

WHEN THE TRUTH HURTS: RELATIONS BETWEEN PSYCHOPATHIC TRAITS
AND THE WILLINGNESS TO TELL VARIED TYPES OF LIES

by

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DEDICATION

To my brother, who I wish could have read this.

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I would like to acknowledge first my loving parents, without whom I would not have been able to make it this far. Your support of and dedication to me has been a crucial part of my learning and I thank you wholeheartedly.

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ABSTRACT

Duplicity is a hallmark of psychopathy. To date, however, most studies of deception and psychopathy have examined the tendency to tell self-beneficial lies (e.g., lying to cover up one's cheating on an exam). Such research is unable to disambiguate whether increased lying in psychopathy is due to an inherent delight in deceiving others or instead simply due to an interest in helping oneself. To disentangle these possibilities, I presented adult participants with a series of vignettes which presented the opportunity to tell different types of lies in addition to self-beneficial lies (e.g., white lies, lies that neither help nor hurt). Participants rated their likelihood of telling the truth in each scenario and completed a standardized measure of psychopathic traits. Results indicated that psychopathy was related to an elevated tendency to deceive across situations, including in situations where the lie did not affect the teller or recipient (e.g., lying about a favorite color). In spite of this general elevation in lie-telling, the largest relations between psychopathy and lie-telling were in cases where the lie benefited the teller. Thus, findings support a small tendency toward 'duping delight' in psychopathy which interacts with a heightened willingness to violate moral norms specifically to benefit oneself. Overall, this pattern of results has implications for understanding psychopathic traits and this general approach should be extended to real-world clinical contexts.

Keywords: lying; psychopathic traits; psychopathy; deception

I. INTRODUCTION

Although there is some disagreement in the field as to whether and how to officially diagnose psychopathy (i.e., the DSM-5 [American Psychiatric Association, 2013] contains antisocial personality disorder, but not psychopathy; Ogloff, 2006; Werner et al., 2015) the term is widely used in the clinical and scientific literature. This existing research characterizes psychopathy as a condition involving deceit, cunning, and manipulation, such that individuals with psychopathy lack guilt or remorse regarding any of their decisions, including those actions that hurt others (Klaver et al., 2006; Brosius, 2017; Cleckley, 1941). Research also describes those with high levels of psychopathy as more aggressive, erratic, and sexually deviant, often with poor interpersonal relations and problems with morality (Muris et al., 2017). Overall, worldwide psychopathy rates are estimated at around 1%, and elevated rates of psychopathy are found in the prison population, such that psychopaths make up anywhere from 15% to 25% of those incarcerated (Hare, 1996). Thus, it is crucial to understand the way that psychopathic traits influence behaviors before considering potential interventions.

Deceitfulness is a core feature of the diagnosis of antisocial personality disorder (American Psychiatric Association, 2013) and is frequently associated with psychopathy. There are two potential explanations for this finding. One explanation is that psychopathy is related to “duping delight” (Ekman, 1991) or lying simply because it is enjoyable (Spidel et al., 2011; Helwa, 2017). Alternatively, because lies tend to be self-serving (DePaulo & Kashy, 1998; DePaulo et al., 1996; Lupoli et al., 2017; & Xu et al., 2009), psychopaths could show elevated rates of lying because they are strategically lying to

help themselves. For example, self-beneficial lies could include lying to get out of trouble or to obtain an advantage (e.g., by cheating on an assessment).

Not all types of lies, however, primarily serve to benefit oneself. A classic example is telling a friend that their bad haircut looks great or telling a grandparent that you love a terrible Christmas present. Although such lies may also help the teller by maintaining the relationship, the primary aim is to make the recipient of the lie feel better (Warneken & Orlins, 2015; Xu, et. al., 2019; Spottswood & Hancock, 2016). These prosocial, or white lies, are in contrast to more anti-social lies such as lying about causing damage to property or saying something untrue simply to be cruel to another person (Talwar & Crossman, 2011). There are also lies that do not seem to result in direct benefit or harm to any party, such as lying about what one had for lunch.

Some researchers have attempted to develop a more formal topology or taxonomy of lie types. For example, Hart and colleagues (2019) developed a lying scale to determine the way that different people lie across broader day-to-day situations. Their scale included items such as “I lie for revenge” and “I lie to hide the bad things I’ve done.” Similarly, Makowski and colleagues (2020) developed a 16-item scale that asked participants to rate their lying behavior, and which involved measures of lying motivations and contexts (e.g., lies of necessity, lies about trivial matters). Such work, however, has not been extended to understanding lying in psychopathy.

The current study aims to disentangle whether elevated lying in psychopathy is driven more by duping delight versus self-interest by examining how psychopathic traits relate to many different types of lying, including lies that help others. If the duping delight hypothesis is true, psychopathic traits should lead to elevated lying in all

scenarios. In contrast, if deception is just another way to benefit oneself, psychopathic traits should only be related to elevated lying in self-beneficial scenarios. One important note is our proposed study examines psychopathic traits, as opposed to individuals with an official diagnosis of psychopathy or antisocial personality disorder. This continuous, trait-based approach is frequently used in studies of psychopathy and deception (e.g., Jones & Paulhus, 2017; Baughman et al., 2014) and can offer insight into how broader population-based variability in a particular trait influences behavior, although I note that possessing psychopathic traits does not necessarily suggest a psychopathy diagnosis (Andershed, 2010).

Clinical Relations between Psychopathy and Deception

Clinical research has found elevated lying in psychopathy (reviewed in Hare et al., 1989 and Gillard, 2018; Porter & Woodworth, 2007; but see Wright et al., 2015 & Verschuere & Hout, 2016). For example, in a study by Porter and Woodworth (2007), researchers interviewed criminal psychopaths and non-psychopaths and evaluated their re-telling of their own crimes. After comparing the descriptions to the official crime files of their cases, researchers found that the criminals who were psychopathic tended to exaggerate their homicides more so than their non-psychopathic counterparts. The psychopaths were also more likely to fail to mention key details of their crimes.

