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REFINEMENT OF THE SPITEFULNESS CONSTRUCT

Arturo Covarrubias-Paniagua

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REFINEMENT OF THE SPITEFULNESS CONSTRUCT

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
in
Psychology:
Industrial/Organizational

by
Arturo Covarrubias-Paniagua

June 2020

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ABSTRACT

In this research we reviewed the current definition of Spite in the psychology field and the current and historical definitions of Spite in other related fields. Given the narrow contemporary definition of spite used by psychological researchers, the first aim of this study was to provide a comprehensive and refined conceptualization of spite that differentiates it from similar aggressive behaviors, along with delineating conditions in which spite may arise. The second aim of this study was to create a measure of trait spitefulness and a measure of engagement in spiteful behaviors. A total of 156 respondents participated in this study, which entailed answering questions about how they would preferably act to proposed scenarios and other questions meant to assess aggression and personality traits. These respondents were all university students, comprised mainly of women between the ages of 19-29, and worked primarily in sales, food service, and education related careers. A total of three subject matter experts who were all university faculty and had at minimum a Master's degree level education were also contacted to provide consultative advice on how to improve and refine the created measures. Results from the trait spitefulness measure development demonstrated that the portion of the measure meant to assess realistic spitefulness had low reliability, whilst the portion of the measure meant to assess idealistic spite had unacceptable reliability. Results from the engagement in spitefulness measure development demonstrated that the measure was generally reliable but could be refined and shortened. Results of

the scale validation supported that spite was related to factors such as negative reciprocity beliefs, reactive aggression, and premeditated aggression, but distinct from factors such as impulsive aggression. Results also demonstrated that engagement in spitefulness was related to negative reciprocity beliefs. In addition, the results also demonstrated that the selected personality measures were generally poor predictors of trait spitefulness and engagement in spite. Results from the mediation analysis demonstrated a link between trait spitefulness and engaging in spite, but our proposed mediators did not mediate the relationship as predicted. Results from the subject matter expert feedback demonstrated that the experts generally approved of the items. Overall, this research provides the first step in a comprehensive and refined measure of trait spitefulness that reflects its choice-driven and calculated nature, provides a measure that assesses engagement in spite. And provides theoretical and practical implications with suggestions for future research.

Keywords: Spite, Altruism, Punishment, Aggression, Negative Reciprocity Beliefs, Revenge, Retaliation.

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CHAPTER ONE: LITERATURE REVIEW

Refinement of the Spitefulness Construct

The spite and spitefulness constructs are largely understudied within the psychological field. While literature in personality and clinical psychology has recently attempted to rectify this (Marcus, Zeigler-Hill, Mercer, & Norris 2014), spite has been studied across time in other various academic fields, including behavioral economics (Kimbrough & Reiss, 2012; Pillutla & Murnighan, 1996), evolutionary biology (Gardner & West, 2004; Hamilton, 1970), and philosophy (Smead & Forber, 2012). However, even with its study in other fields, there is a lack of consensus on how to conceptualize spite, with many sub-fields choosing to adopt their own definition, and even many authors within their sub-field making important distinctions between their definition and other definitions.

The purpose of this study is to provide a comprehensive and refined conceptualization of spite that entails how to differentiate it from other similarly aggressive behaviors, along with conditions under which spite may arise. This conceptualization will be based on developing a measure that places it and similar but distinct measures on a common nomological network. In this research, we propose a conceptualization of spite as a unidimensional construct that is related to, but distinct from other forms of interpersonal aggression and impulsive retaliation, and lapses in personal regulation.

Literature Review

Spite and Self-Harm

Across the literature, the only component of spite that is universally agreed upon is that spite entails an actor harming another individual vindictively (Kimbrough & Reiss, 2012; Marcus et al., 2014). By extension, spitefulness is defined as the willingness of an individual to participate in any acts that vindictively harm another individual (Marcus et al., 2014). Established literature and definitions of spite begin to diverge from this point onwards.

A major theme within the literature is spite's relationship to self-harm. Many authors claim that for an action to be considered spiteful, the individual that initiates the spiteful behavior must also take upon a cost or be harmed (Fober & Smead, 2016; Marucs et al., 2014; McAuliffe, Blake, & Warneken, 2012). This definition is frequently framed in the context of altruism, which is a situation where an actor provides a benefit to another individual at a cost to the actor (Fober & Smead, 2016). These definitions of spite and altruism are consistent with the biological view of the four social behaviors (e.g., spite, altruism, mutual benefit, and selfishness), where every interaction between an actor and recipient is framed in its overall impact on the actor and recipient (Gardner & West, 2006). The remaining two social behaviors in this typology are mutual benefit, where both the actor and recipient benefit from interaction, and selfishness, where the actor benefits from the interaction while the recipient does not (Gardner & West, 2006). This typology is useful in terms of the describing and classifying spite and

other behaviors that various organisms engage in within their natural environment; for example, if bacteria find that they are unable to infect their host, they will engage in “spiteful” behaviors as they explode in a shower of antibacterial toxins to kill their competitors while killing themselves in the process (Gardner & West, 2006).

This typology is very inflexible and is not suited for the complex relationships that humans may have with other humans. However, this is not to say that this definition is exclusive to the field of evolutionary biology. Since 2014, an influx of psychological literature on spite has also defined spite as requiring for an actor to take upon a cost in order to harm another individual (Marcus et al., 2014). The driving article in this renewed interest in spite specifically mentions that adding the requirement of self-harm is advantageous as it helps distinguish spite from other aggressive, hostile, or sadistic behaviors (Marcus et al., 2014). However, not every human interaction results in costs for either party, and there may be interactions where one party suffers a loss while the other party neither gains nor loses anything.

Spite without Self-Harm

Kimbrough and Reiss (2012) craft a less restrictive definition of spite, stating that spite only involves harming another individual while providing no immediate benefit to the spiteful actor. As economists, Kimbrough and Reiss (2012) frame this definition of spite in the context of auctions, where a spiteful actor can willingly increase the cost of an item during bidding, with no intention or

desire to win the item. Vindictiveness is still present within this example and is compatible with the earlier mentioned broad definition of spite.

In addition, Hamilton (1970; 1971) proposes that spite should be more prevalent in cases where actors have the ability to harm others with little to no cost to themselves. Situations like these have been identified in nature, where non-reproductive, eusocial insects such as ants engage in acts that can be considered spiteful (Foster, Wenseleers, & Ratnieks, 2001). One such act is green beard queen killing, where worker fire ants that carry a certain allele will actively attempt to kill queens in their colony that lack that allele while not harming queens that carry the allele (Foster, Wenseleers, & Ratnieks, 2011). As fire ant workers are sterile and have no ability to pass on their own genes, their action provides no direct benefits or disadvantages to them, thus making it a spiteful act (Foster, Wenseleers, & Ratnieks, 2011).

Levin (2014) defines spite in the context of public goods and presents it as the opposite of prosocial behaviors. Levin defines prosocial behaviors as actions that have been taken because they benefit others, while spiteful behaviors are actions that have been taken because they explicitly harm others. However, Levin also states that explanations as to why humans engage in spiteful behaviors should remain speculative until further research is conducted.

Jensen (2010) incorporates literature from the fields of evolutionary biology, psychology, philosophy, and economics in. His review delineates two distinct but directly related constructs, which are punishment and spite, and

discusses both in terms of “functional” and “psychological, where the term “functional” refers to the immediate consequences for an actor or recipient, while “psychological” refers to psychological mechanisms, such as intent and motivations (Jensen, 2010). Jensen notes that punishment and spite are similar constructs, where both deal with the imposition of costs on another individual. However, Jensen (2010) differentiates the two by stating that punishment typically has delayed benefits for the punisher, while in spite, the punishment is the benefit itself.

