compute, and sum the effects for each of the indirect pathways for each predictor - outcome (e.g., Psychopathy → Intention, Psychopathy → Action, etc.).

of the Fraud Diamond elements on each outcome, we performed a path-analytic decomposition of the indirect effects of the Dark Triad traits and Fraud Diamond elements.[11] As Table 5 indicates, narcissism had a significant indirect positive association with opportunity of 0.083 through its direct positive association with capability (0.177 * 0.468 = 0.083). Machiavellianism had a significant positive indirect association with motivation via its direct positive association with opportunity (0.212 * 0.331 = 0.071). As is also evident in Table 5, all of the Fraud Diamond elements had significant positive indirect associations with both Intention and Action.[12] The other significant indirect associations illustrated in Table 5 can be calculated using the beta coefficients illustrated in Fig. 2.

9. Discussion

We synthesize and extend prior research on academic misconduct by developing and testing a comprehensive model that presumes that the elements of the Dark Triad are associated with the components of the Fraud Diamond in predictable ways. We find that each element of the Dark Triad exerts a differential impact on the various steps in the ethical decision-making

[11] Chong and Monroe (2015), citing Kerlinger and Pedhazur (1973, 19), observe that this procedure 'can be used to determine whether the pattern of correlations for a set of observations is consistent with a specific theoretical formulation'.
[12] Though not reported in Table 5, narcissism also had a marginally significant (at $p < .10$) indirect positive association with motivation via its associations with capability and opportunity (0.177 * 0.488 *0.331 = 0.028).

process that underlies the decision to engage homework assistance website services through their respective influence on the elements of the Fraud Diamond. By hypothesizing that rationalization is the culmination of the ethical decision-making process, and that it is predicated on the individual's capabilities, opportunity, and motivation, we find that rationalization is directly associated with both the intention to engage the services of homework assistance websites, as well as the act itself.

Our results show that narcissism is directly associated with capability as hypothesized, but not motivation. However, we did identify an indirect association between narcissism and motivation through capability and opportunity. It is noteworthy that we also find narcissism to have significant indirect positive associations with both the intent to engage in academic misconduct as well as the act itself, although the magnitudes of those associations are relatively small. In contrast, we only found Machiavellianism to have one significant indirect association, i.e., a positive one with motivation. This result is not overly surprising given that much of the prior research on Machiavellianism's effect on scholastic cheating has identified either a small effect or no influence at all (e.g., Cizek, 1999; Nathanson et al., 2006; Williams et al., 2010). Given that we hypothesized that all the Dark Triad elements would be associated with motivation, it was unexpected that we would find that only psychopathy had a direct association, but it was not surprising to find that psychopathy was far more powerful in predicting intention and action than either of the other Dark Triad elements. Indeed, psychopathy's total effect on intention was more than six times larger than that of narcissism ($\beta = 0.455$ vs. $\beta = 0.074$), and its effect on action was nearly four times that of narcissism ($\beta = 0.239$ vs. $\beta = 0.074$).[13] As noted earlier, Machiavellianism had no distal effects beyond opportunity.

Collectively, our results suggest that each of the psychological elements that comprise the Dark Triad exert differential influence on the components of the Fraud Diamond and ultimately on individuals' intentions and engagement in academic misconduct. We further find that capability, opportunity, and motivation each exert a unique influence on rationalization, intention, and action. These results complement those of Choo and Tan (2008) who found that each of the elements of the Fraud Triangle was influential in students' propensity to cheat and identified a three-way interactive effect indicating that opportunity, motivation, and rationalization were jointly influential in that proclivity. Our results further indicate that because each of the components of the Fraud Diamond serve as predictive factors in students' cheating behaviors, efforts to deter scholastic cheating will have varying degrees of effectiveness depending on the students' psychological predisposition. Moreover, various contextual factors germane to the academic misconduct decision may rise or fall in their relative importance based on their potential to influence the students' opportunity, motivation, and rationalization.

While both the Fraud Triangle and the Dark Triad have previously been used to explicate academic misconduct, this study uses the Fraud Diamond as its foundation and integrates it with the Dark Triad into an omnibus framework. Like Harrison et al.'s (2018) investigation into consumer fraud, we find that the unique effects of the Dark Triad amplify each phase of the cognitive process of academic fraud.