Similarly, in an extremely influential book authored by Cleckley, (1976) psychopathy is broken down in great detail. The author is able to illustrate the many behaviors of clinically psychopathic individuals based on his years of work as a psychiatrist in hospitals and later as a professor of medicine. Specifically, he chronicles the behaviors of 15 of his own patients and their inability to act within the norms of

society. After going into great detail about each of these patients, Cleckley lists and describes the major behavioral tendencies of these patients, one of which is their persistent “untruthfulness” and their inability to be sincere (Cleckley, 1976). Cleckley describes instances of grandiose lying and persistent and unfounded lying, among others, lending further credit to the idea that frequent lie-telling is a distinct characteristic in clinical psychopaths.

Psychopathic Traits and Deceptive Behaviors

Laboratory studies of lying in psychopathy examine deceptive behaviors in more controlled contexts than studies of real-world behaviors and predominately focus on psychopathic traits rather than formally diagnosed individuals. One such laboratory-based study examined relations between psychopathic traits and the willingness to lie on a coin-flipping task (i.e., lie about whether the coin showed an advantageous outcome; Jones & Paulhus, 2017). Psychopathic traits were associated with an increased willingness to lie in both low-risk (i.e., no cost for a detected lie) and high-risk (i.e., cost for a detected lie) conditions. Other studies have also found links between psychopathic traits and dishonesty, operationalized as a willingness to gamble with other’s money (Jones 2013a, 2014). A separate behavioral paradigm examined the ability of participants to learn to lie in a face identification task and found that those with higher psychopathic traits were better able to learn how to lie (Shao & Lee, 2017).

Another set of studies has examined the relation between psychopathic traits and neural activation while actively deceiving others, producing mixed findings. In an fMRI study, Fullam et al., (2009) found that people with higher levels of psychopathic traits had lower levels of activation in frontal regions when lying, similar to a study in

individuals with an antisocial personality disorder which found that capacity to lie was linked to decreased activation in frontal regions (Jiang et al., 2013). In contrast, another study found psychopathic traits to be correlated with increased activity in frontal regions (Glenn et al., 2017). One potential explanation advanced by Glenn and colleagues (2017) is that the type of lie influences the relation between psychopathy and brain activation. Researchers found that there was increased activity in areas of the frontal and prefrontal cortex when the participants lied about any information, but activation was particularly high when they lied about criminal behaviors. Psychopathy was also positively correlated with activity in the lateral prefrontal cortex when the participants specifically told lies about autobiographical information. Thus, the brain data also suggest that different types of lies may have different relations with psychopathy.

Given the importance of considering multiple types of lies, a drawback of existing behavioral studies is that they often examine simple types of lies (e.g., lying about a coin flip) or only one or two instantiations of lying per participant. Another important and well-controlled way to gain insight into deceptive tendencies is to present questionnaires on which participants can be assessed on a variety of dimensions, such as self-reported willingness to lie and confidence in their ability to deceive.

Psychopathic Traits and Questionnaire-Based Measures of Deception

One line of questionnaire-based work has examined how likely participants think they will be at getting away with their deception. For example, in a study by Giammarco and colleagues (2013), researchers presented participants with a set of scenarios (e.g., lying on one's resume) and asked participants how successful they thought they would be at deceiving others. Participants also filled out the Short Dark Triad, (Jones & Paulhus,

2014) which measures psychopathy, narcissism, and Machiavellianism (i.e., an extreme self-interest, making one very motivated by manipulation of others) using a brief 27-item survey. Those with higher levels of psychopathic traits rated their ability to deceive as higher. Interestingly, in contrast to elevated beliefs in one's own deceptive ability, other studies have found that while psychopaths do lie more often, they are not necessarily more successful in getting away with the lie (Michels et al., 2020).

A separate line of research has participants rate their likelihood of lying, measured both on hypothetical vignettes and on self-reported rates of real-world behaviors. In a vignette-based study, a group of 462 undergraduate students rated their probable lie-behaviors regarding two situations (Baughman et al., 2014). The participants were presented with two scenarios, one in which the participant is caught cheating in class and one in which the participant meets with an ex-partner without telling their current partner and again gets caught. After reading each scenario, the participants were asked how likely they were to lie in the given situation, how much effort they would put into the lie, their emotional state when lying, and the degree to which they thought their lie would be believed. Those with higher levels of psychopathic traits reported an increased likelihood of lying in both contexts, consistent with findings of increased real-world academic dishonesty in psychopathy (Coyne & Thomas, 2008; Williams et al., 2010), and also reported that they would have a positive emotional state when lying. Similar questionnaire-based studies have found positive relations between psychopathic traits and high-stakes deception (i.e., when deception risks negative consequences; Azizli et al., 2016), as well as with rates of self-reported sexual deception (Brewer et al., 2019; Seto et al., 1997).

Regardless of the method employed, however, most existing studies of lying and psychopathy have examined lies that benefit oneself, which does not allow us to disentangle a general love of deception from a desire for self-benefit. To accomplish this, research needs to compare different types of lies.

Psychopathic Traits and Other Types of Lies

A handful of studies have examined how psychopathic traits relate to rates of lying when such lies do not directly benefit oneself. In one such study, Jonason and colleagues (2014) asked 447 participants to identify the lies they had told in the previous seven days. They asked participants to list the people they lied to, as well as how many lies they told to benefit themselves (i.e., antisocial lies), the other person (i.e., prosocial lies), and how many lies they told for no particular reason. Researchers measured relative levels of psychopathic traits in the population using the Self-Report Psychopathy Scale-III (Paulhus et al., 2009) and found that elevated psychopathic traits were linked to telling more lies to benefit oneself and telling more lies for no reason, but not to white lies (i.e., lies to benefit another person).