Constructing a Clear Spite Construct

After having covered the available literature, it is clear that many of the authors agree on the idea that spite involves harming another individual. However, a lack of consensus on other details of spite muddy its conceptualization. By taking the reviewed articles into consideration, I posit the following definition: spite describes a desire to harm or punish another individual vindictively. By extension, spitefulness describes how willing an individual is in participating in behaviors that harm or punish other individuals. Spite requires the participation of two parties at minimum, where one party acts or engages in the spiteful behavior, while the other party is the target of the spiteful behavior. The ultimate goal of spite is to enact harm on a target. Any outcomes that may result from the process of attempting to harm others has no bearing on those actions being considered spiteful.

Spite as a Bidirectional Relationship

Because spite requires the presence of at minimum two parties, social interactions and the directionality of behaviors are relevant in its discussion. Spitefulness can arise in a myriad of social situations, which includes scenarios such as sabotage (e.g., bacteria realizing that they will be unable to spread their bacteria, thus they kill any bacteria around them [Gardner & West, 2006]), rejection of inequity (e.g. depriving a target of a better reward when an actor has a lesser reward [McAuliffe, Blanke, & Warneken, 2014]), retaliation for passed transgressions (e.g. snubbing a co-worker after being snubbed by them previously [Marcus, Mercer, Zeigler-Hill, & Norris, 2014]), or possibly even a simple desire to see others suffer. The former three social situations lend themselves to be explained by social paradigms, such as the social exchange theory (Cropanzano & Mitchell, 2005). However, the latter social situation cannot be explained using social paradigms as it may be more reflective of sociopathy than a relational exchange (Marcus et al., 2014).

The social exchange theory describes the rules and norms of exchange that arise as a result of interactions between individuals, one of which being the concept of reciprocity (Cropanzano & Mitchell, 2005). Reciprocity essentially describes a bidirectional transaction, where one party offers something and will receive something in return from the other party (Cropanzano & Mitchell, 2005). This transaction can be either positive or negative, where an individual will return positive treatment for positive treatment and vice versa (Cropanzano & Mitchell,

2005). A major stipulation of the norm of reciprocity is that the returns one party gives another should be roughly equal, depending on the perceptions of the actors (Gouldner, 1960). Specifically, the returns can be heteromorphic in the sense that what is being exchanged is not concretely similar but are perceived to be equal in value (Gouldner, 1960). The exchanges may also be homeomorphic in the sense that what is being exchanged is concretely similar in the sense that what will be exchanged is similar and that the circumstances under which the exchanges occur are similar (Gouldner, 1960). Historically, negative reciprocity is thought to occur mainly in homeomorphic exchanges, such that actions that have caused pain to one actor are returned with equal actions that cause pain towards the other actor (Gouldner, 1960).

I propose that spite is caused by an actor perceiving that the norm of reciprocity entitles them to retaliation. In these cases, actors believe that harming their target will achieve a fair equilibrium. However, it is important to note that engagement in spite can possibly result in an actor being placed in a relative advantageous or disadvantageous position. As spite only intends to harm targets, the outcomes of spiteful behavior should have no impact in whether or not to describe a behavior as spiteful. Thus, I posit the following hypotheses:

Hypothesis 1: An individual's belief in the importance of negative reciprocity will be positively related to spitefulness. The coefficient for the relationship between negative reciprocity beliefs and trait spitefulness will be

positive. Specifically, when negative reciprocity beliefs are strong, individuals will be more likely to exhibit trait spitefulness.

Hypothesis 2: *An individual's belief in the importance of negative reciprocity will be positively related to self-reported engagement in spiteful behaviors. The coefficient for the relationship between negative reciprocity beliefs and self-reported engagement in spiteful behaviors will be positive. Specifically, when negative reciprocity beliefs are strong, individuals will be more likely to report engagement in spiteful behaviors.*

Spite as a Cognitive Process

It is also important to note that spite is a planned behavior. This idea is most prominently seen in the behavioral economics literature, where Kimbrough and Reiss (2012) make a distinction between the observed harm in a situation and the maximum possible harm that an actor could have undertaken. This distinction comes with three additional suppositions that must be considered when an individual engages in spite, which are: 1) the individual must be aware that they want to harm a recipient, 2) the actor must consider the resources they have available that enables them to be spiteful, and 3) the actor must consider exactly how spiteful they will be (Kimbrough & Reiss, 2012). With these suppositions, spite and when people will be spiteful can be conceptualized using both Ajzen's (1991) Theory of Planned Behavior and Vrooms (1964) Expectancy Theory.

In the context of Vrooms (1964) Expectancy Theory, an actor who chooses to engage in spite can be said to have made a conscious decision to do so in order to maximize pleasure to themselves while also considering the available alternatives. In particular, the actor must have had considered the extent to which their spiteful behavior will result in the desired amount of harm, which is known as an actor's expectancy towards their efforts (Vroom, 1964). Additionally, the actor must consider how likely they are able to successfully perform their spiteful behavior, and if performing well will result in their desired outcome (Vroom, 1964). Finally, the actor must consider how much value they place on the outcome of their spiteful behavior, which is known as valence (Vroom, 1964). Thus, we posit the following hypotheses:

Hypothesis 3: Trait spitefulness will be positively related to self-reported engagement in spite behaviors, moderated by the expectancy held by the respondent. The coefficient for the relationship between trait spitefulness and self-reported engagement in spiteful behaviors will be positive, with respondent expectancy serving as a mediating variable. Specifically, when trait spitefulness is high and when it is perceived that acting in a spiteful manner will result in the desired harm, individuals will be more likely to engage in actual spiteful behaviors.

In context of Ajzen's (1991) Theory of Planned Behavior, behavioral intentions that individuals have will be influenced by their attitudes towards the behavior, the subjective norms they hold, and the actors perceived behavioral

control. Specifically, the actors attitudes towards engaging in spite will be determined by their beliefs towards the behavior, where their beliefs describe their own evaluations on the likelihood that their behavior will produce their intended result (e.g. engaging in a spiteful behavior will result in harm towards my target) (Ajzen, 1991). In addition, actors will consider the social norms in their decision to engage in the behavior, such that if it is considered socially acceptable to engage in a spiteful behavior, the actor will be more inclined to engage in it (Ajzen, 1991). Finally, an actor will consider the ease of engaging in a spiteful behavior, such that an actor who believes they have the control and ability to engage in spite will be more likely to engage in it (Ajzen, 1991). Thus, we propose:

Hypothesis 4: Spitefulness will be positively related to self-reported engagement in spite behaviors, moderated by the respondent's perceptions of spites social acceptability. The coefficient for the relationship between trait spitefulness and self-reported engagement in spite will be positive, with perceptions of spites social acceptability serving as a mediating variable. Specifically, when trait spitefulness is high, and when it is perceived as socially acceptable to engage in spiteful or retaliatory acts, individuals will be more likely to engage in actual spiteful behaviors.

Differentiating Spite from Other Related Constructs

Spite at its core is a construct that describes behaviors taken with punitive sentiment. Various other constructs exist in the contemporary literature that

describe similar behaviors, of which include: revenge (Bobocel, 2013), various forms of aggression (Marsee et al., 2011), bullying (Einarsen, 1999), counter-productive work behaviors (CWB's; Gruys & Sackett, 2003), and workplace incivility (Cortina, Magley, Williams, & Langhout, 2001). While overlap exists between these constructs and spitefulness, spitefulness is a conceptually distinct but related construct that can be differentiated by process and intent.

