Evil Geniuses at Work: Does Intelligence Interact with the Dark Triad to Predict Workplace Deviance?

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Evil Geniuses at Work:
Does Intelligence Interact with the Dark Triad to Predict Workplace Deviance?

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Abstract

A meta-analysis which investigated the direct relationship between intelligence and the Dark Triad traits found that there was no evidence for a strong correlation between the two constructs (O’Boyle, Forsyth, Banks, & Story, 2013). However, the existence of an indirect relationship between the two traits was still unknown. Following the recommendation of a meta-analysis conducted by Muris, Merckelbach, Otgaar, and Meijer (2017), the present study sought to confirm whether cognitive ability interacts with the Dark Triad traits to predict deviant, smart lying workplace behaviours. Undergraduate psychology students who were currently working full-time or part-time, or have worked in the past, participated in the study ($N = 77$). They completed a battery of measures entirely online. The study included assessments of cognitive ability, Dark Triad traits, and a situational judgment test (SJT) which afforded the participants the opportunity to manipulate coworkers and supervisors in fictional scenarios. A series of hierarchical multiple regressions were performed to understand the ability of each predictor and moderator variable to predict unique variance in SJT scores, the criterion variable. It was hypothesized that the highest intent to engage in smart lying behaviour would result from an interaction between high levels of intelligence and high levels of Dark Triad traits. Non-significant results were reported for all hypotheses; intelligence was not a moderator of the Dark Triad–smart lying relationship. Additionally, there was no evidence to show that Machiavellianism accounted for significantly more variance within smart lying scores above and beyond either narcissism or psychopathy alone. Instead, psychopathy emerged as the strongest independent predictor of smart lying. Implications and future recommendations are discussed.

Keywords: Dark Triad, cognitive ability, intelligence, deception, lying.
Evil Genius at Work: Does Intelligence Interact with the Dark Triad to Predict Workplace Deviance?

It has been a decade and a half since Paulhus and Williams (2002) introduced the Dark Triad (DT) into the psychological lexicon. As described by Jones and Paulhus (2014), the DT includes narcissism (i.e., over-inflated sense of entitlement, dominance), Machiavellianism (i.e., manipulativeness, immorality, cynicism), and psychopathy (i.e., lack of empathy and self-control). Taken together, the common core of the three DT traits consists of either low agreeableness (Stead & Fekken, 2014), low honesty-humility (Book, Visser, & Volk, 2015), or callousness (Jones & Figueredo, 2013). The originality of the DT stemmed from the idea that these traits are not always indicative of disorders, and instead they can be widely found in subclinical populations. A respectable body of research on the DT has proliferated which has investigated the phenomenon in various contexts of normal behaviour. In a subset of these studies, industrial/organizational psychologists have been interested in how employees and supervisors with high levels of these callous traits can impact their colleagues and organizations as a whole. Prominent findings summarized by O’Boyle, Forsyth, Banks, and McDaniel (2012) were that Machiavellianism and psychopathy were associated with decreased job performance, and that high incidences of all three traits were related to more counterproductive work behaviours (CWBs) such as theft and absenteeism. Continued research on the DT in workplace contexts can improve personnel selection processes by reducing CWBs and increasing employee satisfaction with the exclusion of highly self-centered applicants.

In recent years, a few meta-analyses summarizing DT research have also been published. Amongst them, two are primarily of interest to this study. O’Boyle et al. (2013) investigated the intelligence–DT connection using 48 samples. They found that there was no apparent correlation...
between callous, antisocial behaviour and cognitive ability. Muris et al. (2017) cited these findings and recommended that future researchers look at whether certain moderating factors, in particular intelligence, could interact with DT traits to produce negative social outcomes. The current study followed through on this recommendation from Muris et al. (2017) to test whether intelligence interacting with the DT could predict manipulative workplace behaviour in the form of smart lying.

The criterion variable in this study, termed “smart lying”, describes instances where individuals intentionally lie in order to get ahead of, or along with, others for their own gain. Due to their cunning calculations of when, and how, to lie successfully, these smart liars theoretically would suffer few negative repercussions. Previous research has showed that all the DT traits together predicted the perceived ability to deceive better than any of the three traits alone, and each DT trait had significant positive correlations with perceived ability to deceive (Giammarco et al., 2013). As well, those high in DT traits were indeed more likely to have lied and carried out norm-breaking behaviours (e.g., drug abuse, bullying) over their lifetime (Azizli et al., 2015; Baughman, Dearing, Giammarco, & Vernon, 2012). Thus, not only do those high in the DT traits believe they are more deceptive and skilled at lying than the rest of the population, they also commit more deceptive acts. However, are they truly more talented liars? The missing piece of the puzzle involves research on the outcomes of deceptive behaviours carried out by those high in the DT traits.

Intelligence, specifically general mental ability (i.e., g), is a strong predictor of many job-related markers of success: socioeconomic status (Strenze, 2007); occupational training (Morris & Levinson, 1995; Ziegler et al., 2011); occupational functioning (Morris & Levinson, 2005); job performance (Schmidt & Hunter, 2004); and job status achievement (Schmidt & Hunter,
2004). Given this, it would not be a far reach to guess that intelligence also may predict the success of one’s lie overall in achieving enhanced reputation and status at work.

To the researchers’ knowledge, smart lying at work is a variable which has not yet been explored in psychological literature. Though we know that those with high levels of the DT traits lie more profusely than their peers, we do not yet know if intelligence may change the complexity and situational adaptiveness (i.e., smartness) of the lie, and thereby influence its success. The current study sought to answer the first part of this conundrum – do certain combinations of intelligence and DT trait levels produce more or less intelligent lies? Smart lying is conceptually similar to CWBs, which are “intentional behaviours that violate organizational norms and are contrary to the legitimate interests of the organization and its members” (Gonzalez-Mulé, Mount, & Oh, 2014, p.1223). Therefore, the following literature review on this topic will draw primarily from CWB research.

**Overview of the Research Area**

**The DT and intelligence.** O’Boyle et al. (2013) analyzed 39 publications on the link between general mental ability and the DT traits. Their findings showed that there was no statistically significant correlation between intelligence and any of the DT traits, however they were careful to note that stronger relationships between intelligence and the DT traits may be found in certain populations or situations. In particular, they noted that individuals in executive positions whose promotions depended more on positive interpersonal relations may benefit from a combination of high intelligence and DT traits.

Smart lying behaviour logically would require a large amount of cognitive effort to craft a believable lie, estimate the risk involved in lying in the given scenario, and plan for possible future consequences to one’s reputation. As such, a smart liar should be adept at carrying out
cost-benefit analyses. The relationship between good impulse control in the face of rewards (i.e., high self-control) and intelligence is well-documented. A meta-analysis published by Shamosh and Gray (2008) examined 24 studies on the link between intelligence and delay discounting (i.e., preference for smaller, more immediate rewards over larger, time-delayed rewards) and found that there was a negative correlation between intelligence scores and delay discounting. In short, those who are highly intelligent are more able to see the value in working towards highly rewarding long-term goals and have a greater ability to check their spontaneous urges to satisfy a short-term need. This result lends support to the idea that a smart individual who wants to ultimately get ahead of many others in an organization would be well-equipped to stall their impulse to lie (and receive short-term gratification from the thrill of deception) until they are in a situation where lying could lead to more long-term benefits than being honest.

Together, the literature on intelligence and the DT proposes that there is no direct relationship between the two constructs, but the combination of high intelligence and high DT traits may prove to generate successful lies in specific environments like work or school where one’s reputation and charm become a good way to access power and status. Being able to craft a smart, undetectable lie at work depends on the skill to recognize the greater value of future rewards (e.g., promotions) compared to short-term rewards (e.g., gossiping about a colleague because it is fun). The self-control needed to curb the desire for instant gratification and instead work towards long-term goals is more readily available in highly intelligent people.

**Psychopathy.** A study conducted by Watts et al. (2016) echoed the findings of O’Boyle et al. (2013) as the researchers found no relationship between sub-clinical psychopathy and intelligence in a broad sample of undergraduate students. This result provides more evidence that the impulsivity that characterizes psychopathy is unrelated to methodical and complex thinking
processes. It also lends further support to the idea that those high in intelligence are also better at curbing their impulses (Shamosh & Gray, 2008).

Not all individuals who score highly in DT traits are equally able to curb their impulse to deceive. A study conducted by Baughman, Jonason, Lyons, and Vernon (2014) sought to find relationships between each of the DT traits and lying behaviours. They presented 462 student participants with one scenario describing the opportunity to deceive a romantic partner, and another scenario with the opportunity to deceive a professor. Among other items, students were asked to self-report how often in general they lie, how they feel when they lie, how much cognitive effort they expend on a lie, and if they would lie in each of the given scenarios. It was found that those high in psychopathy lied the most often and gained more joy from lying in any scenario, which aligns with the thrill-seeking aspect inherent in subclinical psychopathy (Jones & Paulhus, 2014). This would suggest that psychopaths are impulsive when it comes to lying; they may lie profusely, but not necessarily intelligently. Even though psychopathy is characterized by a lack of self-control which predicts more deceptive behaviours (Azizli et al., 2015; Baughman et al., 2012), it is unlikely that these norm-breaking acts fit the description of smart lying.