In a similar study by Rose and Wilson (2014), over 4000 participants were asked to rate how acceptable and justifiable are both prosocial and antisocial lies and to report how often they told each type of lies. Psychopathic traits were measured using Levenson's Self-Report Psychopathy Scale (LSRP: Levenson et al., 1995). In contrast to findings from Jonason and colleagues (2014), Rose and Wilson (2014) found that psychopathic traits were related to increased acceptability and propensity ratings for both prosocial and antisocial lies, although the correlations were stronger for antisocial lies.

In Dobrow's (2016) study, the researcher assessed duping delight using a self-report psychopathy questionnaire called the Elemental Psychopathy Assessment (EPA; Lynam et al., 2011). A sample of undergraduate students rated their lying frequency and results indicated that the more antagonistic and disinhibited (two of the four psychopathic factors measured on the EPA) a person was the more frequently they told lies. The results also showed that increased levels of antagonism and disinhibition were related to increased lies told for self-gain and duping delight.

In yet another study design, researchers examined the relationship between psychopathic traits and lying behavior in a manner that tasked participants with rating the likelihood in which they would lie in given situations (Helwa, 2017). In this sample, 152 participants (91 undergraduate students, and 61 from the general public) were assessed using the Self-Reported Deception Scale (Dobrow, 2016), the Duping Delight Scale (Dobrow, 2016) and a Situational Lying Scale designed for the study, as well as a measure of psychopathic traits. Consistent with prior findings, the researcher found that there was a positive relationship between lie frequency and psychopathic traits, as well as between psychopathic traits and levels of duping delight. One limitation of this study, however, is that the research only examined one type of lie that did not benefit oneself. Additionally, researchers did not examine lies that benefited no one, even though such pathological lies may be of interest in psychopathology. Thus, the existing literature is limited with regards to fully depicting links between psychopathy and prosocial lies.

Gaps in the Literature

Although significant research has found links between psychopathic traits and willingness to deceive, less work has engaged in a systematic examination of whether and

how this relation is influenced by the type of lie. To date, very few studies have examined psychopathic traits and lies that do not benefit oneself. Additionally, no study has systematically compared lies that help oneself versus hurt another or lies that hurt both oneself and another party, which is crucial to dissociate a general propensity to tell lies in all contexts from a desire to tell lies that specifically benefit oneself or harm another.

The current project filled these gaps in the literature by examining, in a college sample, the relation between psychopathic traits and individuals' self-reported willingness to tell many different types of lies that systematically vary in who they help or hurt. Specifically, participants rated their likelihood of telling a lie versus telling the truth, on a 1-6 Likert scale, in a series of 19 social scenarios. I hypothesized that individuals with higher levels of psychopathic traits will exhibit a greater tendency to endorse lying, collapsing across the specific scenarios (i.e., that there would be a main effect of psychopathic traits on lying). After examining this general effect, I examined whether the relation between psychopathic traits and lying was moderated by a specific lie type in order to distinguish between the duping delight hypothesis (i.e., that psychopathy is linked to general enjoyment of lying) from the self-beneficial hypothesis (i.e., that links between psychopathy and lying exist because most lies are self-beneficial). I hypothesized that those with more psychopathic traits would not lie indiscriminately, but instead would specifically show increased lying to benefit themselves and hurt others, endorsing the self-benefit hypothesis and providing evidence against the duping delight hypothesis.

II. METHOD

Participants

Participants were students at Texas State University aged 18-31 who completed the survey on the online research tool SONA. I conducted an a priori power analysis based on previous studies examining links between lying and antisocial traits (Baughman et al., 2014; Jones & Paulhaus, 2017). Based on a lower bound estimate of effect size from these studies ($r = .15$), I used G*Power to calculate that I would need $n = 350$ participants to achieve 80% power. I attempted to recruit 450 participants, estimating roughly 20% sample loss due to incomplete surveys and/or failed attention checks. Due to limitations in the size of the participant pool, only $n = 383$ participants completed the survey. I excluded 91 participants solely due to a failure to answer attention checks correctly and 6 others because they failed to answer more than 7 items of the psychopathy section of the Short Dark Triad. I also excluded 6 participants because they selected the same answer choice for every answer, suggesting a lack of attention. Fourteen participants were excluded because they failed the attention checks and answered all of the questions with the same answer choice. 8 participants were excluded because they skipped more than two vignettes, failed the attention checks, and skipped more than 2 statements on the Short Dark Triad. Finally, 1 participant was excluded because they skipped more than two vignettes and failed the attention checks.

Thus, the final sample was $n = 257$ usable participants. Although smaller than my initial target, this sample size was not informed by an optional stopping rule (i.e., I stopped at the end of the semester and did not analyze my data until collection was completed; John et al., 2012) and still had sufficient power to detect effects in line with

those from past work (i.e., corresponded to 80% power to detect effect sizes of roughly $r = .17$.)

In the final sample, 60.7% of participants were White, 17.1% were African American, 6.2% were Multiracial, 3.1% were Asian, 3.1% were American Indian or Alaskan Natives, .4% were Native Hawaiian or Pacific Islander, 1.9% left the field blank, and 7.4% selected that they did not wish to disclose. In the sample, 42.0% identified as Hispanic/Latino, 56.4% identified as not Hispanic/Latino, with the remainder not wishing to disclose. Of the 257 usable participants, 196 were females, 60 were males, and 1 identified as non-binary. Informed consent was collected for all participants and all study procedures were approved by the Texas State Institutional Review Board.