10. Recommendations

As noted above, our results indicate that the psychological components of the Dark Triad exert distinct effects on the decision-making process characterized by the Fraud Diamond. Individuals' capabilities influence their perceived opportunity, which in turn affects their motivation, and each is associated with rationalization. This model suggests that different stages of the process may be targeted to reduce the incidence of unauthorized solicitation of homework assistance website services.

It appears that the elements of the Dark Triad are immutable traits and, like other personality characteristics, are not susceptible to easy alteration (O'Boyle et al., 2012; Paulhus & Williams, 2002). Consequently, we cannot expect to reduce academic misconduct by changing the predisposition of the students but will instead need to alter perceptions related to the elements of the Fraud Diamond to affect the desired result.

Little can be done to address an individuals' conceptions of their capabilities as it flows directly from their personality. However, it may be possible to insert some controls to diminish the individual's motivation, perception of their opportunities, and rationalization processes. Students will always be subject to some level of pressure to cheat in an academic setting. However, educators may be able to alter the classroom environment to reduce their motivation to cheat. While simplifying the material or curtailing course rigor is obviously not a solution, it may be possible to offer students incentives to master the material and internalize the desired knowledge by emphasizing its importance for future scholastic or professional endeavors. For example, instructors can stress that higher-level coursework presumes a mastery of lower-level material and that employers are seeking employees who have the capacity and requisite understanding to perform the necessary tasks, not simply high scores on a transcript (Becker et al., 2006).

Students have a multitude of incentives driving them toward misconduct. One way to counter these incentives is through disincentives, and "under utility maximization, the disincentives for even a minor violation should be severe given the low probability of detection" (MacGregor & Stuebs, 2012, 268). One's motivation to engage in academic misconduct is derived from a deliberative process that evaluates the potential benefits of the act against the probability of being detected, and the severity of the likely penalties (McCabe et al., 2006). Accordingly, a greater expectation that the misconduct will be

[13] The total β (0.455) is calculated as the sum of direct association from Table 4 and the indirect association from Table 5. For example, the total β for psychopathy and intention is the sum of the direct association Table 4 (0.265), and the indirect association in Table 5 (0.190).

detected, coupled with an assumption of a harsh penalty, will likely be reflected in a decrease in motivation to engage in the act. Students also engage in misconduct as a result of peer pressure in an attempt to gain favor or avoid disapproval, or through a desire to advance their relationships with others. Publicizing violations of academic honor codes can result in a social disincentive derived from the public shame concomitant with the revelation of academic dishonesty (MacGregor & Stuebs, 2012).

Rationalization is often overlooked in discussions related to financial fraud because it represents the unobservable and internal attempt one uses to reduce their cognitive dissonance regarding the act to remain within their moral comfort zone (Dorminey et al., 2012a). The ability to rationalize academic misconduct is the critical piece linking opportunities and motivations. However, it may be possible for educators to take proactive action that effectively precludes students from easily justifying academic misconduct (MacGregor & Stuebs, 2012). Perhaps the most important way this can be done is through education (Bain, 2015). Educators need to engage in frank discussions about academic integrity and clearly convey their expectations in that regard. Instructors need to deploy an academic honor code and deliberately communicate that all academic fraud is material and that there are no minor infractions of academic integrity policies. Course syllabi should explicitly define what constitutes academic dishonesty and provide specific information regarding the penalties that will be imposed for violators. Instructors should further clearly prohibit all resources except those that are explicitly approved rather than attempting to develop a comprehensive list of what is disallowed (MacGregor & Stuebs, 2012). Moreover, all acts of misconduct should be promptly and severely punished. The failure to do so can establish an environment where students believe that cheating is not taken seriously thereby subtly encouraging it (Bain, 2015). Collectively, these actions proactively address potential rationalizations.

When considering financial fraud in the context of the Fraud Diamond, opportunity draws most of the attention. While there have been efforts to encourage the psychological profiling to identify those best positioned to engage in fraud, most of the effort aimed at preventing and detecting financial fraud is targeted at the opportunity leg of the Fraud Triangle (Padgett, 2014; Wolfe & Hermanson, 2004). Indeed, most of the substantive changes made to accounting standards in the aftermath of the financial fraud scandals that dominated the early part of the century are devoted to strict implementation and testing of internal controls – intended to deprive potential fraudsters of the opportunity to engage in their nefarious acts (Dorminey et al., 2012b).