Revenge

Revenge is defined as actions that are taken in response to a perceived wrongdoing by another individual that are intended to harm the individual deemed responsible (Bobocel, 2013). The concept of revenge is heavily tied to the perceptions of justice and self-concern by individuals, such that employee perceptions of justice in relation to their levels of self-concern within their workplace predict work attitudes and future behavior (Bobocel, 2013). Specifically, individuals who are self-concerned rather than other-oriented will be more likely to engage in defensive revenge behavior against their organization when they perceive injustice (Bobocel, 2013). Perceptions of justice are a way to describe reciprocity within a workplace, where being treated unfairly by an organization represents a failure on behalf of the organization to meet reciprocity norms (Bobocel, 2013; Cropanzano & Mitchell, 2005). As our definition of spite requires that for an action to be spiteful, it must be motivated by norms of exchange being broken rather than by mere whim. Thus, revenge can be said to be an essential component of the larger spitefulness construct. However, it is

important to note that spitefulness only entails a specific type of revenge, where an individual is only motivated to harm their transgressor, rather than to correct an issue (Bobocel, 2013; Jensen, 2010). Thus, we posit:

Hypothesis 5: *Revenge will be positively related to trait spitefulness. The coefficient for the relationship between revenge and trait spitefulness will be positive. Specifically, when vengefulness is high, individuals will be more likely to exhibit trait spitefulness.*

Hypothesis 6: *Revenge will be positively related to engagement in spiteful behaviors. The coefficient between revenge and self-reported engagement in spiteful behaviors will be positive. Specifically, when vengefulness is high, individuals will be more likely to engage in spiteful behaviors.*

Pure, Reactive, and Instrumental Aggression

Spite can also be considered a form of aggression, as it is defined broadly as the “intent to harm” (Marsee et al., 2011). Aggressive behaviors are classified as either overt or relational, such that overt aggression entails harming an individual through direct physical or verbal means, which includes hitting, pushing, or threatening (Marsee et al., 2011). In contrast, relational aggression entails harming others by damaging relationships, friendships, feelings of acceptance or inclusion in the work group (Marsee et al., 2011). Aggression also has various functions, such as “pure aggression”, which describes aggression utilized for no motive other than the acting individual being inclined to engaging

into aggressive behaviors without provocation (Marsee et al., 2011). In contrast, “reactive aggression” describes aggression that has been utilized as a response to provocation or threats, and “instrumental aggression” describes aggression that is utilized in order to obtain personal gain or to achieve dominance over others (Marsee et al., 2011). It is important to note that the constructs of reactive and instrumental aggression are similar to the constructs of reactive and proactive aggression proposed by Bettencourt et al. (2006).

According to our developed definition of spite, spiteful behaviors can possibly be either overt or relational, as we posit no requirements for how the spiteful behavior is carried out if it is done with the intent to harm. However, spite cannot be considered a form of “pure aggression”, as we posit that spite occurs due to breakdowns in reciprocity. Likewise, spite cannot be considered a form of “instrumental aggression”, as there is no ulterior motive to spite other than to harm. Thus, spite can be best considered a form of “reactive aggression”. Based off this, we posit the following hypotheses:

Hypothesis 7: *Trait spitefulness will not be related to instrumental/proactive aggression. The coefficient between trait spitefulness and instrumental/proactive aggression will not be statistically significant. Specifically, trait spitefulness and instrumental/proactive aggression will have no bearing on each other.*

Hypothesis 8: *Trait spitefulness will be positively related to reactive aggression. The coefficient between trait spitefulness and reactive aggression*

will be positive. Specifically, when individuals are high in reactive aggressiveness, they will be more likely to exhibit trait spitefulness.

Impulsive Aggression and Premeditated Aggression

Impulsive aggressive behaviors are aggressive acts that are carried out during outbursts where individuals lose control of their behavior (Helfitz-Sinville & Stanford, 2014). As a construct, impulsive aggressive behaviors are similar to the previously discussed “pure aggression” construct (Marsee et al., 2011). In contrast, premeditated aggressive behaviors are aggressive acts that are carried out in a controlled and goal-directed-manner (Helfitz-Sinville & Stanford, 2013). It is thought that individuals who engage in premeditated aggression do so when there is a possibility of them being challenged or threatened (Helfritz-Sinville & Stanford, 2014). As we have defined spite to have a cognitive component where individuals evaluate the expectancy, instrumentality, and social acceptability of their potential retaliation, we posit the following hypotheses:

Hypothesis 9: *Impulsive aggression will be negatively correlated with trait spitefulness. The coefficient for the relationship between impulsive aggression and trait spitefulness will be negative. Specifically, when individuals are high in impulsive aggression, the less likely they will be to exhibit trait spitefulness.*

Hypothesis 10: *Premeditated aggression will be positively related to trait spitefulness. The coefficient for the relationship between premediated aggression and trait spitefulness will be positive. Specifically, when individuals are high in premeditated aggression, they more likely they will be to exhibit trait spitefulness.*

Hostile Attribution Bias and Negative Reciprocity

Hostile attribution bias (HAB) describes the tendency for an individual to interpret the intent of other individuals as hostile despite a lack of environmental cues that would indicate clear intent (Helfritz-Sinville & Stanford, 2014). HAB is present in individuals who engage in impulsive aggressive behaviors and premeditated aggressive behaviors (Helfritz-Sinville & Stanford, 2013). HAB is thought to be present in both groups, regardless if hostile intent from their target party has not been clearly established (Helfritz-Sinville & Stanford, 2013). A phenomenon also exists in ultimatum games where individuals who attribute hostility from others after having received an unfair offer will react with anger once they have received information that confirms their initial suspicions of negative intent (Pilluta & Murnighan, 1996). It has also been found that individuals who harbor strong negative reciprocity beliefs and attribute hostile intent to the actions of other individuals are the most likely to retaliate against their perceived aggressors (Wu, Zhang, Chiu, Kwan, & He, 2013). Based off this information, we propose the following hypotheses:

Hypothesis 11: HAB will be positively related to trait spitefulness. The coefficient for the relationship between HAB and trait spitefulness will be positive. Specifically, the more an individual exhibits hostile attribution bias, the more likely they will be to exhibit trait spitefulness.

Other Related Constructs

Selfishness

Other constructs exist that are tangentially related to spitefulness but either can be assessed using our already included variables, may not have an existing measure to include in our study, or may not be related upon closer examination due to differences in motivation. One such variable is selfishness, which is described as the inordinate focus on one's own welfare that can come at the expense of the well-being of others (Raine & Uh, 2018). Selfishness is said to have three forms (i.e., adaptive, egocentric, and pathological) that vary depending on the amount of consideration that one places on other's well-being and the functions of the selfish behavior (Raine & Uh, 2018). Adaptive selfishness describes selfish behaviors that are taken by an actor out of care for themselves, for the purposes of benefitting others, such as friends and family (Raine & Uh, 2018). Egocentric selfishness describes selfish behaviors that are taken out of a single-minded focus on the self, with no consideration of the positive or negative impacts that a selfish act may have on others (Raine & Uh, 2018). Pathological selfishness describes behaviors in which individuals are intentionally harmed for the purposes of self-gain (Raine & Uh, 2018). Our definition of spite posits that individuals engage in spite for the sole purpose of harming their target, and positive or negative outcomes have no consideration on if a behavior is considered spiteful. Accordingly, egocentric selfishness appears to be the most related to spitefulness, as spiteful acts can be done to satisfy an

actors single-minded need for revenge. However, rather than include a measure of the three types of selfishness in our study, we believe that the same dimensions of self-concern can be adequately assessed using general personality variables, such as conscientiousness and agreeableness, as they can reflect the planning-oriented and tactful nature of individuals (John & Srivastava, 1999). These personality traits will be discussed further in a later section.