Procedure & Materials

Assessing Deception

Consistent with prior studies of deceptive behavior, I used participant responses to hypothetical vignettes (Bussey, 1992; Xu et al., 2009) as the measure of this study. Past studies, however, have typically only assessed one or two types of deceptive tendencies (e.g., anti-social lying). To overcome this limitation, I developed 19 vignettes to measure the different situations in which participants had the opportunity to lie (summarized in Table 1; see Appendix A for the full text of all vignettes). Each vignette asked the participant to imagine a situation in which they are given the opportunity to lie. What systematically varied across vignettes was whether the lie benefitted, harmed, or had no effect on the participant (which I term “self-impact”) and whether the lie benefitted, harmed, or had no effect on the social partner (which I term “other-impact”). Thus, vignettes were designed to capture nine types of scenarios based on the effect that telling

the truth would have on the participant (help, no effect, hurt) and the other person in the story (help, no effect, hurt), creating a 3x3 repeated measures design. For example, some truths would harm a social partner but would have minimal effect on the participant (e.g., a participant asked about what they would say if a friend gave them a terrible gift). Other lies, such as lying versus telling the truth about one's favorite color, had no impact on the teller or recipient.

I assessed lying behavior in response to each vignette by asking participants, on a 1 to 6 Likert scale, how likely they were to tell the truth, with 1 being "*Extremely unlikely to tell the truth*" and 6 being "*Extremely likely to tell the truth*". I asked participants about their likelihood of telling the truth (versus how likely they were to lie) because I thought that asking explicitly about lying might be more likely to lead to social desirability demands that biased responses. Thus, throughout this thesis, higher scores on predicted behavior indicate increased likelihood of truth-telling. Therefore, I expected lower scores on my truth-telling measure for those higher in psychopathy.

Additionally, I also asked participants how much telling the truth would help versus harm them and how much the truth would help versus harm the social partner in the story in order to validate that our vignettes were capturing different types of lies based on self-impact and other-impact.

Three control and two attention check vignettes (see Appendix B) that do not involve lying were also included in the survey to ensure that participants were paying attention to the survey and to help obscure the main purpose of the survey. The control vignettes asked about predicted behavior in situations that did not involve lying. The attention checks were formatted in a very similar way to the vignettes, but instead asked

participants to respond with a certain answer on the Likert scale. Vignettes, including controls, were presented to participants in a random order.

Behavioral Questionnaires

After responding to the vignettes, participants were assessed on their psychopathic traits using the Short Dark Triad (Jones & Paulhus, 2014), which has been used in several previous studies examining deception (Giammarco et al., 2013; Jones & Paulhus, 2017; Baughman et al., 2014). This 27-item questionnaire involves 9 items that assess psychopathy. Participants responded on a 5 point Likert scale (from *strongly disagree* to *strongly agree*) to statements such as “*I’ll say anything to get what I want*” and psychopathy scores were created based on averaging across the nine items, such that psychopathy scores could range from 1 to 5. Based on our study design and for ease of interpretation (cf. Iacobucci et al., 2015), I used a median split to classify respondents into “high psychopathy” ($n = 125$, $Mean = 2.75$, $SD = .37$, range: 2.33-3.88) and “low psychopathy” groups ($n = 133$, $Mean = 1.82$, $SD = .33$, range: 1-2.22).

Finally, a very brief demographics form was completed that asked for participant information such as age, race, and sex for descriptive purposes.

III. RESULTS

Preliminary Analyses

I first examined whether our vignettes successfully captured the relevant dimensions of self-impact (i.e., the effect of telling the truth on oneself) and other-impact (i.e., the effect of telling the truth on the other person in the story). Based on preliminary piloting with lab members, I had designed our vignettes to systematically vary in self-impact (help, no effect, hurt) and on other-impact (help, no effect, hurt). To supplement the judgements of the research team, I asked participants to rate the likely effect of telling the truth on themselves and on the other person in the story. These ratings were given on a 1 to 5 scale from 1 = *extremely harmful* to 5 = *extremely beneficial*. Empirical ratings of the vignettes fit with our original planned classification scheme (Table 1).

Table 1. Average Participant Rating of the Effects of Truth-Telling for Each Vignette

Classified Vignette category	Self-Impact Rating (1-5)	Other-Impact Rating (1-5)	Sample Vignette Topic
Truth helps you and them	3.97 (.79)	3.99 (.82)	You and a friend are asked about a wrongdoing you did not commit
Truth helps you and has no effect on them	4.49 (.69)	3.38 (.64)	You are asked to report on your good performance
Truth helps you and hurts them	4.36 (.71)	1.39 (.54)	Friend blamed you for a mistake they made
No effect of truth on you and helps them	3.25 (.48)	4.66 (.47)	Friend asks if their outfit looks good when it does
No effect of truth on you or them	3.09 (.37)	3.21 (.41)	A friend asks your favorite color
No effect of truth on you and hurts them	2.9 (.51)	2.45 (.75)	Friend gives you a bad gift
Truth hurts you and helps them	2.23 (.69)	3.85 (.91)	You need to deceive your friend to gain an advantage
Truth hurts you and has no effect on them	2.28 (.87)	2.97 (.48)	Friend from work asks if you made a mistake at work
Truth hurts you and them	2.22 (.68)	2.58 (1.02)	Both of you committed a wrongdoing

Note. Values are mean (standard deviation) averaged across all participants. 1=very harmful and 5=very beneficial.

For each participant, I averaged over the vignettes placed in each particular self-impact and other-impact category. Thus, each participant yielded nine values of truth-telling likelihood in a 3 (hurt self, no effect self, help self) x 3 (hurt other, no effect other, help other) design.