Heilbrun (1982) thought that psychopathy, when combined with high levels of intelligence, could lead to a lower probability of antisocial behaviours. Intelligence could provide a much-needed impulse check on the psychopathic intent to be deviant. However, Watts et al. (2016) found results contrary to those expected by Heilbrun (1982). When Watts and colleagues analyzed the moderating effect of intelligence on psychopathy and antisocial behaviours, they found a small effect where high scores on psychopathy interacted with high intelligence to lead to higher than average predictions of criminal behaviour. As their effect size was not large, and
there is far more evidence to suggest that intelligence and psychopathy involve conceptually opposite cognitions, this interaction effect will likely not be replicated in the current study. It is predicted that psychopathy will not be directly related to smart lying behaviour, nor will it interact with intelligence to indirectly predict intelligent lying.

**Machiavellianism.** The manipulative nature of Machiavellianism is typically seen as synonymous with social intelligence, and evolutionary psychologists have proposed that the adaptive purpose of a general intelligence (g) was primarily for more efficient social interactions (Wilson, Near, & Miller, 1996). Following this line of logic, there is reason to believe that a high general intelligence would also be related to Machiavellianism, but this relationship has not been supported in multiple empirical studies (O’Boyle et al., 2013; Wilson et al., 1996). Wilson and colleagues (1996) stated that there is additionally little evidence to suggest a direct relationship between Machiavellianism and positive occupational outcomes such as upwards social mobility (i.e., promotions and raises). However, there may exist an indirect relationship between these constructs. Touhey (1973) included intelligence as a moderating variable within the Machiavellianism–social mobility relationship and found that individuals could climb occupational ladders more quickly when they scored highly on both intelligence measures and Machiavellianism. Moreover, individuals who scored high in Machiavellianism but low in intelligence showed low social mobility. The findings of Touhey’s study proposes that intelligence could have a moderating role to play in the relationship between DT traits and workplace outcomes. Specifically, individuals who are very smart and high in the Machiavellianism trait would be able to use these skills to obtain more powerful job roles.

Further results from the Baughman and colleagues (2014) study on DT traits and domain-specific lying behaviours revealed that students who scored highly in the Machiavellianism
subscale made more elaborate, novel lies using greater cognitive effort, which reflects the calculated and manipulative aspect of Machiavellianism described in the DT (Jones & Paulhus, 2014). Additionally, participants who had high scores in Machiavellianism put more thought into academically-related lies than lies to a romantic partner (Baughman et al., 2014). This contrasted with those who scored highly on the psychopathy measure, as they expended relatively little cognitive effort on planning their lie in both situations. The implication of this result is particularly relevant to the current study investigating workplace deception as both academic and employment settings allow successful liars to gain increased status. It points to the idea that Machiavellianism may be the DT trait that is most related to smart lying at work, as Machiavellians may be more willing to craft intricate lies to win status rewards.

After looking at the indirect effect of workplace success that high intelligence and high Machiavellianism produced in the Touhey (1973) study, coupled with the findings of Baughman et al. (2014), it seems that very smart Machiavellians are the most likely to lie intelligently at work. Machiavellianism alone, as well as in combination with intelligence, may significantly predict the propensity to lie intelligently.

**Narcissism.** In line with the self-aggrandizing behaviours that typify narcissism, both male and female narcissists over-estimate their true intelligence and have an inflated view of their cognitive ability (Gabriel, Critelli, & Ee, 1994). Interestingly, in their seminal paper on the topic, Paulhus and Williams (2002) did find a small, significant positive correlation between narcissism and IQ scores. However, when O’Boyle et al. (2013) included Paulhus and Williams’ (2002) results within their large meta-analysis of intelligence and the DT, this direct relationship between intelligence and the narcissism subscale was not replicated.
McKenzie and Lee (2015) analyzed the personality profiles of over 200 six- to nine-year-old children and found a statistically significant correlation between children high in both intelligence and narcissism and symptoms typical in oppositional defiant disorder and conduct disorder. This positive correlation was not present in comparative groups of children with low and average intelligence scores. Oppositional defiant disorder and conduct disorder are both characterized by norm-trespassing behaviours and a consistent disregard for rules and authority figures so they can be conceptually related to CWBs. As a caveat, it is important to note that the current study will use an adult population and results may vary due to this demographic difference. There is plenty of research on emotional intelligence and narcissism in adult samples, but unfortunately no other past studies which investigated the indirect relationship between narcissism and deceptive behaviours, moderated by intelligence, were found. Due to this lack of information, it is hard to predict whether intelligence will moderate the narcissism–smart lying association. There appears to be no direct relationship between narcissism and smart lying, and if intelligence does indirectly moderate narcissism and smart lying behaviour, this relationship is most likely weaker than the interaction of intelligence and Machiavellianism in predicting smart lying.

Overall, the findings reported on intelligence in relation to each of the DT subscales indicate that there is no direct relationship between any of them (O’Boyle et al., 2013; Wilson et al., 1996). However, Machiavellianism alone is probably most directly predictive of smart lying at work, as well as indirectly predictive of smart lying via the moderating influence of intelligence. Though all three traits correlate positively with deceptive behaviour, smart lying involves an element of thoughtful, planned deception in order to work towards a long-term goal
of elevated status. Rational, long-term goal oriented behaviour can clash with the impulsivity which characterizes psychopathy, and the short-lived charm of narcissists (Czarna et al., 2016).

**The DT and work behaviours.** Forming alliances is a major part of gaining influence and power over others in the workplace. Those with DT traits strategize differently when it comes to making friends. Machiavellians were more likely to choose friends who were easily manipulated, psychopaths preferred befriending emotionally unstable, unkind individuals, and narcissists had a widely varied number of reasons to pick friends related to their ongoing need for ego-reinforcement in various domains (Jonason & Schmitt, 2012). Jonason and Schmitt (2012) went on to hypothesize that while narcissists often made friends to advance their own personal image, psychopaths instead chose friends who provided constant excitement in their lives, and Machiavellians used friendships for exploitative purposes. If this is true, then narcissists and Machiavellians would be most interested in deceiving others at work for upwards social mobility within the organizational hierarchy, whereas psychopaths would lie to others simply for the reckless joy of doing so.

Employees can either adopt hard (e.g., uttering threats) or soft (e.g., complimenting) tactics to persuade colleagues to do their bidding. Jonason, Slomski, and Patryka (2012) concluded from a widely varied sample of students and working professionals that in general, the entire DT is more closely related to a preference for hard tactics over soft ones. Within the specific traits of the DT, Machiavellians and psychopaths were linked to using more manipulative tactics than narcissists. Machiavellians seemed to be comfortable using any level of manipulation to suit their needs, as the construct was related to both hard and soft tactics. Individuals high in narcissism were more likely to report using soft tactics. Conversely, those high in psychopathy were more likely to report using hard tactics. As Machiavellians show the
most flexibility and adaptiveness in their use of tactics to achieve their self-serving aims, it is likely that this subscale will be most related to smart lying. They would be the most willing to lie, backstab others, and do whatever it takes to achieve their self-serving aims.

O’Boyle et al. (2012) meta-analyzed 245 samples in studies which investigated the link between occupational outcomes and the DT. One of their main findings was that there was a positive association between CWB incidents and high levels of each of the DT traits. Grijalva and Newman (2015) later updated the O’Boyle et al. (2012) meta-analysis to conclude that narcissism was the greatest independent predictor of CWBs in the DT. Despite this finding, a critical conceptual difference between CWBs and smart lying may mean that narcissism may not independently predict smart lying. While smart lying requires long-term ingratiation with important others (e.g., colleagues, bosses) to achieve an ultimate goal of increased status for oneself, CWBs may be carried out without the aid of others. The tendency for narcissists to quickly lose popularity in the eyes of peers is important to consider here, as this quickly tarnished reputation may mean that they would not be able to sustain smart lies (Czarna et al., 2016).

Kessler et al. (2010) created a scale measuring Machiavellianism specifically in workplace contexts. The researchers found that the participants who strongly valued their managerial positions and maintaining power self-reported that they engaged less in CWBs. However, O’Boyle et al.’s (2012) follow-up analysis concluded otherwise. They demonstrated over a wider range of samples that Machiavellians engaged in more CWBs regardless of how powerful a role they held in their organization. Though narcissism and Machiavellianism were associated with higher rates of CWB no matter what the authority level of the employee, the relation of CWBs to psychopathy was a bit more complex. As psychopaths climbed higher in the
organizational hierarchy, they displayed less CWBs and the positive relationship between the two constructs weakened (O’Boyle et al., 2012).

Together, the findings on DT traits and work behaviours show that narcissists and Machiavellians would be the most likely to make friends for selfish motives (Jonason & Schmitt, 2012; e.g., self-enhancement, gaining power by manipulating others). Machiavellians see friendships as a means to a self-enhancing end, and are willing to manipulate close others with a combination of hard or soft tactics to get their way (Jonason et al., 2012). Though narcissism alone accounts for the most variance in CWBs (Grijalva & Newman, 2015), CWBs comprise a variety of behaviours from bullying to absenteeism, and only a few within that category serve to directly manipulate others. It is more likely that the current study will find that psychopathy and Machiavellianism independently predict more intelligent lying than narcissism.

**Intelligence and CWBs.** Though it has been well-established through decades of research that intelligence is positively correlated with job performance, research on the link between intelligence and non-task performance has not produced the same relationship. Gonzalez-Mulé et al. (2014) summarized 35 existing studies on the relationship between general mental ability and CWBs to conclude that they have a negligible correlation of -.02. Given this, it will be interesting to see whether adding in a third variable of the DT personality traits will affect this null relationship.