Bullying

Bullying consists of systematically directed hostile and aggressive behaviors towards a target (Einarsen, 1999). These behaviors are done with the intent to stigmatize and victimize the recipient of behaviors, and clearly cause humiliation, offence, and distress to an individual (Einarsen, 1999). Bullying behaviors are also unwanted by the targets and are often directed towards individuals whom have no means of retaliating (Einarsen, 1999). Spiteful actions are done with the planned intent to harm, which can result in the humiliation, offence, and distress of a target (Jensen, 2010). However, there is no requirement for spiteful behavior to be repeated and enduring across time, or for spiteful actions to occur specifically towards individuals that have no means of retaliating. Rather, spiteful behaviors are often done in retaliation to perceived wrongs or unfair offers by other individuals (Marcus et al., 2014). Additionally, our refined definition of spite posits that individuals only engage in spite when

reciprocity norms have been broken, thus differentiating spite from the larger bullying construct.

Counter-Productive Work Behaviors

CWB's are any intentional behaviors taken on by an organizational member that go against the interests of the organization (Gruys & Sackett, 2003). CWB's explicitly focus on the behavior taken by an actor rather than the consequences or amount of harm done by the behavior (Gruys & Sackett, 2003). Spite in comparison discusses the behaviors that individuals will undertake, the resulting harm, and what may motivate an individual to engage in that behavior. While it can be said that an individual may engage in a CWB as a result of their spiteful intentions, spite is a much larger and conceptually distinct construct which we intend to measure using a newly developed self-report of engagement in spite measure that will include modified items typically seen in CWB measures.

Workplace Incivility

Workplace incivility is defined as low-intensity deviant behavior with ambiguous intent to harm a target, which is in violation of workplace norms for mutual respect (Cortina et al., 2001). In workplace incivility, individuals may not intend to do harm or may not know that they are harming their target (Pearson, Andersson, & Porath, 2005). In contrast, our definition of spite posits that it is a conscious behavior with the clear intent to harm. In addition, workplace incivility is seen as an interactive process rather than a single static event, where spite is

a singular event that may be influenced by situational and historical factors (Pearson et al., 2005). While a spiteful individual may engage in uncivil behaviors, spite is conceptually distinct from the larger workplace incivility construct. Likewise, the only existing measures of workplace incivility are for the experience of it, rather than the perpetration of those behaviors. However, as workplace incivility is a harming behavior, we will include modified items from workplace incivility scales that are written from a perpetration standpoint in our newly developed self-report of engagement in spite measure.

Personality

Big Five Personality Traits

With regards to general personality functions, it is thought that antagonistic aspects of personality have positive associations with spitefulness (Ewing, Zeigler-Hill, & Vonk, 2016). Anger is thought to arise in situations where individuals are able to attribute intentionality behind being given an unfair offer (Pillutla & Murnighan, 1996). Other previous studies have found that spitefulness as defined by Marcus et al. (2014) is negatively correlated to personality traits such as extraversion, agreeableness, conscientiousness, emotionality, honest-humility, and openness to experience, but positively correlated with neuroticism (Ewing et al., 2016; Marcus et al., 2014; Zeigler-Hill, Noser, Roof, Vonk, & Marcus, 2015). While our refined definition of spite distinguishes itself from the Marcus et al. (2014) definition by not requiring self-harm, we predict that many of these relationships will still be present in the current study. In addition, while

these basic personality traits were measured in the previously mentioned studies through the use of the HEXACO-60 personality inventory (Ashton & Lee, 2009), we expect that these relationships will still be present when using the Big Five Inventory (BFI; John, Donahue, & Kentle, 1991). However, we posit that the BFI traits of agreeableness and conscientiousness will be the most predictive of spitefulness as their HEXACO equivalents had the highest negative correlations in previous studies (Marcus et al., 2014). Thus, we propose the following hypotheses:

Hypothesis 12: *Agreeableness will be negatively related to trait spitefulness. The coefficient for the relationship between agreeableness and trait spitefulness will be negative. Specifically, the more agreeable an individual is, the less likely they will be to exhibit trait spitefulness.*

Hypothesis 13: *Conscientiousness will be negatively related to trait spitefulness. The coefficient for the relationship between conscientiousness and trait spitefulness will be negative. Specifically, the more conscientious an individual is, the less likely they will be to exhibit trait spitefulness.*

Hypothesis 14: *Agreeableness will be negatively related to engagement in spiteful behaviors. The coefficient for the relationship between agreeableness and engagement in spiteful behaviors will be negative. Specifically, the more agreeable an individual is, the less likely they will be to engage in spiteful behaviors.*

Hypothesis 15: *Conscientiousness will be negatively related to engagement in spiteful behaviors. The coefficient for the relationship between conscientiousness and engagement in spiteful behaviors will be negative. Specifically, the more agreeable an individual is, the less likely they will be to engage in spiteful behaviors.*

Type A and Dominant Personalities

Previous research has shown that agreeableness and neuroticism were the most predictive of trait aggressiveness, as it is negatively correlated with agreeableness and positively correlated with neuroticism (Bettencort et al., 2006). This association is notable in individuals with Type A personalities, as these individuals strive for achieving personal goals and being competent and in-control of their surroundings (Bettencort et al., 2006). When Type A individuals are provoked, such as by being placed in a frustrating situation that challenges their competence or being physically threatened, they are prone to express aggressive behavior (Bettencort et al., 2006). Similar outcomes exist in individuals who exhibit trait dominance, which describes a tendency to prefer high dominance positions in social situations (Mast & Hall, 2004). Individuals with this orientation that are placed in situations where their dominance is challenged will also feel a similar sense of frustration (Mast & Hall, 2004). As both describe a similar personality trait, we will include a measure of trait dominance in our study as it focuses on social interactions. Thus, we posit the following hypotheses:

Hypothesis 16: *Trait dominance will be positively related to trait spitefulness. The coefficient for the relationship between trait dominance and trait spitefulness will be positive. Specifically, the more trait dominance an individual exhibits, the more likely they will exhibit trait spitefulness.*

Hypothesis 17: *Trait dominance will be positively related to engagement in spiteful behaviors. The coefficient for the relationship between trait dominance and engagement in spiteful behaviors will be positive. Specifically, the more trait dominance an individual exhibits, the more likely they will engage in spiteful behaviors.*

Measurement of Spite

Historically, spite has been measured in experimental settings in conditions where individuals only have two possible actions, to engage or not engage in spite (Forber & Smead, 2014). These settings are known as ultimatum games, and usually pit two subjects against each other in a competition for resources (Forber & Smead, 2014; McAuliffe, Blake, & Warneken, 2014; Kimbrough & Reiss, 2012). In these settings, individuals are typically presented various offers either by the other participant or a third-party and are given the option to accept or reject the offer (Forber & Smead, 2014). Offers will vary on the degree of fairness, such that one party may receive a higher amount of resources than the other party (Forber & Smead, 2014). In cases where unfair offers are presented, the recipient party is typically expected to reject the offer which denies a payout to both parties, which is considered a spiteful action as it

was done primarily to harm the other party (Forber & Smead, 2014; McAuliffe, Blake, & Warneken, 2014).

Another variation of this experiment pits participants against each other in an online auction setting where participants attempt to purchase single-unit items (Kimbrough & Reiss, 2012). Spite is said to arise in this situation when an actor realizes they cannot win an item, but choose to bid in order to raise the final purchase price for their opponents (Kimbrough & Reiss, 2012). Kimbrough and Reiss (2012) noted that the experiment demonstrated that individuals are typically either not spiteful at all or prefer to always be as spiteful as possible. While not explored in the article, the previous finding alludes to the possibility that personality impacts whether individuals consistently engage in spite or not (Kimbrough & Reiss, 2013).