Main Analyses

To determine the interaction between psychopathy, self-impact (i.e., how the truth would affect oneself), and other-impact (i.e., how the truth would affect the other person in the vignette), we conducted a 3x3x2 mixed design ANOVA. Specifically, my within-participant factors were self-impact (help, no effect, hurt) and other-impact (help, no effect, hurt) with level of psychopathy (high versus low) as a between-participants factor and likelihood of telling the truth as the dependent variable.

I began by testing the main effects of my within-subjects variables (self-impact and other-impact) in order to determine if the effect of truth-telling did influence the likelihood of telling the truth (e.g., whether self-harmful truths were less likely to be told than self-helpful truths). I started by examining how the effect of truth-telling on oneself (help, no effect, hurt) influenced the likelihood of telling the truth.

Mauchly's test indicated that the assumption of sphericity had been violated for this variable ($X^2(2) = 100.29, p = < .001$), therefore degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ($\epsilon = .75$). Self-impact was significantly related to the likelihood of telling the truth ($F(1.5, 379.13) = 569.57, p = < .001$).

Bonferroni-corrected post-hoc test indicated that participants were significantly more likely to tell the truth when it helped themselves versus had no effect on themselves and significantly more likely to tell truths with no effect on themselves than self-harmful truths ($ps < .0001$).

I next examined the main effect of other-impact (help other, no effect on other, hurt other) on truth-telling. The assumption of sphericity was met, $X^2(2) = 2.39, p = .3$, so no correction of degrees of freedom were necessary. The results showed a significant

main effect of other-impact on truth-telling ($F(2, 504) = 363.08, p < .001$). Again, post-hoc Bonferroni-corrected tests found significant differences between all pairwise comparisons in the same staircase pattern, such that participants were most likely to tell the truth when it benefited another and least likely when it harmed another ($ps < .0001$).

Before examining psychopathy, I analyzed the interaction between self-impact and other-impact on rates of truth-telling. Mauchly's test indicated that the assumption of sphericity was violated $X^2(9) = 199.37, p < .001$, thus degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ($\epsilon = .78$). The results showed that there was a significant interaction between self-impact and other-impact $F(3.1, 781.72) = 471.49, p < .001$ (Table 2). This effect was driven by two phenomena. First, negative other-impact (i.e., the other person would be harmed by the truth) affected truth-telling less when the truth would help oneself. Second, individuals were more likely to tell other-harmful truths that also negatively impacted themselves than other-harmful truths that had no effect on themselves or self-harmful truths that had no effect on another. I return to this surprising finding in the discussion, but believe it may be due to idiosyncratic properties of the vignettes used.

Table 2. Ratings of Truth-Telling Likelihood Across Social Impact Categories

		Self-Impact on Participant		
		Help	No Effect	Hurt
Other-Impact	Help	5.89 (.34)	5.84 (.36)	4.77 (1.02)
	No Effect	5.87 (.57)	5.74 (.50)	3.23 (1.32)
	Hurt	5.51 (.60)	3.49 (.95)	4.69 (1.02)

Note. Values reflect likelihood of truth-telling on a 1-6 scale such that higher values indicate a higher likelihood of telling the truth. Values are mean (SD).

After examining all within-subject effects, I assessed whether the high and low psychopathy groups showed a significant difference in rates of truth-telling, collapsing across vignettes. Results showed that the two groups were significantly different ($M_{\text{LowPsychopathy}} = 5.11$, $SE = .031$, $M_{\text{HighPsychopathy}} = 4.89$, $SE = .032$, $F(1, 252) = 25.69$, $p < .001$), such that those lower in psychopathy were more likely to tell the truth (i.e., had higher values on the truth-telling scale).

Finally, I examined interaction effects with psychopathy for my two within-subject predictor variables (self-impact and other-impact) in the omnibus ANOVA model described previously. I found an interaction between psychopathic traits and self-impact ($F(1.5, 379.13) = 9.46$, $p < .001$) and between psychopathic traits and other-impact ($F(2, 504) = 5.17$, $p = .006$). These effects were most interpretable in context of the significant three-way interaction between all variables ($F(3.1, 781.72) = 4.91$, $p = .002$), indicating that importance of considering the full scenario when estimating the effects of psychopathy on the willingness to tell truths (Figure 1). Specifically, although the higher psychopathic trait group showed lower truth-telling on all dimensions, effects were largest in size (corresponding to a Cohen's d of roughly .5) when the truth was potentially harmful to oneself and had no impact or a helpful impact on another.

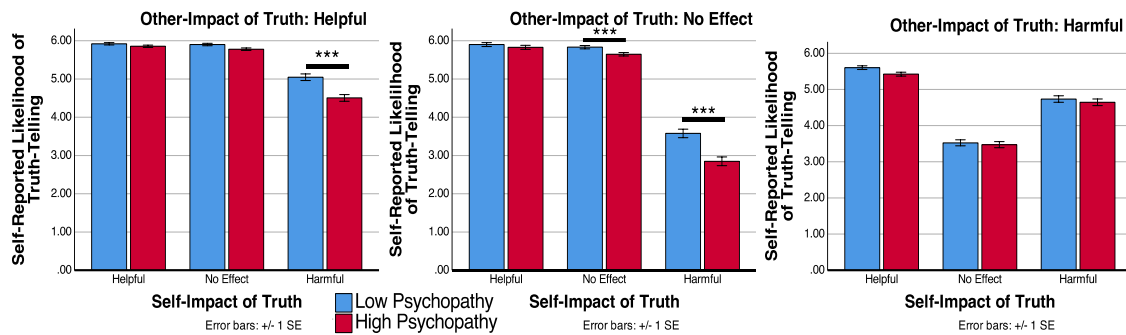


Figure 1. Effects of Self-Impact, Other-Impact, and Psychopathy on Truth-Telling

Note. *** indicates a p -value of $p < .0055$ (significant at $p < .05$ after Bonferroni correction).