As with financial fraud, the best way to minimize the incidence of students engaging in academic misconduct is by denying them the opportunity to do so (Peterson, 2004). There are a wide variety of tools and techniques intended to preclude students' opportunities to engage in scholastic cheating, but perhaps the most powerful tool the instructor has is the design of the course itself. Opportunities can be reduced simply by integrating certain techniques into the course. For example, the instructor can refrain from using publisher-based questions for homework and exams given the ease with which students can gain access to the solution (Bain, 2015). Instead, teachers could develop their own questions and exams with multiple versions and/or use essay-type questions that require a deeper understanding of the material, and which are not easily plagiarized from outside sources (e.g., McCabe et al., 2006; Savage & Simkin, 2010; Williams et al., 2010). Alternatively, instructors can de-identify questions culled from publisher test banks. This is often less time intensive than developing questions from scratch.

An efficacious way to minimize the adverse effects of student cheating via homework assistance websites is, as has become increasingly popular among faculty, to deploy an assessment integrity tool. These tools serve as barriers and disincentives that faculty can impose to help prevent academic dishonesty in an online assessment environment. The most prevalent method to deter cheating is to use an online remote proctoring service such as Honorlock, ProctorU, Proctorio, or Respondus. The cost and functionality of these tools vary, but may include website tracking and/or blocking, audio and video recording of the screen and/or student, identification verification, plagiarism detection, audio recording, environmental scan, etc. Any unusual activity is flagged and provided to the instructor for further review. In some cases, a live proctor will intervene if misconduct is detected. Emerson and Smith (2021) found that this strategy greatly reduced, but not eliminate the use of these website services.[14]

Absent utilization of a remote proctoring service, or to augment the effectiveness of any extant integrity tool, instructors can add an additional level of security by actively monitoring and recording students during assessments using platforms such as Zoom while students concurrently complete the exam on another platform such as Canvas, Blackboard or Moodle where questions are de-identified and scrambled. This multi-tiered level of security serves a strong disincentive to students who might otherwise be tempted to "consult" with other individuals or resources as a means of bettering their performance.

While assessment integrity tools appear somewhat effective in protecting the rectitude of online assignments, one can be certain that students are actively trying to find ways to circumvent them, as evidenced by a variety of online videos dedicated to that exact topic.

As noted earlier, the imposition and enforcement of academic integrity policies can be a powerful deterrent and weaken the individual's perception of opportunity (e.g., Bain, 2015; Emerson & Smith, 2021; Lang, 2013; Moten, Fitterer, Brazier, Leonard, & Brown, 2013; Savage & Simkin, 2010). To that end, some professors have gone so far as to use cheating technology against the offenders by setting a 'cheating trap' by posting a difficult question and a reasonable (but incorrect and obscure)

[14] The authors presumed that cheaters were bypassing the assessment tool by using a different device than that being used to take the assessment to access the website.

answer on a homework assistance website, then asking that same question on a graded assessment. Those identified as using the posted response can then be punished for an honor code violation (Moten et al., 2013). Imposition of penalties on offenders is a necessity because failing to act when academic misconduct is detected creates opportunity and inculcates an atmosphere that encourages further dishonest behavior (Becker et al., 2006).

A further disincentive that can be a very effective supplemental deterrent, is to inform students at the beginning of the term that they will be randomly called upon throughout the course to explain the solution to homework problems that they submit – anyone who turns in a correct solution to an assignment but cannot explain the derivation of the solution will receive a grade of 0 for the assignment, and depending on the nature of the assignment, might subject the affected student to an academic integrity violation charge by the instructor. The first violation if not contested, or if contested and upheld by the university, comes with a warning – the second violation can result in suspension from the university. Students expect that their professors will take active steps to curtail academic fraud, and if they fail to do so the students may feel that academic dishonesty is justifiable (Peterson, 2004).