Measurement of Spitefulness

Marcus et al. (2014) developed and validated a 17-item Spitefulness Scale intended to measure the willingness of individuals to engage in behaviors that would harm others. Items within the scale depict situations where the respondent engages in a behavior or expresses a preference for a behavior that would enact harm on another individual, but would result in harm to themselves as well (Marcus et al., 2014). This scale distinguishes itself from aggression scales by including the requirement for harm to oneself (Marcus et al., 2014). The harm is not limited to one type, as the harm may be social, financial, physical, or

inconvenience, and some items were more overt in the harm caused while others were more subtle (Marcus et al., 2014).

The scale has been used in follow-up papers dedicated to describing spite in terms of the DSM-5 (Zeigler-Hill & Noser, 2018), finding correlates between spite and humor styles (Vrabel, Zeigler-Hill, & Shango, 2017), and describing the relationship between spite and deficits in the theory of mind (Ewing, Zeigler-Hill, & Vonk). However, the scale was composed with the assumption that for behavior to be classified as spiteful, that behavior must include self-harm (Marcus et al., 2014).

Our goal is to construct a psychometrically sound measure of spitefulness that more accurately reflects our refined definition of spite as a retaliatory, planned behavior motivated only by the desire to harm another individual. The harm caused by these behaviors can take many forms, but we will not necessarily limit the classification of an outwardly directed harmful behavior as spite by requiring these behaviors to cause self-harm. By extension, we will draw a distinction between being spiteful and tangible engagement in spite. Specifically, an individual can wish and plan to do harm upon another individual but may not engage in that harm due to personality and situational factors. To best assess the multifaceted nature of spitefulness, the newly constructed measure will be presented in the form of a situational judgement questionnaire that will present respondents with a vignette that describes an interaction between two individuals where one individual is harmed in some form.

Respondents will be asked to picture themselves in the vignette and indicate their ideal response and realistic response to the situation posed, along with how much they believe the other individual depicted in the vignette would deserve their ideal response, and their expectancy beliefs towards their ideal response.

Summary of Proposed Relationships

There are three overarching relationships proposed throughout this paper: the relationship between convergent/divergent constructs and trait spitefulness, the relationship between predictive constructs and engagement in spiteful behaviors, and the relationship between trait spitefulness and engagement in spiteful behaviors. Simplified path models will be presented, with the full path models with variable names and final regression coefficients available in the appendix.

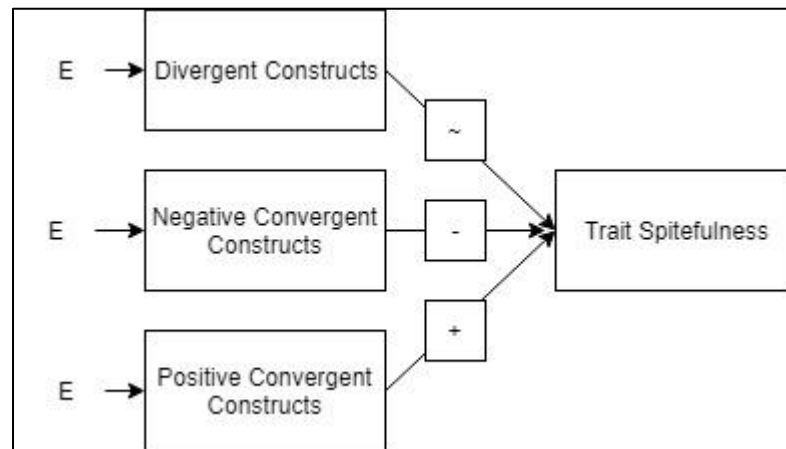


Figure 1. Convergent and Divergent Constructs and Trait Spitefulness. “+” denotes positive relationships, “-“ denotes negative relationships, and “~” denotes no relationships.

Broadly speaking, constructs such as negative reciprocity beliefs and revenge beliefs are proposed to be positively related to trait spitefulness as believing that negative acts should be reciprocated with negative acts and that revenge is acceptable should be indicative of a spiteful individual.

Instrumental/Proactive aggression is proposed to not be related to spite, as these indicate behaviors done for self-gain rather than being motivated by harm or retribution alone. Reactive and premeditated aggression are proposed to be positively related to trait spitefulness as these are behaviors done in reaction to harms and planned. Impulsive aggression is proposed to be negatively related to trait spitefulness, as spiteful behaviors are proposed to be planned in nature.

Hostile attribution bias is proposed to be positively related, as individuals who are more likely to assign hostile intent to actions of others may be more confident in their negative responses to said behavior.

The personality factors of agreeableness and conscientiousness are proposed to be negatively related to trait spitefulness as being high in these traits may indicate an individual who is more friendly and willing to work through received harm without aggression. In contrast, having trait dominance is proposed to be positively related to spite as individuals who are high in this trait may be more anxious and more prone to experience feelings such as anger. See Appendix A for full model.

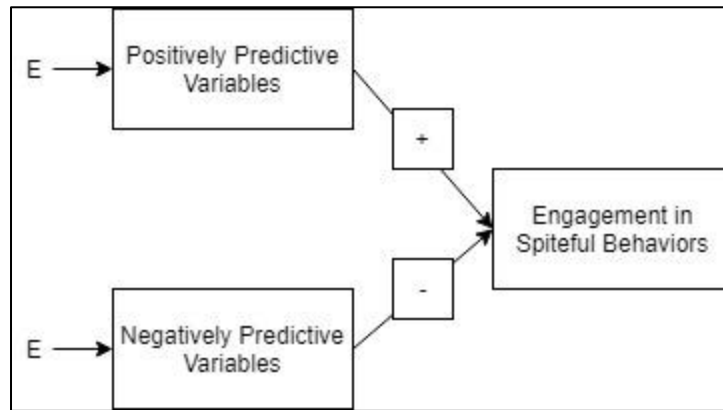


Figure 2. Predictive Constructs and Engagement in Spiteful Behaviors. “+” denotes positive relationships, “-“ denotes negative relationships, and “~” denotes no relationships.

The relationships between the constructs in the previous model and spitefulness are proposed to be the same in this model with engagement in spiteful behaviors.

See Appendix A for full model.

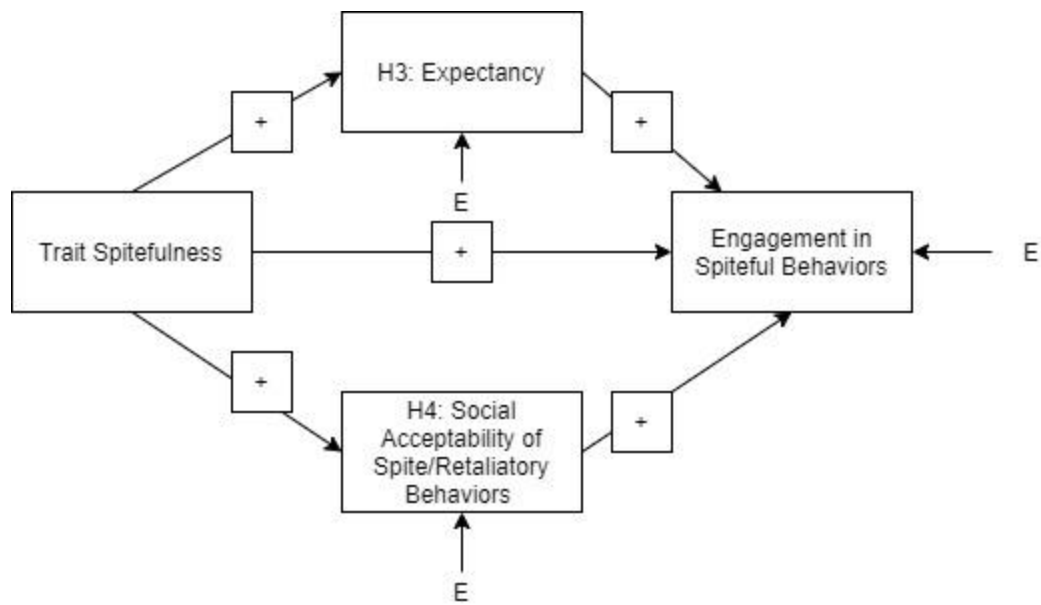


Figure 3. Trait Spitefulness and Engagement in Spiteful Behaviors. “+” denotes positive relationships.