Exploratory Analyses

I also conducted an exploratory analysis using Pearson's correlations to test the relationship between psychopathic traits (measured continuously) and the likelihood of telling the truth in each vignette. Given the exploratory nature of this analysis, I did not correct for multiple comparisons. My rationale of conducting this analysis was to supplement the median split approach and to ensure that effects were still present when considering psychopathy as a continuous variable.

For eight of the 19 vignettes, rates of truth-telling were significantly ($p < .050$) correlated with lower levels of psychopathic traits (see Appendix A for full relations). That is, as psychopathic traits increased, the likelihood of a participant telling the truth in these vignettes decreased. These vignettes differed in content and included lies without a clear beneficiary (e.g., lying about one's favorite color ($r(255) = -.135, p = .030$) as well as lies that clearly helped oneself at the expense of another (e.g., lying to a potential subletter about the appropriateness of your apartment ($r(255) = -.257, p < .001$)). Of the eight vignettes with significant negative correlations between psychopathy and truth-telling, four were instances where the truth would hurt the teller, two were instances

where the truth had no effect on either party, one was a case where the truth had no effect on self and helped another, and the final was a case where the truth helped self and no impact on another. Thus, the general pattern in these continuous analyses mirrored those from the ANOVA: general elevated lying with higher psychopathic traits, particularly in cases where the truth would be harmful to oneself.

IV. DISCUSSION

The current study aimed to evaluate the different situations in which a participant high in psychopathic traits would show an increased tendency to lie. Psychopathy and lie-telling have been closely linked, but past research has predominately examined self-beneficial lies. Thus, findings showing elevated lie-telling in psychopathy could be driven by (1) a general duping delight (Ekman, 1991) or (2) by a tendency to take actions that benefit oneself, even if such actions may violate moral norms. By examining a variety of different types of lies, the current study provides a crucial starting point in understanding why people with high levels of psychopathic traits tell lies. Overall, results supported aspects of both the duping delight and self-interest hypotheses; I found generally decreased truth-telling in the high psychopathic traits group and found that the effects were largest in cases where the truth could be harmful to oneself.

Before conducting my main analyses, I began by ensuring that the 19 selected vignettes successfully captured scenarios where the truth could help, harm, or have no effect on self and other (resulting in my planned 3 x 3 design). Analyses showed that participant ratings of self-impact and other-impact were consistent with my targeted effects, allowing for a rigorous examination of the interactions between self-impact, other-impact, and psychopathy. Future research could further refine my approach by considering a participant's individualized ratings for the effects of truth-telling in each context or by examining what factors lead to different self-impact or other-impact ratings.

My results for self-reported likelihood of truth-telling further support the validity of my vignettes in capturing self-impact and other-impact dimensions of the social scenarios. Namely, I found that when telling the truth was beneficial to either party,

participants were more likely to do so than if the truth did not have an effect or harmed either party. However, when the truth was beneficial to oneself, the impact it had on the other person became less important when participants were deciding whether to tell the truth. This suggests that people tend to want to help others but may consider their own feelings and welfare before doing so. This explanation holds true in cases of children with conduct problems that result in higher levels of deceptive behaviors and lack of remorse (Sakai et al., 2012) and future work should examine the generalizability of this result is important.

One surprising finding was that individuals (collapsing across psychopathy categories) were more likely to tell the truth in situations where the truth would negatively impact themselves and the other person compared to situations where the truth would harm others with no effect on themselves or would hurt themselves with no effect on the other person. That is, more harmful truths (harmful to two people) were more common than less harmful truths (harmful to one person). One potential explanation for this finding is that the vignettes varied in other dimensions besides self- and other-impact. For example, the situations where the truth would harm both parties involved covering up wrongdoing (e.g., throwing a party without permission) whereas the situations where the truth harmed another and had no impact on oneself involved white lies (e.g., saying you liked a bad gift). Individuals may be much more likely to tell white lies than to lie to cover up misdeeds, even though the latter lie would be more beneficial to oneself. This hypothesis is supported by previous research finding that individuals find white lies to be more acceptable than lies that conceal a transgression (Perkins & Turiel, 2007; Seiter et

al., 2009). Including a scale that directly asks participants how acceptable a lie is could help to further understand how that factor plays a role.

In my main analyses, I found that participants higher in psychopathic traits were less likely to tell the truth than those with lower psychopathic traits including in situations where no one benefited from the lie. Alongside this main effect, however, was an interaction such that effects of psychopathy were largest in cases where the truth would harm oneself. Thus, my findings are consistent with both initial hypotheses from the introduction: I show a small duping delight driving increased tendencies to lie in many situations paired with an additive effect of self-interest. Surprisingly, psychopathic traits were not related to a specific tendency to tell truths that harmed others. That is, contrary to some prior work (MacKinnon et al., 2021), psychopathy did not predict an elevated tendency to tell spiteful truths (e.g., telling someone that you hated their terrible gift), which was surprising considering the study used the same measure of psychopathic traits and other similar methods as my own. Whatever the reason for these differing findings, my findings suggest that duping delight may override a tendency to want to harm others. Future research should continue to probe this effect in order to reconcile it with other research showing spitefulness in psychopathology.

Limitations & Future Directions

A potential limiting factor to the success of this study was the use of the Texas State University SONA system. Although the system is an efficient and timely way to find participants, this sample is largely made up of female students, resulting in a sample that was over three-quarters students who identified as female. Previous psychopathy research suggests that both psychopathy and psychopathic traits are more often found in

males than in females (Nicholls et al., 2005; Salekin et al., 1997; Forth et al., 1996) and so it will be important to replicate the current findings in a more gender-balanced sample. Such work could also examine whether gender moderates any of the observed effects, which I was underpowered to do.