**Current Study and Hypotheses**

As reviewed above, there is abundant evidence to show that there is no correlation between intelligence and any of the three DT traits (O’Boyle et al., 2013; Watts et al., 2016; Wilson et al., 1996). However, the few studies that have investigated the moderating effects of intelligence when combined with specific DT traits have been able to predict both positive and
negative outcomes. Touhey (1973) found that very smart Machiavellians could increase their occupational status quickly, McKenzie & Lee (2015) observed that smart, narcissistic children had higher rates of disruptive disorders, and Watts et al. (2016) discovered that very smart psychopaths were more likely to commit crimes in the future. The literature in this area requires confirmation on whether intelligence could moderate the relationship between the DT composite and social outcomes like smart lying. If intelligence indeed moderates the DT–smart lying relationship, what would the relationship look like? Furthermore, do any of the three DT traits independently, or in combination with intelligence, predict smart lying more than the others? Muris et al. (2017) have called for further research into this area and the current study seeks to find answers to the above questions.

The purpose of the present study is to investigate whether intelligence moderates the relationship between DT traits and smart lying outcomes, and if so, what the interactive relationship looks like. Though it is known that all three facets of the DT are related to norm-breaking behaviours like CWBs (O’Boyle et al., 2012) which bear some resemblance to smart lying, intelligence may add further nuances into the prediction of specific deceptive behaviours. It is likely that high levels of intelligence would provide the self-control needed to carefully plan and execute smart lies (Shamosh & Gray, 2008). Therefore, high intelligence, combined with the intent to deceive arising from high DT traits, should combine to predict the most intelligent lying: the ability to deceive for one’s own gain with low risk of getting caught and suffering negative consequences. As well, it is probable that Machiavellianism has a stronger relationship with smart lying than the other DT traits. Based on the existing body of work in this area, the following hypotheses will be tested:
**Hypothesis 1a:** Intelligence will moderate the relationship between the DT composite and smart lying.

**Hypothesis 1b:** The nature of the moderation will be such that individuals with higher levels of intelligence will have a stronger relationship between the DT composite and smart lying, compared to those with a lower level of intelligence.

**Hypothesis 2a:** Machiavellianism will predict smart lying above and beyond psychopathy alone.

**Hypothesis 2b:** Machiavellianism will predict smart lying above and beyond narcissism alone.

**Hypothesis 2c:** Intelligence will moderate the relationship between Machiavellianism and smart lying.

**Hypothesis 2d:** The nature of the moderation will be such that individuals with higher levels of intelligence will have a stronger relationship between Machiavellianism and smart lying, compared to those with a lower level of intelligence.

**Method**

**Participants**

Initially, 99 Western University undergraduate students with access to the psychology research participation pool (SONA) participated in the study. From this sample of 99, 22 participants were removed for careless responding, never having worked before, or completing the study twice. As such, the final sample size used in analyses was $N = 77$. Within the final
sample, 61% were female, 38% were male, and 1% identified as other. Participant ages ranged between 17 to 27 years ($M = 19.4, SD = 1.74$). Though all of the participants reported that they had previously worked at least one paid job, 34% of the participants were currently working while also in school. Of this subset of currently working students, 89% were working part-time (i.e., 24 or less hours per week), and 11% were working full-time (i.e., 25 or more hours per week).

To be included in the survey, students first had to be able to access the SONA website via enrolment in a course requiring research credit. Participants were excluded if they had never worked before in their life, as the content of the survey required that participants imagine fictional scenarios at work and respond to them in a realistic manner. It was believed that those who had worked before could more easily imagine themselves in the specific work scenarios, compared to those who did not have prior employment experience. Aside from the aforementioned inclusion criteria, participants also must have had normal or corrected-to-normal vision so that they could read the computer screen for up to an hour without excessive fatigue. The latter two exclusion criteria were noted in the SONA recruitment form and letter of information.

Data collection occurred over a period of eight weeks in early 2018. As the entire survey was administered online, participants could log in at any time during that time period to complete the questionnaire. If a participant left the study at any point during the survey, they had up to one week to log back in and finish from where they left off. After one week, their data was automatically deleted by the survey platform and researchers were not able to collect it. Participants filled in the survey on their own without supervision of the researcher. They were compensated with research credit regardless of whether or not they completed the full study.
Materials

**Demographic Questions.** Each participant responded to non-identifying demographic questions (e.g., “Do you have a job now in addition to attending school?”). Information about gender, age, ethnicity, first language, employment history, and year of study was collected. As with all the other questions in the survey, participants could freely skip any questions they did not want to answer.

**International Cognitive Ability Resource (ICAR).** The ICAR Sample Test (Condon & Revelle, 2014), comprised of 16 items, was obtained through the public domain ICAR website to test cognitive ability in the present study. The ICAR Sample Test is a representative subset of the original 60-item measure with respect to item difficulty (Condon & Revelle, 2014). The ICAR assesses the g factor of intelligence. The long version of the ICAR was validated using 96,958 online participants across 199 countries, and the short version was validated with a subset of 4,574 participants (Condon & Revelle, 2014). The reliability of the 16-item ICAR Sample Test is acceptable ($\alpha = .81$; Condon & Revelle, 2014), though not as reliable as the 60-item test ($\alpha = .93$; Condon & Revelle, 2014). The short version of the test was used in the present study to avoid participant fatigue effects through the rest of the study.

**Situational Judgment Test (SJT).** The basis of the smart lying at work SJT that I adapted for use in the current study came from an unpublished doctoral dissertation by Conway (2014). See Appendix A for the adapted SJT used in the present study. Responses to the 12 fictional workplace scenarios in the SJT reveal participants’ intent to either lie or be honest when presented with the opportunity to manipulate coworkers to get ahead of them or gain their admiration, trust, and respect.
According to the Theory of Planned Behaviour (Ajzen, 1991), the intention to execute a deliberate behaviour is the greatest predictor of whether one’s internal belief or attitude will be translated to a real action, given that the individual feels as though they have adequate behavioural control over the situation. When perceived behavioural control is extremely high, then intention alone should be enough to predict the translation of a desire into real behaviour (Ajzen, 2012). Perceived behavioural control is at high levels when individuals feel they have adequate information, ability, and skills to execute their desired behaviour (Ajzen, 2012). In each of the fictional SJT scenarios, participants were provided with plenty of information about the situation at hand, their own status at work, and their relationship with other coworkers to allow them to make an informed decision about how to respond to the problem. Therefore, their perceived behavioural control in all the SJT situations should have been relatively high. Following this rationale, it is likely that participants who reported their intent to lie or tell the truth when faced with complex fictional workplace scenarios would do the same if presented with the same situation in reality.

Though Conway (2014) had included 12 unique scenarios in his measure and categorized them as either instances where one could lie to get ahead or lie to get along with one’s coworkers, in the present study this distinction was unimportant as both forms of lying could lead to greater power for the deceptive employee. Additionally, Conway (2014) had been concerned primarily with the size of the lie being made (i.e., small, medium, or large), but the current study was concerned with the degree to which a lie was smart (i.e., difficult to detect, well-thought out, adapted to the situation in question) rather than its size. With these considerations in mind, I modified the original SJT by replacing a few scenarios with other ones that Conway (2014) had developed but not included in his final measure. I also changed the
order and weight of the possible multiple-choice responses to reflect smartest to least-smart lying rather than large to small lie size. Finally, I changed some of the names in SJT scenarios to reflect greater ethnic and gender diversity in the work environment. The adapted smart lying SJT used in the current study originally included 12 items, but after an item analysis of the measure one item was removed for a total of 11. Each item was scored on a 5-point ordinal scale ranging from 1 (response least representative of a smart lie) to 5 (response most representative of a smart lie).

The reliability of the original SJT (Conway, 2014) was calculated using data from participants recruited from both Amazon Mechanical Turk ($\alpha =$ .66 to .71) and an institutional psychology research participant pool ($\alpha =$ .64 to .69). As the SJT was first used in an online study, it was appropriate to use this measure in an analogous online study with student participants. The reliability of the original SJT was not applicable to our present usage, as the two studies had very different goals. While Conway (2014) was concerned with whether the SJT could accurately measure a general willingness to lie, the present study used the adapted SJT to operationalize smart lying intentions. The present sample yielded a scale reliability of $\alpha =$ .51. It is important to note that the revised SJT used in the current study had not been previously validated with other samples.

**Short Dark Triad (SD3).** We used the SD3 to measure levels of the DT in the student participants in our study. The SD3 was developed in 2014 by Jones and Paulhus to respond to the need for an accurate, short-form measure of the DT personality traits. A comparative study conducted by Maples, Lamkin, and Miller (2014) showed that, when compared to lengthier single-facet DT scales, the SD3 had greater convergent and incremental validity than the other popular brief DT measure, the Dirty Dozen (DD; Jonason & Webster, 2010). In short, the SD3 is
a superior option over the DD for a short but efficient measure of the DT traits. A conscious decision was made to include a condensed survey of the DT rather than lengthy, detailed measures surveying each of the constructs to reduce the amount of time and cognitive effort participants would have to expend on this part of the study.

The SD3 has a total of 27 self-report items, and includes nine questions to measure each facet, including narcissism (e.g., “I have been compared to famous people”), psychopathy (e.g., “People often say I’m out of control”), and Machiavellianism (e.g., “You should wait for the right time to get back at people”). Each item is scored on a 5-point Likert scale ranging from 1 (Disagree Strongly) to 5 (Agree Strongly). Over four studies with 1063 participants, Jones and Paulhus (2014) showed that each subscale of the SD3 had a strong positive correlation ($r = .82$ to .92) with standard, lengthy individual facet scales. Cronbach’s alpha for each of the three subscales of the SD3 ranged from .68 to .74 (Jones & Paulhus, 2014).