Minimizing opportunity is especially important in light of our findings with regard to psychopathy given Nathanson et al.'s (2006, 119) admonition "that the only way to eliminate cheating among psychopaths is to make cheating an impossibility." While others may be motivated to engage in academic misconduct, they may refrain from acting because such an act would compromise their self-image and violate their personal moral code (Williams et al., 2010). In contrast, psychopathy is characterized by a conspicuous lack of conscience, making rationalization inconsequential (Bailey, 2017). Prominent among the psychopath's attributes are deficits in moral inhibitions and a fundamental lack of impulse control which encourages cheating as an acceptable and expedient path to achieve success and their career goals (Williams et al., 2010). Indeed, (Babiak and Hare, 2007) noted that many psychopaths are able to graduate from college and obtain professional credentials, "but in most cases it is less through hard work and dedication than through cheating, getting others to do their work, and generally 'working the system'."

11. Limitations and conclusions

As with all empirical analyses, our results must be interpreted in light of their limitations. First among these is our use of a single self-reported survey instrument. The cross-sectional data collected from instruments such as these are subject to the possibility of the negative influence of common methods variance or issues related to instrument design. However, each of the constructs measured with our survey were captured using psychometric scales that have been used and validated in prior research. In addition, our analyses support the distinctiveness and theoretical foundations of our latent variables which suggests that our data collection method is not responsible for the observed associations between them.

The cross-sectional design of our study also raises concerns that the data would support construct orderings other than those hypothesized. While all of our analyses were conducted in accordance with existing theory and research, conclusive statements with regard to causality await future longitudinal studies.

Despite the above-referenced limitations, this study adds to the extant research on academic misconduct by evaluating the unauthorized use of homework assistance websites within the context of a comprehensive framework that links the Dark Triad constellation of maladaptive personality traits and the Fraud Diamond. As predicted, Dark Triad elements influenced specific elements of the Fraud Diamond in predictable ways. Examining the Fraud Diamond through the lens of a causal ethical decision-making framework facilitates a better understanding of scholastic misconduct in the virtual environment. Thus, it provides a basis for using the Fraud Diamond in concert with the Dark Triad to view academic dishonesty in a different and more comprehensive way (Becker et al., 2006).

Educators have an obligation to evaluate and assess students' understanding of course materials, but that task is compounded when there are barriers that limit their ability to observe students' effort and activity. In cyberspace, students have expanded opportunity to collaborate without permission and access forbidden materials and websites while instructors' capacity to monitor and enforce these activities are correspondingly diminished (MacGregor & Stuebs, 2012). Easy access to information and the broad dissemination of course-specific materials make cheating in an asynchronous online environment easier, faster, and more convenient than ever before (Bain, 2015; Moten et al., 2013). This is unfortunate for a number of reasons. Students deprive themselves by circumventing the learning process and potentially hampering their future career success. Non-cheating students are harmed by depressed GPAs relative to the cheaters. Faculty must dedicate scarce resources to prevention, detection, and enforcement activities that would be better spent on enriching course materials. Schools and universities may suffer reputational damage as students without the requisite skills and abilities are advanced into the workforce (Cheng & Crumbley, 2018).

Lastly, as noted above, cheating in college has disturbing ramifications for future behavior because students who cheat in the classroom are more likely to engage in a wide variety of dishonest behaviors in the workplace (Nonis & Swift, 2001). This is even more disturbing given that business students have a more tolerant view of academic misconduct and are consistently near the top of majors deemed most likely to cheat (Becker et al., 2006).

Instructors have a duty to be cognizant of students' cheating behaviors because as technology advances, new avenues for misconduct will open, particularly in an era when many students are more technologically savvy than are the faculty (Becker et al., 2006). It is also important for educators to understand that it is not possible to eliminate all of the motivations and opportunities that drive academic misconduct. Consequently, they need to create strong barriers against it, implement

and enforce powerful disincentives, and create an environment where students find it difficult to rationalize academic misconduct (MacGregor & Stuebs, 2012).

Technology in education is a wonderful thing and it has brought many exciting innovations that can invigorate the classroom, but all parties involved need to be mindful of the malevolent ways it can be used to subvert the learning process.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgement

We would like to thank the editor-in-chief, Natalie Tatiana Churyk, the associate editor, and the two anonymous reviewers for their many valuable comments and suggestions.

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