Also due to the nature of the participant pool, the vast majority of participants were between the ages of 18 and 21. Although limited research has examined psychopathy across the lifespan, replicating findings in middle and late adulthood is an important future direction. In addition to the demographic limitations of a college student sample, the current study did not use data from a clinical or criminal sample, a sample that more wholly encompasses psychopathic traits in a community population. One possibility is that the pattern of results would be different in a clinical sample. For example, the clinical sample may demonstrate a tendency to tell more exaggerative truths that harm others (Porter & Woodworth, 2007). Such research could also examine psychopathic traits more continuously, rather than breaking into a high and low group the way that I did. This median split method is a limitation in itself since psychopathic traits present in a continuous way, and my splitting their values into high and low limited the scope of the information I could gather from each value of psychopathic traits.

Another likely limitation to this research is that I used vignettes to measure lie-telling behaviors. It is possible that this measure produces different responses than if I had measured lies in real-world context. For example, participants got the chance to think through each situation for as long as they wanted, an opportunity that they likely would not have in a real-life circumstance. Participants may have also felt social desirability pressures that are common when taking research surveys (Van de Mortel, 2008; Richman

et al., 1999). That is, because participants knew they would be evaluated based on their answers on the survey, they may have lied about how often they would actually tell a lie, in order to appear more socially acceptable. The participants may have also been confused because my scenarios may have been situations that they had never experienced before and thus they truly did not know how they would respond in the real-world. Behavior studies would be difficult given my aim to produce a variety of different situations, but researchers could combine multiple vignettes with one or two real-world scenarios. Additionally, conducting research using a daily-journal or other kind of self-reporting may be helpful to truly capture lie-telling rates.

Another possible limiting factor in my data was the fact that most of my vignettes only asked about lying to close friends. This was intentional to create matching across the vignettes, but it is possible that psychopathy may be differentially related to rates of lying to different types of people. In other words, it may be that those with higher psychopathic traits are more likely to lie to strangers than to people they consider friends. If that is the case, the data may show that the participants high in psychopathic traits do not lie often in certain situations when in reality they would to a particular social partner. Past work has indicated that the social partner (i.e., stranger, close friend, and acquaintance, among others) can influence lie telling (DePaulo & Kashy, 1998; Ennis et al., 2008) such that people tend to lie less to those they consider “close” than to strangers or acquaintances that they do not interact with as much, making this is another important direction for future work.

Another limitation of the vignettes is that I only asked participants about their likelihood of telling the truth, as opposed to explicitly probing their likelihood of

changing the subject or avoiding the topic. This is a strategy that many tend to use in real-life situations to avoid hurting someone's feelings (DePaulo & Bell, 1996; Saarni, 1984; Wice, et al., 2019). This option is important to observe in future research and should be included in order to further understand the role that psychopathic traits play in all lie behaviors. One possibility is that psychopathy is related to more outright lying, as opposed to 'lies of avoidance' like masking, ignoring, or changing the topic.

In addition to including measures of avoidance or masking, future research could also delve more into assessing motivations. While I made assumptions here about why people chose to lie or tell the truth (i.e., self-impact and other-impact), I did not explicitly ask participants to provide a rationale. It would be interesting to code free response data on why people made the choices they did. Such data could also be collected as part of a daily diary study in which people report their actual lying behaviors, similar to the diary method that DePaulo and colleagues utilized (1996). Including a duping delight scale (Dobrow, 2016) in these studies may also help assess differences in motivation and provide more insight into why individuals said they would lie in contexts where no one benefitted. Such work could also be paired with questionnaires where participants attempt to explain why others tell lies in certain situations. It would be interesting to examine whether individuals high in psychopathy assume others have the same motives that they do.

Conclusion

In summation, the goal of this research was to evaluate the relation between psychopathic traits and rates of lying. The previous literature suggested two competing hypotheses: first, that people high in such traits lie due to a love of deception, and second, people high in such traits lie more because many types of lies are self-beneficial. The study found evidence of both, showing a general duping delight across contexts paired with an especially heightened willingness to lie in situations where such lies would help oneself. This research offers a deeper understanding of deception and psychopathy and is an important first step in future work involving clinical populations and real-world outcomes.

APPENDIX SECTION

APPENDIX A

Vignettes

Classification			
Impact of Truth on Self	Impact of Truth on Other	Full Text	Correlation between Truth-telling and Psychopathy
Help	Help	You are hanging out at a friend's house when their dog breaks a vase. Their parents come home and ask if you and your friend broke the vase. How likely are you to tell them the truth, that the dog broke the vase?	-.122
Help	Help	Someone stole a purse at a party--you didn't see it and you didn't steal it, and neither did your friend, but because you and your friend were standing near that area all night, you get asked if you and your friend took it. How likely are you to tell the truth, that neither of you stole the purse?	-.063
Hurt	Help	Your mom made cupcakes for a birthday party and asked you not to take any since she made one for each guest who is attending. You take two cupcakes anyway and put them in your lunchbox to bring to school. She notices that the cupcakes are missing and asks what happened to them. How likely are you to tell her the truth, that you took two cupcakes and put them in your lunchbox?	-.154*
Hurt	Help	You are trying to move out of your apartment and need someone to sublet it for the rest of your lease. Someone is trying to choose between your apartment and one that your friend is subletting. The renter asks you which apartment is on the bus route, as transportation is a dealbreaker for them. Only your friend's apartment is on the bus route. How likely are you to tell them the truth, that your friend's apartment is on the bus route and yours is not?	-.257**
No effect	Help	Your close friend buys a new outfit and asks you if you think they look nice. You think they do look nice. Using the scale below, how likely	-.077