**Attention Checks.** As the entire study was quite long, three types of attention check items were placed throughout the questionnaire. These attention checks served two purposes. First, they reminded participants to stay alert and pay attention to the wording of the questions. Second, they allowed researchers to later exclude inattentive, fatigued participants who did not correctly respond to enough attention check items. The first type of attention check was within the SJT, as each of the 12 items asked respondents to first answer a reading comprehension question to assess their understanding of the unique scenario before answering how they would behave in that circumstance. Additionally, in the SD3 assessment around the end of the study, instructed response attention check items (e.g., “Please respond with ‘Agree’ for this question”) were inserted between the standard questions of the measure. Finally, at the end of the survey
there was a question which asked participants to be honest and self-report whether they thought their data should be used by the researcher.

**Procedure**

Ethical approval for the study was obtained with the institutional non-medical research ethics board. Soon after, data collection occurred between the start of February and the end of March 2018. Students in the online research participation pool logged in with their anonymous ID codes and read a study description on the SONA website (see Appendix B). If they were interested in participating in the study, they then opened the study on Qualtrics (a third-party survey hosting platform). The students first read through a detailed letter of information about the study which outlined the exclusion criteria, what tasks they would be asked to complete, and their rights as research participants (see Appendix C). They then indicated their consent to participate in the study. Participants who did not consent were automatically redirected to an end-of-study webpage.

Following implied consent, the participants each completed four measures. They were instructed to respond honestly in a quiet, non-distracting environment and avoid using aids such as internet search engines, calculators, and the knowledge of others. To encourage truthful answers, the letter of information stated explicitly that no personal/identifying information would be collected (e.g., names or birth dates). Furthermore, the letter of information stressed that 1) participants could choose to leave the study at any time, 2) skip any questions they did not want to answer, and 3) leaving the study would not affect their academic or employment status.

The order of measure presentation within the study was 1) ICAR test, 2) smart lying SJT, and 3) DT measure. All participants received the same order. The most cognitively demanding
tasks were presented first so that participants could put their greatest mental effort towards understanding and solving the most difficult questions.

After completing the questionnaire, participants responded to follow-up questions and were given the opportunity to disclose whether they had paid close attention over the full duration of the study. A debriefing form was then presented to each participant, which disclosed the purpose of the study, hypotheses, contact information of the researchers, and relevant readings on the study topic (see Appendix D). Each participant was compensated with research credit for their class. The study took approximately one hour to complete in its entirety.

**Results**

Table 1 presents all scale means, standard deviations, internal consistency scale reliabilities in Cronbach’s alpha (α), and bivariate Pearson correlation coefficients. As the ICAR Sample Test (Condon & Revelle, 2014) was originally intended to be used with untimed online participants, but the current study allotted participants a maximum of 20 minutes to complete as many of the 16 items as possible, the test changed from a power test to a speed test. The time limit was included to ensure participants did not expend too much time on one measure, to meet research pool regulations of maximum survey time length. As the ICAR became a speed test, the reliability of the ICAR Sample Test in the current study was not reported, and instead the reliability data from Condon and Revelle’s initial untimed study of the scale was included in the table.

Though most scale reliabilities surpassed the minimum acceptable cut-off of α = .70, two did not. The narcissism subscale of the SD3 had Cronbach’s α = .65, and the smart lying SJT developed for this study had a low α = .51. These are concerning figures. The low internal consistency of the narcissism subscale is difficult to explain, as previous studies that used the
### Table 1

**Correlations and Descriptive Statistics for DT, Intelligence, and SJT Scores**

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Machiavellianism</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Narcissism</td>
<td>.38**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Psychopathy</td>
<td>.46**</td>
<td>.41**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. SD3 Composite</td>
<td>.78**</td>
<td>.72**</td>
<td>.87**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Intelligence</td>
<td>-.06</td>
<td>-.05</td>
<td>-.23*</td>
<td>-.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. SJT</td>
<td>.18</td>
<td>-.06</td>
<td>.31**</td>
<td>.21</td>
<td>-.14</td>
<td>.51</td>
</tr>
</tbody>
</table>

*Note: N = 77. SD3 = Short Dark Triad, SJT = situational judgment test scores. All bivariate correlations are reported as Pearson correlation coefficients (r). Reliabilities are displayed in parentheses along the diagonal.

* Reliability coefficient for intelligence comes from the original validation study conducted by Condon and Revelle (2014)

*p < .05, **p < .01
SD3 to assess deceptive behaviours found reliabilities around .70 for narcissism (e.g., Baughman et al., 2012; Baughman et al., 2014). The various reasons why the SJT may have been unreliable will be discussed later. Nonetheless, as SJT scores were used as the criterion variable in each of the following multiple regression analyses, it is important to take all ensuing results with a grain of salt.

All three subscales of the DT correlated significantly with one another, as well as with the composite score of the DT (i.e., the average of the three means of the subscales). These findings are in line with previous research using the SD3 to study deception (e.g., Baughman et al., 2012). The remaining two significant correlations were surprising. Psychopathy had a significant negative correlation with scores on the intelligence test ($r = .23$), and psychopathy correlated significantly and positively with smarter lying, as measured by scores on the SJT ($r = .31$). Rationale for these results will be discussed.

**Test of Hypothesis 1**

Aiken and West’s (1991) moderated multiple regression approach was used to test whether intelligence moderated the DT–smart lying relationship. Following their advice, in this hypothesis test as well as the second moderated multiple regression analysis in this study, moderator and predictor variables were mean centered before being entered into the equation.

**Hypothesis 1a and 1b.** Variables were entered in order: 1) DT scores (the predictor variable), 2) intelligence scores (the moderator), and 3) the DT–intelligence interaction term (DT scores * intelligence scores). The results of hypothesis one are presented in Table 2. Overall $R^2$ represents the percentage of total variance in the smart lying construct that can be predicted by the equation entered. For example, after adding the DT–intelligence cross-product, the moderator variable and both predictor variables accounted for 6.9% of the total variance in smart lying
Table 2

Model Testing if Intelligence Moderates the Relationship between DT and Smart Lying

<table>
<thead>
<tr>
<th>Variable</th>
<th>β</th>
<th>B</th>
<th>ΔR²</th>
<th>Overall R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equation 1</td>
<td></td>
<td></td>
<td>.057</td>
<td>.057</td>
</tr>
<tr>
<td>Dark Triad Composite</td>
<td>.194</td>
<td>.232</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligence</td>
<td>-.111</td>
<td>-.018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equation 2</td>
<td></td>
<td></td>
<td>.012</td>
<td>.069</td>
</tr>
<tr>
<td>Dark Triad Composite</td>
<td>.189</td>
<td>.226</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligence</td>
<td>-.135</td>
<td>-.022</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligence x DT Composite</td>
<td>.112</td>
<td>.048</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: N = 77. β = standardized regression weight; B = unstandardized regression weight; ΔR² = Change in R²-value due to adding variable to equation; overall R² = total variance predicted considering all variables in equation. All moderator and predictor variables were mean centered.

*p < .05
scores ($\Delta R^2 = .01$, n.s.). This outcome implies that intelligence is not a moderator of the DT–smart lying association, contrary to what was predicted. Thus, both Hypothesis 1a and 1b were not supported.

**Tests of Hypothesis 2**

Results for Hypothesis 2a and 2b are listed in Table 3, and are explained in greater detail below. Hypothesis 2a includes Equations 1 and 2, and Hypothesis 2b includes Equations 3 and 4. As these linear regressions did not involve a moderator, variables were not mean centered before being entered into the equations.

**Hypothesis 2a.** It was hypothesized that Machiavellianism would predict variance in smart lying above and beyond psychopathy alone. Including Machiavellianism into the regression equation after psychopathy did not result in a significant increase in $R^2$ ($\Delta R^2 = .00$, n.s.). Interestingly, due to a near-zero change in $R^2$, it appeared that psychopathy and Machiavellianism were conceptually similar enough that they predicted nearly identical variance in smart lying scores. Hypothesis 2a was not supported.

**Exploratory Analyses.** It is remarkable to note in the test of Hypothesis 2a that before Machiavellianism was added, psychopathy independently significantly predicted smart lying scores ($\Delta R^2 = .10, p < .01$). Further exploratory analyses that examined whether psychopathy was the strongest independent predictor of smart lying, above and beyond both Machiavellianism and narcissism, revealed that this was indeed the case. As shown in Table 4, a linear regression of psychopathy added after narcissism revealed that there was a statistically significant increase in $R^2$ ($\Delta R^2 = .14, p < .01$). Similarly, including psychopathy into the regression equation following Machiavellianism increased $R^2$ significantly as well ($\Delta R^2 = .07, p < .05$). These statistics, coupled with the significant positive correlation noted before between psychopathy and
Table 3

*Machiavellianism-Moderated Regression of Psychopathy or Narcissism onto Smart Lying*

<table>
<thead>
<tr>
<th>Equation 1</th>
<th>Variable</th>
<th>β</th>
<th>B</th>
<th>ΔR²</th>
<th>Overall R²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Psychopathy</td>
<td>.313**</td>
<td>.249**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equation 2</td>
<td>Psychopathy</td>
<td>.294</td>
<td>.234</td>
<td></td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Machiavellianism</td>
<td>.041</td>
<td>.039</td>
<td></td>
<td>.100</td>
</tr>
<tr>
<td>Equation 3</td>
<td>Narcissism</td>
<td>-.055</td>
<td>-.062</td>
<td>.003</td>
<td>.003</td>
</tr>
<tr>
<td>Equation 4</td>
<td>Narcissism</td>
<td>-.143</td>
<td>-.161</td>
<td>.046</td>
<td>.049</td>
</tr>
<tr>
<td></td>
<td>Machiavellianism</td>
<td>.231</td>
<td>.220</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: N = 77. β = standardized regression weight; B = unstandardized regression weight; ΔR² = Change in R²-value due to adding variable to equation; overall R² = total variance predicted considering all variables in equation. All moderator and predictor variables were mean centered.*