Trait spitefulness is proposed to predict engagement in spiteful behaviors, mediated by expectancy and social acceptability. Specifically, when individuals perceive themselves as capable of committing spiteful behaviors successfully, these individuals will be more likely to engage in spite. If individuals hold spiteful sentiment, but lack that confidence in their capability, these individuals will be more likely to not engage in spite. Likewise, if individuals believe that spite is socially acceptable, they will be more likely to engagement in spite when they are spiteful. See Appendix A for complete model.

CHAPTER TWO: METHODS

Overview of the Study

A two-part study was conducted that consisted of providing the newly created situational judgement test and spiteful behavior self-report to subject matter experts (SME), along with providing the items to a sample of respondents simultaneously. Specifically, Study 1 entailed giving both measures to a sample of respondents, along with a battery of other measures to evaluate the divergent, convergent, and construct validity of the measures. Study 2 entailed providing the newly created situational judgement test and spiteful behavior self-report to SME's who judged if the posed responses to the situations and the actions listed in the self-report represent spite as proposed in the study.

Study 1: Exploratory Factor Analysis and Scale Validity

Participants. University students ($N = 156$) who were currently or have been previously employed were contacted to participate in the survey. Participants were offered two points of extra credit for their participation in the study. The sample was largely female ($N = 150$) and the average of participants was 25.47 years old. Participants were predominately from Hispanic or Latinx backgrounds ($N = 116$). All participants were treated in accordance with the Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 2010). See Table 1 for complete breakdown on demographic characteristics of the sample.

Table 1. Demographic Characteristics of the Participants (N=156).

<i>Variable</i>	%
Age	
19-29	85.9%
30-39	7.5%
40-49	2.4%
50-59	3.8%
Gender	
Male	3.2%
Female	96.2%
Other	0.6%
Highest Level of Education Completed	
Some high school	0.6%
High School Graduate or equivalent	9.6%
Some college credit, no degree	30.8%
Associate degree	55.1%
Bachelor's degree	3.8%
Ethnicity	
White	15.4%
Hispanic or Latinx	74.4%
Black or African American	4.5%
Asian	1.9%
Native Hawaiian or Pacific Islander	0.6%
Other	3.2%
Employment Status	
Employed, working 1 - 20 hours per week	41.0%
Employed, working 21 - 40 hours per week	46.2%
Employed, working 41 or more hours per week	5.1%
Not employed, looking for work	2.6%
Not employed, not looking for work	3.8%
Disabled, not able to work	1.3%
Time Employed	
1 - 6 months.	2.6%
7 - 12 months.	5.8%
1 - 2 years.	12.8%
2 - 4 years.	28.2%
Over 5 years.	44.9%
Not currently employed.	5.8%

Table 1. Demographic Characteristics of the Participants Continued.

<i>Variable</i>	%
Time Employed at Current Employer	
1 - 6 months.	12.8%
7 - 12 months.	10.3%
1 - 2 years.	25.0%
2 - 4 years.	31.4%
Over 4 years.	13.5%
Not currently employed.	7.1%
Job Sector	
Education, Training, and Library Occupations	20.9%
Food Preparation and Serving Related Occupations	17.0%
Other (please specify):	15.0%
Sales and Related Occupations	13.7%
Office and Administrative Support Occupations	9.2%
Healthcare Support Occupations	5.2%
Personal Care and Service Occupations	3.3%
Healthcare Practitioners and Technical Occupations	2.6%
Community and Social Service Occupations	2.6%
Transportation and Materials Moving Occupations	2.6%
Management Occupations	2.0%
Production Occupations	1.3%
Building and Grounds Cleaning and Maintenance Occupations	1.3%
Life, Physical, and Social Science Occupations	1.3%
Farming, Fishing, and Forestry Occupations	0.7%
Legal Occupations	0.7%
Business and Financial Operations Occupations	0.7%

Materials. The materials consisted of an online survey which allowed anonymous participation. Participants were provided a consent form when beginning the survey. After completion of the survey, each participant was presented with a debriefing sheet that explained the purpose of the study and provided contact information if the participants had any questions. Please refer to Table 2 for scale descriptive statistics, Table 3 for scale Cronbach's Alpha's, and Table 4 for scale intercorrelations.

Table 2. Scale Descriptive Statistics.

	<i>Mean</i>	<i>Std. Deviation</i>	<i>Min.</i>	<i>Max.</i>
1. Agreeableness	4.15	0.58	2.33	5.00
2. Conscientiousness	3.91	0.59	2.11	5.00
3. Hostile Attribution Bias	2.03	0.43	1.00	3.14
4. Impulsive Aggression	2.73	0.67	1.00	4.64
5. Premeditated Aggression	2.19	0.70	1.00	3.93
6. Normative Aggression Beliefs	1.23	0.36	1.00	2.88
7. Negative Reciprocity Beliefs	2.91	1.14	1.00	6.64
8. Original Spitefulness Scale	1.73	0.48	1.00	3.71
9. Reactive Aggression	1.45	0.25	1.00	2.18
10. Proactive Aggression	1.32	0.24	1.00	2.33
11. Spitefulness Self-Report	1.32	0.33	1.00	2.59
12. Realistic Spitefulness	1.63	0.39	1.00	2.80
13. Idealistic Spitefulness	1.64	0.29	1.00	2.40
14. Vengefulness	1.94	0.68	1.00	4.30
15. Trait Dominance	1.37	0.16	1.02	1.90

Note: Sample sizes ranged from 155 to 156

Table 3. Scale Cronbach's Alpha's.

	<i>No. of Items</i>	<i>Cronbach's Alpha</i>
1. Big Five Inventory (Reduced)	18	0.81
2. Hostile Attribution Bias Scale	14	0.82
3. Impulsive-Premeditated Aggression Scale	25	0.89
4. Normative Beliefs about Aggression Scale	20	0.89
5. Negative Reciprocity Beliefs Scale	14	0.91
6. Original Spitefulness Scale	17	0.81
7. Reactive-Proactive Questionnaire	23	0.85
8. Spitefulness Self-Report	22	0.87
9. Realistic Spitefulness	5	0.60
10. Idealistic Spitefulness	5	0.35
11. Vengeance Scale Shortened	10	0.88
12. Trait Dominance	48	0.85

Table 4. Scale Means, Standard Deviations, Intercorrelations and Alpha Coefficients.