		are you to tell them the truth, that they look nice?	
No effect	Help	You and a close friend are walking out of school together. You start walking toward your car when your friend asks if you could give them a ride home. You have time to drop them off because you have nothing else to do. How likely are you to tell them the truth, that you can give them a ride?	-.132*
Help	Hurt	You are assigned to a group presentation with people you don't know. One of your group mates does not do any work and on the day of the presentation, their section of work is missing. Each group member is graded on their own effort, and after the presentation your professor asks you to rate each of your group mates and describe what work they did. How likely are you to tell the truth, that your group mate did not do their work?	-.082
Help	Hurt	Your close friend is suspected of cheating in class for the second time. The first time they were caught, the professor told them that they would be expelled if they did it again. Your friend asks you to admit to cheating, even though they did it, because they don't want to be expelled. You know if you say you did it that you will get in trouble and could possibly get expelled as well. Using the scale below, how likely are you to tell the truth, that you did not cheat?	-.101
Help	Hurt	You and your close friend are in a hard class. You both need to get A's on the final take home bluebook exam to keep your scholarships. Your friend didn't do any work on their exam and you worked very hard on your exam. The morning that the exam is due, your friend offers to turn in your bluebook exam for you. When you get your exams back, you got an F, and your friend got an A. When you look at the test, you realize that your friend put switched your names so that they put their name on their own exam. The professor contacts you and says that they are surprised by your poor grade on the final and that there is still time for them to edit the grade book before final grades are	-.034

		submitted. How likely are you to tell the truth, that your friend switched your names?	
Hurt	Hurt	Your friend lets you take their car to work. You know that their insurance makes them pay more when a person does damage to their car versus when a natural disaster damages their car. You scratch their car on the way back from work, and when your friend sees the car, they ask what happened. How likely are you to tell them the truth, that you scratched their car?	-.067
Hurt	Hurt	You and one of your roommates (roommate A) throw a party while your other roommate (roommate B) is gone, and the house is trashed. Some of roommate B's belongings are broken, and their room is a mess. You know that was because of the party, and that they will make you and roommate A pay for damages. Roommate B comes home and asks what happened. How likely are you to tell them the truth, that you threw a party?	-.109
No effect	Hurt	You are in the car with a close friend. Your friend starts to play a song that they like. You strongly dislike this song. Your friend asks you, "Do you like the song?" How likely are you to tell the truth, that you do not like the song?	.022
No effect	Hurt	You are hanging out with a close friend and they give you a gift. You strongly dislike the gift they gave you. Your friend asks if you like the gift. How likely are you to tell the truth, that you do not like the gift?	-.013
Help	No effect	You are applying to a big university that accepts a lot of people and the application asks what your high school class ranking was. You ranked 10th in your class. How likely are you to tell the truth, that you were 10th in your class?	-.015
Help	No effect	You are offered a job at a big company. Before it's official, the hiring manager asks if you have a criminal record to be sure they can hire you. How likely are you to tell them the truth, that you have no criminal record?	-.202**
Hurt	No effect	You made a mistake at work that cost your company a lot of money, but no one knows you	

		did it. If people find out, it could get back to your boss and you could get fired. Your friend from work asks if you know anything about what happened. How likely are you to tell your friend the truth, that you made the mistake?	-.235**
Hurt	No effect	Your school is having a promotion where all students that respond to a survey get \$50. You didn't know about the survey, but you get an email anyway that says you earned \$50 due to your response. You need the money to pay your utility bill this month, or you will lose water and electricity. To earn the money, you are asked to respond to confirm that you did the survey. You know that if you take the money no one else will be missing out, since the school has enough to pay every student. How likely are you to respond with the truth, that you did not take the survey?	-.228**
No effect	No effect	Your close friend asks you what your favorite color is. How likely are you to tell them the truth about your favorite color?	-.135*
No effect	No effect	You recently bought a new pair of glasses that you wear often now. You don't need the glasses to see, but you like the way they look. A close friend you have known for a while notices the sudden change and asks whether you have had trouble seeing the entire time you've known them. Using the scale below, how likely are you to tell them the truth, that you do not actually need glasses to see?	-.169**

Note. *. Correlation is significant at the 0.05 level. **. Correlation is significant at the 0.01 level.

APPENDIX B

Control Vignettes/Attention Checks

Control	You are walking through campus and see someone steal a laptop when the owner gets up to throw something away. What do you do in response?
Control 2	You are at the mall and have a coupon to your favorite store for 50% off any item. You pick something out and go to pay for it, but the cashier tells you the coupon does not work for that item. You need to pick something else. How would you respond?
Control 3	You have a meeting scheduled with your professor to discuss your grade on the last exam, but your professor misses the meeting and does not give you any reason or heads up. How likely are you to try to set-up another meeting?
Attention Check 1	You and a close friend are caught cheating in class. You have a meeting with your professor about it and they tell you that if you confess to cheating and your friend does not, you will not be punished, and if your friend confesses and you do not, you will be punished. If you both confess, you will both be in trouble, but they won't have you expelled. If neither of you confess, you will both be expelled. In order to facilitate our research on decision-making, we are interested in knowing certain factors about you. Specifically, we are interested in whether you actually take the time to read the directions. So, in order to demonstrate that you have read the instructions, please select answer choice "Somewhat unlikely to tell the truth."
Attention Check 2	You are doing homework in a common area at school when someone studying across the hall from you gets up to go to the bathroom. They leave all of their belongings at the table they were at, including their phone. While they are gone, you notice someone else walk up and take the person's phone. In order to facilitate our research on decision-making, we are interested in knowing certain factors about you. Specifically, we are interested in whether you actually take the time to read the directions. So, in order to demonstrate that you have read the instructions, please select the "Somewhat likely to tell the truth" option.

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