*p < .05, **p < .01*
Table 4

Model Testing if Psychopathy Predicts Beyond Narcissism or Psychopathy on Smart Lying

<table>
<thead>
<tr>
<th>Equation</th>
<th>Variable</th>
<th>$\beta$</th>
<th>$B$</th>
<th>$\Delta R^2$</th>
<th>Overall $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Narcissism</td>
<td>-.055</td>
<td>-.062</td>
<td>.003</td>
<td>.003</td>
</tr>
<tr>
<td>2</td>
<td>Narcissism</td>
<td>-.219</td>
<td>-.246</td>
<td>.135**</td>
<td>.138**</td>
</tr>
<tr>
<td></td>
<td>Psychopathy</td>
<td>.402**</td>
<td>.319**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Machiavellianism</td>
<td>.177</td>
<td>.168</td>
<td>.031</td>
<td>.031</td>
</tr>
<tr>
<td>4</td>
<td>Machiavellianism</td>
<td>.041</td>
<td>.039</td>
<td>.068*</td>
<td>.100*</td>
</tr>
<tr>
<td></td>
<td>Psychopathy</td>
<td>.294*</td>
<td>.234*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: $N = 77$. $\beta =$ standardized regression weight; $B =$ unstandardized regression weight; $\Delta R^2 =$ Change in $R^2$-value due to adding variable to equation; overall $R^2 =$ total variance predicted considering all variables in equation. $^*p < .05, ^{**}p < .01$
smart lying scores, point to a surprising finding. It can be concluded that psychopathy, not Machiavellianism as predicted, was the single best predictor of smart lying within the three DT traits.

**Hypothesis 2b.** Turning attention back to Table 3, Machiavellianism was expected to predict statistically significant variance in smart lying above and beyond narcissism alone, but this outcome did not occur ($\Delta R^2 = .05$, n.s.). Despite this, it is worthwhile to note that the change in $R^2$ was marginally significant ($p = .06$). While it appears that Machiavellianism and psychopathy account for practically the same unique variance in smart lying scores, this result, coupled with that of the exploratory analyses described above, hint that narcissism is the most conceptually unique of the three DT traits. Overall, Hypothesis 2b was not supported.

**Hypothesis 2c and 2d.** Results for Hypothesis 2c and 2d are listed in Table 5. Machiavellianism was expected to interact with intelligence to significantly predict smart lying, such that there would be stronger relationships between Machiavellianism and smart lying in those high in intelligence, compared to those with lower intelligence scores. Machiavellianism and intelligence did not interact significantly to predict smart lying ($\Delta R^2 = .02$, n.s.), meaning that the addition of the cross-product of intelligence and Machiavellianism did not account for much more unique variance within smart lying scores than both of the variables separately. Hypothesis 2c and 2d were not supported.

**Discussion**

Hypothesis 1 predicted that intelligence would have a moderating role to play in the relationship between the DT and smart lying, and that this interaction would show that individuals with high levels of intelligence would have a stronger relationship between smart lying scores and DT scores. Lower levels of intelligence should have been related to a weaker
Table 5

Machiavellianism-Moderated Regression of Intelligence onto Smart Lying

<table>
<thead>
<tr>
<th>Variable</th>
<th>$\beta$</th>
<th>$B$</th>
<th>$\Delta R^2$</th>
<th>Overall $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equation 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligence</td>
<td>-.131</td>
<td>-.022</td>
<td>-.022</td>
<td>.049</td>
</tr>
<tr>
<td>Machiavellianism</td>
<td>.170</td>
<td>.161</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equation 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligence</td>
<td>-.142</td>
<td>-.023</td>
<td>-.023</td>
<td>.020</td>
</tr>
<tr>
<td>Machiavellianism</td>
<td>.181</td>
<td>.172</td>
<td></td>
<td>.069</td>
</tr>
<tr>
<td>Intelligence x Machiavellianism</td>
<td>.143</td>
<td>.050</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: $N = 77$. $\beta =$ standardized regression weight; $B =$ unstandardized regression weight; $\Delta R^2 =$ Change in $R^2$-value due to adding variable to equation; overall $R^2 =$ total variance predicted considering all variables in equation. All moderator and predictor variables were mean centered.

*p < .05
relationship between smart lying and DT scores. Contrary to what was predicted in Hypothesis 1a, there was no statistical evidence to support the moderating role of intelligence in this association. Thus, the shape of the interaction predicted in Hypothesis 1b was also not found.

Hypothesis 2 predicted that Machiavellianism would be the strongest predictor of smart lying at work both directly and indirectly. In Hypothesis 2a and 2b, it was believed that Machiavellianism would account for more unique variance within the criterion variable than both narcissism alone, and psychopathy alone. This was not revealed in the pattern of results, so there was no evidence that Machiavellianism was the strongest independent predictor of smart lying out of the three DT traits. Instead, psychopathy emerged as the strongest independent predictor, above and beyond both Machiavellianism and narcissism. In the ensuing Hypothesis 2c and 2d, I predicted that Machiavellianism may interact with intelligence levels to predict smart lying scores beyond what could be predicted by Machiavellianism and intelligence on their own. This interaction was expected to show that people with higher levels of intelligence would have a stronger relationship between their Machiavellianism and smart lying scores, relative to those with lower intelligence scores. Again, these hypotheses were unsupported by statistical evidence. It was not found that intelligence and Machiavellianism interacted significantly, and so the shape of the interaction outlined in Hypothesis 2d was not found.

In sum, none of the hypotheses presented in this study were supported. However, there arose a significant finding where psychopathy appeared to strongly predict smart lying on its own.

**Rationale for the Current Results**

The statistically significant positive correlation between psychopathy and smart lying, as well as the negative correlation between psychopathy and intelligence scores will first be
examined. These results present a conundrum – how can psychopaths concurrently have low levels of intelligence, but also lie more intelligently than the other members of the Dark Triad?

There are three possible reasons for these mixed results. First, recall the poor scale reliability of the SJT developed for the current study ($\alpha = .51$). Though the reliability of the initial SJT developed by Conway (2014) to measure quantity of lying in undergraduate psychology students was also shy of reaching an acceptable reliability cut-off ($\alpha = .64$ to $.69$), the fact that items within the smart lying SJT did not correlate strongly with each other suggests that they may have not all been truly measuring the smart lying construct, but instead multiple related constructs. This calls into question the construct validity of the adapted SJT. Perhaps the adapted SJT was not measuring smarter lying than what Conway (2014) had originally developed the scenarios to measure, but was still measuring profuse lying. In this case, this would align with previous research on psychopathy, which showed that those high in the trait were more likely than those with high scores on narcissism and Machiavellianism to lie frequently (Baughman et al., 2014). Second, if the adapted SJT had in fact been measuring smart lying, perhaps psychopaths lie in general so often that, by chance, they had also lied more frequently in an intelligent manner than those with high trait Machiavellianism and narcissism. Third, one may not have to have high cognitive ability to be able to craft intelligent lies. If intelligence does not moderate the DT–smart lying relationship, there may be another individual difference variable that indirectly affects this relationship. Indeed, a new study conducted by Templer (2018) with a Singaporean sample of 204 employees and 140 supervisors from 33 organizations found evidence that political skill (i.e., interpersonal influence, good social skills, networking ability) interacted with low levels of the HEXACO honesty-humility factor (H; Lee & Ashton, 2004) to predict status-enhancing outcomes at work like better performance ratings. This study is
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extremely relevant to the current research question as previous researchers have discovered that the core of the Dark Triad, which was tested in Hypothesis 1, may be equivalent to low H (Book et al., 2015; Lee & Ashton, 2014). Perhaps political skill, or conceptually related impression management skills, may contribute to more intelligent lying behaviour beyond cognitive ability.

The negative correlation between psychopathy and intelligence does not wholly align with previous literature on this topic. O’Boyle et al. (2012) found no correlation over many studies between general mental ability and psychopathy, so these findings run counter to that of the meta-analysis. Similarly, Watts et al. (2016) reported no correlation between psychopathy and intelligence in undergraduate participants. On the other hand, following the idea that a good marker of general intelligence is impulse control and lowered delay discounting (Shamosh & Gray, 2008), it would make sense that psychopathy (characterized by low self-control) was negatively related to intelligence scores.

Within the remaining bivariate correlations, the study results did reflect previous research. Again, there was no direct correlation between the DT composite and two of its subscales with intelligence (O’Boyle et al., 2013). As well, intelligence did not correlate with deviant work behaviours (Gonzalez-Mulé et al., 2014).

Moving on to the non-significant results of Hypothesis 1, the study findings responded to the recommendation provided by Muris et al. (2017) and concluded that not only is there no direct relationship between the DT and negative workplace outcomes, such as deception, but intelligence also does not appear to contribute as a moderating factor to affect this relationship. An interesting scenario to consider is whether O’Boyle and colleagues (2013) were right to suggest that individuals in high status positions at work, who rely more on interpersonal skills to advance in their roles, benefit more from a combination of high DT traits and high intelligence as
compared to employees in lower status roles. None of the situations used in the current criterion measure of smart lying indicated that participants should have imagined they were high powered executives (i.e., belonging to the “C-Suite”). In many of the scenarios, participants were either told they were new to the organization (e.g., “You have just been hired into a new company, and have worked there for a few weeks…”), did not get told how long they had been working there for, or were presumably mid-level managers (e.g., “You are a manager in a research and development firm, and your performance and promotion opportunities are closely tied to your ability to produce innovative products…”).