	Mean	Std. Dev.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. Agreeableness	4.15	0.58	(0.60)														
2. Conscientiousness	3.91	0.59	.472**	(0.71)													
3. Hostile Attribution Bias	2.03	0.43	-0.061	0.053	(0.82)												
4. Impulsive Aggression	2.73	0.67	-0.107	-0.101	0.001	***											
5. Premeditated Aggression	2.19	0.70	-.173*	-0.117	.171*	.522**	***										
6. Normative Aggression Beliefs	1.23	0.36	-.423**	-.192*	0.155	-0.001	.256**	(0.89)									
7. Negative Reciprocity Beliefs	2.91	1.14	-.394**	-0.091	.328**	0.120	.413**	.414**	(0.91)								
8. Original Spitefulness Scale	1.73	0.48	-.474**	-0.150	.328**	.199*	.427**	.397**	.593**	(0.81)							
9. Reactive Aggression	1.45	0.25	-.239**	-0.094	.159*	.392**	.459**	.290**	.473**	.325**	***						
10. Proactive Aggression	1.32	0.24	-.330**	-0.092	.204*	.344**	.471**	.381**	.452**	.424**	.773**	***					
11. Spitefulness Self-Report	1.32	0.33	-.325**	-0.105	.166*	0.149	.317**	.258**	.467**	.501**	.489**	.485**	(0.87)				
12. Realistic Spitefulness	1.63	0.39	-.168*	-0.113	0.148	-0.028	.226**	.221**	.369**	.254**	.302**	.226**	.304**	(0.60)			
13. Idealistic Spitefulness	1.64	0.29	-0.091	-0.085	.223**	-0.027	0.101	0.010	.238**	.226**	0.130	.163*	0.062	.203*	(0.35)		
14. Vengefulness	1.94	0.68	-.460**	-0.134	.242**	0.074	.340**	.425**	.731**	.543**	.329**	.371**	.375**	.159*	0.110	(0.88)	
15. Trait Dominance	1.37	0.16	-0.073	0.039	0.061	-0.038	-0.054	-0.011	-0.031	0.003	-0.040	-0.079	-0.043	0.126	-0.038	0.076	(.085)

Note: *** See Table 3 for overall scale alphas. ** denotes correlation is significant at the 0.01 level (2-tailed). * denotes correlation is significant at the 0.05 level (2-tailed).

Procedure. Respondents were given a link to the questionnaire that included the spitefulness scale and a battery of other relevant measures. When respondents opened the survey, they were presented the consent form. After acknowledging the consent form, respondents took approximately 30-35 minutes to answer free-response and multiple-choice questions. After completion, participants were presented the debriefing screen.

Measures

Spitefulness was measured using the newly drafted situational judgement test created by taking scenarios from the original Spitefulness Scale and expanding upon them. These items depicted a vignette where they were harmed in some way, and respondents were asked to imagine their ideal and realistic response to the situation. Respondents were presented with three choices, which varied from a co-operative response, a neutral response, and a spiteful response, along with a text box where respondents could write out their preferred response if the presented options did not describe a response they would select in either an ideal or realistic context. In these cases, free-written responses were coded as one of the three possible response options based off how closely they resembled one of the options. Respondents were also able to indicate their expectancy beliefs towards their ideal response, along with how strongly the other individual depicted in the vignette deserved their ideal response. The realistic spite items had a Cronbach's alpha of .60 in this analysis, and the idealistic spite items had a Cronbach's alpha of .35.

Spitefulness was also measured using the original Spitefulness Scale (Marcus et al., 2014). The Spitefulness Scale is a 17-item measure that was originally developed to measure spitefulness with items that are consistent with spite defined as a behavior that requires both self-harm and harm to others (Marcus et al., 2014). To validate the scale, Marcus et al. (2014) conducted an EFA to test the IRT assumption of unidimensionality for the originally drafted 31 items, which was met. Through a CFA and on the basis of slope parameters from their IRT model, 17 items were retained, which were found to have high reliability with an estimated ordinal alpha of .94 in a university sample (Marcus et al., 2014). In separate samples of university students and Amazon Mechanical Turk (Mturk) respondents, the measure was found to be positively correlated with aggression ($r = .52, p < .001, r = .58, p < .001$), negatively correlated with guilt-proneness ($r = -.51, p < .001, r = -.48, p < .001$), and positively correlated with Machiavellianism ($r = .47, p < .001, r = .40, p < .001$; Marcus et al., 2014). All items are anchored on a 1 (strongly disagree) to 5 (strongly agree) scale (see Appendix A). In our analyses, the Cronbach's Alpha was .81.

Engagement in Spiteful Behaviors was measured using a newly drafted self-report measure that includes modified items from related scales. Specifically, items from the Counterproductive Work Behavior Checklist (CWB-C; Spector & Bauer, 2010), the Negative Acts Questionnaire-Revised (NAQ-R; Einarsen, Hoel, & Notelaers, 2009), and the Workplace Incivility Scale (Cortina et al., 2001) were utilized for the construction of the measure. Each measure shows reliability in

their original format, with the Cronbach's alphas of each scale being .78, .90, and .89 respectively (Cortina et al., 2001; Einarsen, Hoel, & Notelaers, 2009; Spector & Bauer, 2010). The measure was formatted such that a spiteful action was listed, and the respondent indicated how often they have engaged in this behavior in the previous six months. The items from the CWB-C were modified the least, as the only modification to the original items was the addition of an ending phrase that states "to be spiteful". Items from the NAQ-R and Workplace Incivility Scale were originally written to capture the experience of negative acts and incivility, rather than the perpetration of these acts (Cortina et al., 2001; Einarsen, Hoel, & Notelaers, 2009). Hence, these items were modified to capture the perspective of someone perpetrating these acts to be spiteful. A total of 22-items were included in the initial draft measure and the Cronbach's alpha for the measure in this sample was .87

Proactive and Reactive Aggression was measured using the 23-item Reactive-Proactive Questionnaire (RPQ) (Raine et al., 2006). Two subscales are present in the measure, with 12 items assessing reactive aggression and 11 items assessing proactive aggression (Raine et al., 2006). Both subscales were found to have Cronbach's alpha's over .83 in the initial validation study (Raine et al., 2006). While the RPQ was originally designed to measure aggression in youth and adolescents, but has shown validity in young adult, male, and females samples across time (Cooke, 2016; Gao & Tang, 2013; Goodwin, Sellbom, & Salekin, 2015). The measure was found to be positively correlated with a

Hostility-Aggression Scale ($r = .50, p < .01$), a parent completed Childhood Aggression Scale ($r = .15, p < .01$), and a parent completed Childhood Delinquency Scale ($r = .17, p < .01$) (Raine et al., 2006). All items are anchored on a 0 to 2 scale, where 0 indicates that the respondent has never engaged in the listed behavior, while 2 indicates that the respondent often engages in this behavior (Raine et al., 2006). The Cronbach's alpha for the measure in this sample was .85.

Premeditated and Impulsive Aggression was measured using the Impulsive Premeditated Aggression Scale (IPAS) (Stanford et al., 2003). The IPAS is a 30-item measure that asks respondents to consider their aggressive acts over the previous six months and asks their level of agreement with presented statements (Stanford et al., 2003). A screening question is included that asks if individuals have acted in an aggressive manner in the past 6 months (Stanford et al., 2003). Two subscales are present in the measure which assess PM and IA separately (Stanford et al., 2003). The subscales are not significantly intercorrelated ($r = -.02$), and the Cronbach's alpha for the PM and IA subscales were .82 and .77, respectively. The IA subscale was found to be positively correlated with the Baratt Impulsiveness Scale ($r = .21, p < .05$), the Anger subscale in the Buss-Perry Aggression Questionnaire ($r = .53, p < .01$), and the aggression subscale in the Lifetime History of Aggression measure ($r = .24, p < .05$). The PM subscale was found to be positively correlated with the Baratt Impulsiveness Scale ($r = .38, p < .01$), the hostility subscale in the Buss-Perry

Aggression Questionnaire ($r = .34, p < .01$), and the aggression subscale in the Lifetime History of Aggression measure ($r = .30, p < .01$; Stanford et al., 2003). All items are anchored on a 1 – 5 scale, where 1 indicates strongly disagree and 5 indicates strongly agree. The Cronbach's alpha for the measure in this sample was .89.