In Hypothesis 2a and 2b tests it became clear that psychopathy, not Machiavellianism, was the strongest DT trait predictor of smart lying within the present sample. This result, though unexpected, may be explained by previous literature. Previous research on psychopathy proposed that the low self-control typical of trait psychopathy can predict higher-than-average incidents of deviant behaviours (Azizli et al., 2015; Baughman et al., 2012). The results of the current study which showed psychopathy could best predict smart lying alone are certainly in line with this link to greater deviance. As with the SJT mentioned above, it would be worth paying attention to how individuals with high levels of trait psychopathy and Machiavellianism would behave if they were in high status positions, as previous research has shown that the predictive link between psychopathy and deviant behaviours (i.e., CWBs) weakened when psychopaths were in high-status positions at work. This weaker relationship was not paralleled when Machiavellians and narcissists were promoted to high-powered positions (O’Boyle et al., 2012).

Machiavellianism did not interact with intelligence to significantly predict smart lying in Hypothesis 2c and 2d, so the results of Touhey’s (1973) study were not replicated. Touhey had found that smart Machiavellians were able to ascend power hierarchies at work more quickly.
than their less intelligent, Machiavellian peers. However, Touhey had studied this callous trait decades before the contemporary accepted definition of subclinical Machiavellianism emerged from the introduction of the DT (Paulhus & Williams, 2002). A closer look at the Touhey study revealed that Machiavellianism was conceptualized in a similar vein to modern day psychopathy, with regards to “difficulties with self-control and the inhibition of aggression” (Touhey, 1973; p. 34). It may be that Touhey had discovered an interesting effect where intelligence could act as a protective factor to moderate modern-day psychopathic, antisocial behaviours and lead to enhanced success at work. As our study presented compelling evidence that psychopathy may be predictive of smart lying behaviours at work, this would certainly fit Touhey’s findings given his historic definition of Machiavellianism.

Another reason why Machiavellianism did not interact with the g factor of intelligence to produce smart lying may be because the so-called “Machiavellian intelligence” (i.e., the ability to manipulate others framed as an evolutionary advantage) required to navigate complex, dynamic social situations does not rely on general cognitive ability, but rather a specific kind of social intelligence (Bereczkei, 2018). As Bereczkei (2018) described it, Machiavellian intelligence may only be useful in interpersonal interactions, but not other areas of life which require rapid processing skills (e.g., a visual rotation problem). This may explain why many studies investigating the link between Machiavellianism and intelligence, including the present study, have failed to produce significant findings (e.g., O’Boyle et al., 2013), even though there is strong theoretical support behind the idea that Machiavellians expend more cognitive effort in their deceitful behaviours than other members of the DT (Baughman et al., 2014). Indeed, Bereczkei (2018) found that specific aspects of intelligence were more related to Machiavellian intelligence, such as enhanced attention span used to monitor others, and goal- and task-oriented
behaviours. Therefore, the measure of general intelligence used in the present study may not have been detailed enough to identify the specific superior cognitive abilities that Machiavellians possess which allow them to successfully manipulate others.

**Limitations and Future Directions**

There are a handful of limitations associated with the methodology developed for the current study, which may have influenced the results reported above. Our sample, which included a majority of female participants (61%), may not have adequately measured the DT traits. Many reviews of literature on the DT have found that women score comparatively lower than men on Machiavellianism and psychopathy (Jonason & Davis, 2018), and DT traits as a whole are more frequently reported in men (Muris et al., 2017). These gender differences may be explained by gender role expectations which dictate women should be more cooperative and empathetic in their interactions with others (Jonason & Davis, 2018). Conversely, men may be encouraged to be aggressive, competitive, and antisocial with others in pursuit of self-enhancing goals. However, individuals have control over how much they subscribe to accepted gender norms. Jonason and Davis (2018) found that psychopathy, in particular, was associated with lowered self-identification with femininity, so for the current study to have significant results emerge for psychopathy but not any of the other DT traits suggests that these gender effects were not present. Alternatively, many of the women in the current sample may not have personally adopted traditional prosocial ideals associated with femininity.

The reliability of the SJT used as a criterion measure to predict smart lying behaviours did not meet acceptable standards for test validity. As mentioned previously, all results in this study should thus be interpreted with caution, as all analyses included the SJT as a variable. Future studies that use this SJT scale should attempt to validate the SJT in other samples (e.g.,
other student samples, work samples from various industries). Beyond re-testing Cronbach’s alpha for the SJT in other samples, future researchers may also want to use test-retest reliability as an index of reliability. Research conducted by Catano, Brochu, and Lamerson (2012) on SJT use in high-stakes selection environments revealed that Cronbach’s alpha may be an inappropriate measure to truly capture the reliability of SJT items which can vary widely in content. Catano et al. (2012) found that the SJT they tested simultaneously had a low internal consistency of $\alpha = .46$, but an acceptable test-retest reliability of $r = .82$.

The SJT could also be modified to include more prompts which encourage participants to imagine they are high powered executives. Another possibility would be to recruit a sample of current high-status executives to compare to low-level workers. Findings may differ from the results reported in the current study if it is true that psychopathic individuals, but not Machiavellians or narcissists, reduce their deviant work behaviours in high-status roles (O’Boyle et al., 2012). Additionally, it would be interesting to see if O’Boyle and colleagues (2013) were correct when they surmised that promotions to high-status positions rely more on charm and intelligence than promotions in low-level roles. If this were true, then the hypothesized moderating effect of intelligence on the DT–smart lying may only be found in the upper echelons of the bureaucratic hierarchy.

The sample size of undergraduate participants used was constrained due to delays with the institutional ethical review process, and therefore the study lacked statistical power. When power is enhanced, then the probability of making a Type II error (i.e., stating there is no effect when one truly exists) is greatly reduced. Continued data collection may solve this limitation in the future.
As with many studies in industrial/organizational psychology, it was a challenge to find a realistic sample of employees. Though all the university students in the current sample had previous work experience, the mean age of participants in the sample was 19.4. Labour laws in Ontario state that the minimum age individuals may work is 14. Barring unique cases, from the ages of 14 to 17 individuals may not be employed during regular school hours (Ontario Ministry of Labour, 2016). Given that most participants in the current study proceeded to begin their undergraduate degree immediately after graduating high school, it can be assumed that many had not been exposed to long-term (i.e., more than 4 months over the summer) work situations where the opportunity for promotion mattered a great deal to their livelihood. At the time of taking the survey, only 11% of those working currently were employed on a full-time basis, indicating that the clear majority of those surveyed were full-time students. It would be difficult for those who do not currently prioritize employed work to accurately imagine the consequences of work scenarios which offer status, income, and reputational benefits. In the future, the external validity of this study could be improved if it is conducted with full-time employees that have worked for several years consecutively so that the situations in the SJT can be more salient in the minds of test takers.

Two study designs related to the current research question could be explored in the future. The first concerns Templer’s (2018) study, which found that the individual difference variable of political skill and the core of the DT interacted to significantly predict higher job performance ratings for crafty individuals. Silver-tongued individuals with high social influence capabilities and a propensity towards antisocial behaviours could achieve great success at work. In this case, intelligence was not investigated in the study paradigm, but it would be intriguing to test political skill or impression management as a moderating variable within the DT–smart lying
relationship. The second proposed design for future research would be to attempt to replicate a study on psychopathy and intelligence (Watts et al., 2016). Watts et al. (2016) found evidence that high intelligence interacted with above-average psychopathy scores to predict greater criminal behaviours. The current study found evidence of a direct relationship between psychopathy and norm-breaking work behaviours (i.e., smart lying), so it would be advisable to explore the existence of an indirect relationship between psychopathy and intelligence in the prediction of smart lying.

Implications and Concluding Remarks

The current study results can be interpreted for use in organizations during selection and performance assessment processes. It is quite common for employers to administer both intelligence tests (e.g., the Wonderlic Personnel Test; Wonderlic & Hovland, 1939) and tests measuring “dark”, antisocial personality traits characteristic of the DT (Hogan Development Survey; Hogan & Hogan, 1995) to job candidates, to exclude less intelligent and more devious applicants from the pool. These tests are easily administered not only in person, but also remotely such as over a phone call (Blickle, Kramer, & Mierke, 2010) or on a mobile device (Brown & Grossenbacher, 2017). Therefore, it would be an easy step for employers in the future to be able to administer the SD3 (Jones & Paulhus, 2014), then exclude candidates particularly high in trait psychopathy, as it is predictive of smarter lying behaviour. That is to say, psychopathic employees are often quite willing to be dishonest if it helps them get ahead of their colleagues, and this can be a source of interpersonal conflict within the organization.

360-degree assessments are commonly used in annual performance evaluations, and offer an advantage over traditional supervisor-only performance ratings because they allow for narrative evaluations and quantitative ratings from subordinates and same-status colleagues to be
collected. Conceptually, smart lying involves a fair amount of ingratiating oneself with more powerful superiors, while being happy to manipulate and disregard the needs of those with equal or lower amounts of power than oneself to get ahead of them. Thus, 360 assessments are a good tool to find smart liars that have gone undetected in organizations that have historically only used supervisor performance evaluations. The profile of a smart liar would be expected to reflect high scores from their supervisor, but low scores from the majority of same- and lower-status colleagues. Narrative comments may also give hints to the psychopathic nature of smart liars (e.g., if they mention an impulsive, reckless, thrill-seeking, low emotional stability personality profile). With these warnings in mind, those who conduct performance evaluations for organizations can keep an eye out for individuals who fit the smart liar profile, and alert staff at the company who may be able to discipline the employee. Alternatively, once smart liars are identified they could be moved in a role with less teamwork where their callous personalities may be a benefit for the organization, such as in sales, where being selfish in the pursuit of one’s goals is encouraged.

Overall, this study has contributed to extant literature on outcomes of the DT at work, with regards to deception. In the past, it was known that there exists a connection between high levels of the DT and greater deceptive/norm-breaking work behaviours (O’Boyle et al., 2012). As well, individuals high in the DT perceived that they were better liars than the average person (Giammarco et al., 2013). However, not much was known about what factors could make their deceptive behaviours more successful. Intelligence was investigated as a factor that may increase the smartness of lying behaviours, and therefore lie success, when found in combination with DT traits. Although this effect was not found, the study did find that psychopathy is the DT trait that may contribute the most intelligent lying behaviour at work.
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Evil Geniuses at Work

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Appendix A

Adapted Smart Lying SJT (Zhang & Goffin, 2018)

The following measure was created by the study authors for the purpose of the present study. In this adapted SJT, the multiple choice answers to all the scenarios were scrambled with respect to the smartness of the lie. Please contact Irene Zhang (izhang5@uwo.ca) for the scoring key with answers arranged from most to least smart lie. It was adapted for use from Conway’s (2014) original SJT measuring dishonesty in organizations. To see the original SJT item pool and revised original SJT, please consult the doctoral dissertation cited in the references section.

Following item analysis of the smart lying SJT created for this study, one low reliability items were removed from the final set used in analyses (item 2). The remaining 11 items had an internal consistency of $\alpha = .51$.

Instructions: You will now be presented with multiple imaginary situations. Please pretend you are an employee in each of them. Please choose the answer in each situation that best represents what you would really do.

1. On Wednesday, one of your coworkers, Tammy, asks you to attend a company sponsored after-work social event this Friday evening at a local bar. You do not have plans for the evening, but are not interested in going to the event because you do not care for many of the coworkers who will be there. On Thursday, you decide that you are not going to go to the social event. On Friday, the day of the event, Tammy asks you if you are planning on going to the party.

To confirm if you understand the situation, please indicate below why you do not want to go to the bar:

- You have other plans
- You don’t like the group that is going

What would you say to Tammy?

- Tell Tammy that you will not be attending the party.
- Tell Tammy that you already have plans for the evening.
- Tell Tammy that you will not be attending the party because you are not interested.
- Tell Tammy that you are not sure if you are going to go yet.
- Tell Tammy that you will not be attending the party because you are not feeling well.
2. It is 8:30 Monday morning, and your co-worker in sales, Will, who sits in the cubicle next to you, has just arrived late again. Salma, your boss, has warned Will that if he continues to arrive late to work, he will be let go. If Will is let go, his current clients would be transferred to you which could potentially increase your income. When Salma confronts Will, he assures her that he arrived prior to 8:00 a.m., and had just stepped out of his office for a moment. Will then asks you to confirm his story to Salma.

To confirm if you understand the situation, please indicate below who Salma is:

- Your boss
- Your co-worker

What would you say to Salma?

- Tell Salma that Will came in at 8:45, later than he really arrived.
- Tell Salma that Will was late for work, but only by five minutes.
- Tell Salma that you aren’t sure if Will was late for work or not.
- Tell Salma that Will was on time for work today.
- Tell Salma that Will was late for work, but that the traffic was quite bad that morning.

3. You have just been hired into a new company, and have worked there for a few weeks. While interacting with your new team, you’ve learned that a key component of their cohesiveness stems from a shared passion for several reality television shows, which are all on cable. You have a television, but do not have cable and have not heard of any of the shows and have no interest in them. At the end of a team meeting, one of your teammates, Judd, asks you if you have ever seen a particular show.

To confirm if you understand the situation, please indicate below if you have a television with cable:

- Yes
- No

What would you say to Judd?

- Tell Judd that you know a few friends that like the show, but you have not seen it.
- Tell Judd that you have never seen or heard of the show.
- Tell Judd that you do not have cable.
- Tell Judd that you have caught small portions of the show while channel surfing.
- Tell Judd that you watch the show religiously.

4. You have been at a new job for about a year that you are not completely satisfied with. There are both pros and cons to staying with your current company or moving on to a new one. Recently, you had a phone conversation with a corporate recruiter, who you sought out to find other job opportunities. One of your coworkers, Andrei, who is one of
your closest friends at work, accidentally overheard part of the conversation and later asked you about that conversation. You are uncertain how much Andrei heard from the conversation. Andrei asks you later in the day who you were talking to.

To confirm if you understand the situation, please indicate below what your relationship is with Andrei:

- Andrei is a stranger
- Andrei is a close friend
- Andrei is an enemy

What would you tell Andrei?

- Tell Andrei that the phone call was a family issue.
- Tell Andrei that you were talking with a corporate recruiter who had called you about an available position that you might be interested in.
- Tell Andrei that you were talking with a corporate recruiter who you had called about a new position.
- Tell Andrei that you were talking with a corporate recruiter who had called you about an available position that you are NOT interested in.
- Tell Andrei that you got a completely unexpected call from a corporate recruiter.

5. One of your coworkers, Jenny, recently completed an important work assignment. She spent a considerable amount of time on this assignment, but her manager decided it was not of high enough quality to be used and reassigned the work to another individual. This sort of thing has happened frequently with Jenny as she is one of the lower performers at the company. Jenny comes to you venting about the situation and asks your opinion about her work. You reviewed the assignment along with your manager and agreed that it was not high quality.

To confirm if you understand the situation, please indicate below how often Jenny's work is not used by her manager:

- This was the first time
- This was the second time
- This happens frequently

What would you tell Jenny?

- Tell Jenny that you did not work on that particular project and hadn’t seen what she had turned in.
- Tell Jenny that it was not her best effort and that she is capable of much better.
- Tell Jenny that you think her work was substandard.
- Tell Jenny that you thought her work was fine.
- Tell Jenny that you thought she did a really good job.
6. A coworker at your organization, Cassandra, got a purple dye job for her hair over the weekend. Cassandra is an expert in a niche area that you could really benefit from learning more about. On Monday, Cassandra is asking everyone in the office if they like her new hairstyle. The general consensus around the office is that the hairstyle is her worst yet. You agree with the overall consensus.

To confirm if you understand the situation, please indicate below what colour Cassandra's hair was before she dyed it:

- Brown
- Black
- Blonde
- Not sure

What do you tell Cassandra when she asks you about her hair?

- Tell Cassandra that you do not like her new hairstyle.
- Tell Cassandra that you really like her new hairstyle.
- Tell Cassandra that the hairstyle is not as good as her previous one.
- Tell Cassandra that you are the wrong person to ask about hairstyles.
- Tell Cassandra that she looks fine regardless of the type of hairstyle.

7. You are working on a major project with one of your teammates, Camila. This is the last project you will work on with Camila as she has already begun a new position at another company. You and Camila decided to split up the work for this project and put your respective portions together at the end. This strategy worked well for you two in the past. You ended up not finishing your portion on time and Camila helped you complete it. In the end, you turned in the project to your boss, Anton, a day late.

To confirm if you understand the situation, please indicate where Camila is currently working:

- At your company
- At a different company
- She is unemployed

Anton asked for an explanation for the delay. What would you tell Anton?

- Tell Anton that Camila was late in giving you her portion of the project.
- Tell Anton that it was your fault and that it will never happen again.
- Tell Anton that you completed your portion on time, but had to help Camila complete her portion.
- Tell Anton that you had written down the wrong date as the deadline for the project.
- Tell Anton that both you and Camila fell a little behind in completing the project.
8. You are managing a project team as part of a company-wide competition for new and innovative directions for your company. You know that if the team you are managing wins this competition, it would likely mean a significant promotion for you as well as high marks for the rest of your team. Your good friend and colleague, Jim, is leading another team that you view as your only real competition. The day before the competition concludes with presentations to senior executives, you and Jim are discussing your project presentations and you realize that Jim has forgotten to include a business plan in his presentation. Without a business plan, Jim’s group will likely have little hope of winning, which would almost guarantee a win for your team. Jim shows you several printouts from his team’s presentation and asks if you have any thoughts on his team’s presentation.

To confirm if you understand the situation, please indicate what Jim has forgotten:

- A business plan
- A title page
- A results graph

What would you tell Jim?

- Tell Jim that you think he has put together an excellent presentation that will be hard to beat.
- Tell Jim that you think he came up with some really creative ideas for his presentation.
- Tell Jim you do not have any constructive feedback regarding his presentation.
- Tell Jim that his presentation has all the components for a successful proposal.
- Tell Jim that he forgot a business plan in his presentation.

9. You work in a manufacturing plant and your boss’ name is Noam. Noam is getting a little older and his performance has started to decline. Despite this, you still think Noam does an adequate job as a shift supervisor and will be able to do a decent job until he retires. While you are not very close to Noam, he has always treated you well. Whereas Noam’s performance has started to slip, your performance is on the rise, so much so that you believe you will likely be promoted once Noam retires, which would probably be in about two years. One day, your boss’ boss, Craig, invites you into his office to talk about Noam. Craig informs that you that he is thinking about giving Noam an early pension and essentially forcing him into retirement a few years early. Craig asks you about Noam’s recent performance and his prospects for the future.

To confirm if you understand the situation, please indicate what direction your performance is currently headed:

- About the same as it has always been
- On the rise
- On the decline
What would you tell Craig?

- Tell Craig that you agree with his assessment regarding Noam’s future with the company.
- Tell Craig that you think Noam’s performance has dropped, but you are not sure whether he should be let go.
- Tell Craig you think Noam’s performance is fine and that he should stay with the company until retirement.
- Tell Craig that you think Noam should be given another year because he is still an adequate shift supervisor.
- Tell Craig that you think Noam’s performance has slipped and that he should be let go.

10. You are a manager in a research and development firm, and your performance and promotion opportunities are closely tied to your ability to produce innovative products. You’ve noticed that it is very common for managers in your field to claim personal credit for products that they funded development for, but for which they had little to no actual research involvement. For instance, a colleague recently told leadership he had “helped invent” a more efficient motor, when in fact he had simply managed the financials for a contractor that developed the motor. At a meeting with senior leadership in your organization, you realize that leadership believes you personally designed an innovative new product, but in fact you simply contracted out its development.

To confirm if you understand the situation, please indicate what your colleague recently told leadership he had helped invent:

- A new chocolate bar
- A new motor
- A new fabric
- A new microchip

How would you respond when leadership praises your technical innovativeness?

- Tell the leaders that you really did not have much to do with the new product.
- Accept the praise from the leaders and say that some credit should go to your team.
- Tell the leaders that most of the credit should go to your team.
- Accept the praise and take most of the credit for the new product.
- Accept the praise from the leaders without mentioning that you had little to do with it.

11. You have been spending the last few months developing a relationship with a potential new client, OXL Technology Systems (OXL Tech), for your organization. The prospect of landing such a big new account has increased your profile with your boss, Sandra, and may potentially lead to a big bonus. In preparing your self-assessment for your year-end performance evaluation, you have highlighted the relationship with OXL Tech as evidence of your readiness for advancement and described the revenue it could generate for the company. The evening before your annual evaluation, an executive at OXL Tech calls you to explain that there have been some changes in their management structure and
it now looks like they most likely will not be able to get involved with your organization. This is obviously a big disappointment, especially because of your evaluation the following morning. So far you are the only one who knows of this change.

To confirm if you understand the situation, please indicate when the executive at OXL Tech called you:

- The week before your annual evaluation
- The evening before your annual evaluation
- The day of your annual evaluation

How would you address this during your review in the morning (if at all)?

- During your performance review, tell Sandra that the account with OXL Tech should be complete any day now.
- During your performance review, tell Sandra that you received a call from an executive at OXL Tech that there may be a delay in finalizing the new account.
- During your performance review, tell Sandra that you still have high hopes that the new account will provide a big boost for your company.
- During your performance review, tell Sandra that the new account may not come through due to management restructuring within OXL Tech.
- During your performance review, do not mention the phone call you received from OXL Tech the evening before to Sandra.

12. You and a co-worker, Ken, are both in competition for a new managerial position at your bank. A few days before the promotion interview, you send an e-mail to Lucinda, who had recently interviewed for the same managerial position at another branch. Lucinda gives you some good insights on what may be asked in the interview. The day before the interview, you and Ken go to lunch together and Ken asks you if you have any thoughts about what might be asked during the interview.

To confirm if you understand the situation, please indicate where you and Ken went the day before the interview:

- To lunch
- To Lucinda’s office
- To a hockey game

What would you tell Ken?

- Tell Ken a few useful things Lucinda mentioned to you (without mentioning that you talked to Lucinda).
- Tell Ken that you are not sure what is going to be asked in the interview.
- Tell Ken that you talked to Lucinda and give Ken all the information you were given.
- Tell Ken a few things Lucinda told you that you did not think would be very helpful (without mentioning that you talked to Lucinda).
• Tell Ken that you talked to Lucinda and give Ken some of the information you were given.
Appendix B

SONA Recruitment Letter

SONA / PARTICIPANT POOL RECRUITMENT

In this study, you will be asked to complete a series of surveys about your beliefs and preferences, thinking processes, and reactions to a set of fictional situations.

The study will take a maximum of one hour and will take place online on your personal computer.

In order to participate in this study, you must 1) be an undergraduate student who has worked part-time or full-time; and 2) have normal or corrected-to-normal vision.

You will be compensated with 1 research credit per hour toward PSYC1000 for participating in this study. If you are enrolled in a course other than Psych 1000, your compensation will be based on your course outline. If you have any questions about the time or compensation, please feel free to contact the investigators before you consider signing the consent.

If you have any questions about the study, please contact Dr. Richard Goffin, Western University at goffin@uwo.ca or by phone at 519-661-2111 ext. 84641. You may also contact Irene Zhang, Western University at izhang5@uwo.ca or by phone at 519-661-8632.

Please note: your participation is voluntary and all information collected will be kept confidential.
Appendix C

Letter of Information and Consent

LETTER OF INFORMATION

Project Title

Beliefs, preferences, and reactions to fictional scenarios

Principal Investigator + Contact

Principal Investigator

Dr. Richard Goffin, PhD, Psychology
Western University, goffin@uwo.ca

Additional Research Staff + Contact (optional)

Additional Research Staff

Irene Zhang, Psychology
Western University, izhang5@uwo.ca

1. Invitation to Participate

Introduction

You are being invited to participate in this research study about your beliefs, preferences, and reactions to fictional scenarios because you are currently an undergraduate student who has worked part-time or full-time.

2. Why is this study being done?

The purpose of this study is to find out what personal characteristics help certain workers succeed at work, resulting in outcomes such as promotions or raises. There is still not very much research on the relations of different personal characteristics with success at work (e.g. problem solving, math skills, memory). We will ask you to complete a number of different questionnaires to understand your current beliefs and preferences about yourself and others. Following that, we’ll ask you to imagine you are an employee in various fictional scenarios and indicate how you would react to assorted work problems.

3. How long will you be in this study?

It is expected that the study will take one hour of your time. You will not need to return for further follow-up studies.
4. **What are the study procedures?**

   If you agree to participate you will be asked to use a computer to take the study online on your own in a quiet environment free of distractions. There will be five sets of questions in the study. The first set will be demographic questions, and the remainder will assess your thought processes, preferences and personal tendencies, as well as your reactions to several fictional scenarios.

5. **What are the risks and harms of participating in this study?**

   There are no known or anticipated risks or discomforts associated with participating in this study.

6. **What are the benefits?**

   The possible benefits to society may be greater understanding of the characteristics of employees who succeed in work environments.

7. **Can participants choose to leave the study?**

   Yes, you can withdraw from the study at any time by closing your browser window. If you decide to withdraw from the study, you will have up to one week to re-open the survey and continue where you left off. If you do not re-open the survey to complete it within that week, then the information that was collected prior to you leaving the study will be automatically deleted and will not be used. No new information will be collected without your permission.

8. **How will participants’ information be kept confidential?**

   No names or identifying information of any kind will be collected, so your responses will all be anonymous. IP addresses will be stripped from your participant file. Representatives of The University of Western Ontario Non-Medical Research Ethics Board may require access to your study-related records to monitor the conduct of the research. Participant data will be kept electronically in password protected computer hard drives and encrypted USB drives for a minimum of seven years after the last publication derived from this research as per regulatory guidelines. It will be electronically destroyed after this period of time.

9. **Are participants compensated to be in this study?**

   If you are a Psychology 1000 student, you will be compensated one research credit for the hour you participate in this study. If you do not complete the entire study you will still be compensated the entire credit amount. If you are an other-than-Psychology 1000 student you will receive compensation based on information provided in your course outline. If you have any questions about the compensation, please refer to your course outline or contact your course instructor.

10. **What are the Rights of Participants?**

    Your participation in this study is voluntary. You may decide not to be in this study. Even if you consent to participate you have the right to not answer individual questions or to withdraw from the study at any time. If you choose not to participate or to leave the study at any time it will have no effect on your employment status and academic standing.

    You do not waive any legal right by signing this consent form.
11. **Whom do participants contact for questions?**

If you have questions about this research study please contact Dr. Richard Goffin, Western University at goffin@uwo.ca or by phone at 519-661-2111 ext. 84641. You may also contact Irene Zhang, Western University at izhang5@uwo.ca or by phone at 519-661-8632.

If you have any questions about your rights as a research participant or the conduct of this study, you may contact The Office of Human Research Ethics (519) 661-3036, email: ethics@uwo.ca.

This letter is yours to print and keep for future reference.

**Consent**

Have you ever worked part-time or full-time?

- □ Yes
- □ No

You indicate your voluntary agreement to participate by responding to the questionnaire. Have you read the full letter of information and understand what you will be asked to do in this study?

- □ Yes
- □ No
Appendix D

Debriefing Form

Western

DEBRIEFING FORM

Project Title: Beliefs, preferences, and reactions to fictional scenarios

Principal Investigator: Dr. Richard Goffin, Western University, goffin@uwo.ca and Irene Zhang, Western University, izhang5@uwo.ca

Thank you for your participation in this study. The purpose of this study was to examine a few variables that could possibly lead to more successful interpersonal deception in work environments. What we predicted was that individuals high in both intelligence and Dark Triad personality traits (Machiavellianism, narcissism, and psychopathy) would be the most successful at lying for their own personal gain. This was carried out by asking you to fill out a series of surveys on your personality, cognitive ability, and how you would behave given the opportunity to lie at work.

Here are some references if you would like to read more.


Thanks again for participating. Your results are confidential to the experimenters and all results will be published anonymously as part of a group so that your personal data will not be singled out. If you have any questions or concerns, please contact Irene Zhang.

Thank you,

Irene Zhang

Western University

izhang5@uwo.ca