Acceptability of Aggression was measured using the Normative Beliefs about Aggression Scale (NOBAGS) (Huesmann, Guerra, Miller, & Zelli, 1998). The NOBAGS is a 20-item scale that assess an individual's perceptions of how acceptable it is to be aggressive in varying conditions where provocation may or may not be present (Huesmann et al., 1998). This measure has been adapted for use in both child and college-age populations, with Cronbach's alpha's of .86 and .90, respectively. All items are scaled from 1 (it's really wrong) to 4 (it's perfectly ok; Huesmann et al., 1998). The Cronbach's alpha for the measure in this sample was .89.

Negative Reciprocity Beliefs was measured using the Negative reciprocity norm measure developed by Eisenberger, Lynch, Aselage, and Rohdieck (2004). The Negative reciprocity norm measure is a 14-item measure that contains statements about how advisable it is to seek retribution for unfavorable treatment (Eisenberger et al., 2004). The measure has a Cronbach's alpha of .92, and been found to be negatively correlated with benevolence ($r = -0.25, p < .01$), positively correlated with malevolence ($r = .48, p < .01$), and positively correlated with dispositional anger ($r = .35, p < .01$; Eisenberger et al.,

2004). All items are scaled from 1 (strongly disagree) to 7 (strongly agree; Eisenberger et al., 2004). The Cronbach's alpha for the measure in this sample .91.

Revenge was measured using a shortened version of the Vengeance Scale originally developed by Stuckless and Goranson (1992). The shortened scale is a 10-item measure that presents respondents with statements on revenge and asks respondents for their level of agreement with those statements (Coelho et al., 2018). In the validation study, the shortened measure was found to have high internal consistency across both British and Brazilian samples (Cronbach's alpha = .88 and Cronbach's alpha = .92; Coelho et al., 2018). The measure was also found to be negatively correlated with agreeableness across both samples ($r = -.25, p < .001$ in the British sample, $r = -.28, p < .001$ in the Brazilian sample), but positively correlated with neuroticism in both samples ($r = .25, p < .001$ in the British sample, $r = .19, p < .01$ in the Brazilian sample; Coelho et al., 2018). All items are scaled from 1 – 5, where 1 indicates strongly disagree, and 5 indicates strongly agree. The Cronbach's alpha for the measure in this sample was .88.

Personality was measured using 17-items from the Big Five Inventory developed by John and Srivastava (1999). The measure assesses 5 aspects of personality, which are openness to experience, conscientiousness, agreeableness, neuroticism, and extraversion (John & Srivastava, 1999). For the purposes of our study, we were only interested in a respondent's

conscientiousness and agreeableness, so only the 17 items meant to assess those two personality traits were used in the present study. Hee (2014) conducted a confirmatory factor analyses of all the subscales within the measure and found that the subscales had evidence of reliability with Cronbach's alpha's of .88 and .90, respectively. All items are anchored on a 1 (strongly disagree) to 5 (strongly agree) scale. The Cronbach's alpha for the combined items in the measure for this sample was .81. When looking at the subscales separately, the agreeableness subscale had a Cronbach's alpha of .60 and the conscientiousness subscale had a Cronbach's alpha of .71.

Hostile Interpretation Bias was measured using the Social information processing-attribution bias questionnaire (SIP-ABQ) developed by Coccaro, Noblett, and McCloskey (2009). This measure presents eight aversive but socially ambiguous actions by provocateurs (Coccaro et al., 2009). For each vignette, respondents are presented four questions that assess direct hostile intent, indirect hostile intent, instrumental nonhostile intent, and neutral or benign intent (Coccaro et al., 2009). Respondents are also presented two items that reflect negative emotional responding such as anger and embarrassment (Coccaro et al., 2009). Both sets of items are measured using a four-point Likert response scale from 1 (not at all likely) to 4 (very likely). The four subscales within the measure had evidence of reliability with Cronbach's alphas of above .76 for each subscale (Coccaro et al., 2009). The Cronbach's alpha for the measure in this sample was .82.

Trait Dominance was measured using the 48-item Hypomanic Personality scale by Eckbald and Chapman (1986). This measure presents general personality statements meant to assess social vitality, excitement, and mood volatility, which are traits strongly linked to dominance (Stanton et al., 2017). For each statement, respondents are asked to indicate how if the presented statements are true or false when applied to themselves (Eckbald & Chapman, 1986). The measure was found to have evidence of reliability with a Cronbach's alpha of .87 (Eckbald & Chapman, 1986). The Cronbach's alpha for the measure in this sample was .85.

Study 2: Spitefulness Scale Feedback

Participants. A total of three subject matter experts who were all university faculty and had at minimum a Master's degree level education were contacted to provide consultative advice on the newly generated items in the situational judgement test and spitefulness scale. These subject matter experts provided their consultative abilities on a volunteer basis and were not compensated for their time. These subject matter experts were free to stop cooperation at any point in this process.

Materials. Subject matter experts (SME) were provided a survey link which directed them to a survey site that housed the refined definition of spite and the proposed items.

Procedure. After recruiting five to ten SME, each were provided a link to the survey site which housed the definition and proposed items. Individuals were

considered as a SME if they have graduate education in a psychology or a related social science field. These individuals preferably have work experience in the mental health field. Recruited SME indicated if the drafted scenarios, possible responses, and actions in the situational judgement test and spite self-report were indicative of spite, somewhat representative of spite, or clearly representative of spite. Items that have been indicated clearly representative by five subject matter experts, or somewhat representative or clearly representative by all subject matter experts were be retained for future analyses. SME were also able to provide any constructive feedback they had on the items, such as changes in wording or response options. The information obtained from SME was used to assist with future refinement of the measures.

CHAPTER THREE: RESULTS

Results: Exploratory Factor Analysis – Trait Spitefulness

The new trait spitefulness scale was created to assess two distinct concepts of spitefulness, which are the spite that individuals would (or would not) realistically engage in, and spite that individuals would ideally engage in. Three principle axis factor analyses were conducted to assess the dimensionality of the of measure, the first analysis being conducted on the items meant to assess realistic spite, the second factor analysis being conducted on the items meant to assess ideal spite, and the final factor analysis being conducted to assess all 10 items together. As the second and third factor analyses yielded unacceptable results, we will be reporting only the first factor analysis in this section. See Appendix C for written results for the second and third factor analyses. Because the final number of factors was not known, the eigenvalue standard was used. Factor solutions with an eigen value higher than 1.0 were retained. To assess the factor loadings of items, a varimax rotation was used in each analysis. For each analysis, small coefficients below .3 were suppressed, and the maximum number of iterations for convergence was initially set to 25.

For the five items meant to assess realistic spite, the Kaiser-Meyer-Olkin measure indicated that the sample size was moderately acceptable for this analysis, KMO = .715. The factor analysis extracted only one factor, which explained 23.79% of the variance. Please refer to table 5 for complete factor

loadings. The items all clustering on one factor suggest that the measure does represent how spiteful a respondent would be in reality given all the obstacles and challenges on may face.

Table 5. Exploratory Factor Analysis Factor Loadings for Items Representing Realistic Trait Spitefulness.

<i>Item</i>	<i>Factor 1</i>
Realistic Item 1	0.47
Realistic Item 2	0.63
Realistic Item 3	0.44
Realistic Item 4	0.42
Realistic Item 5	0.46
Eigenvalue of Factor	1.19
% of Total Variance	23.79

Note: Extracted using principle axis factoring.

Results: Exploratory Factor Analysis – Engagement in Spiteful Behaviors

The engagement in spitefulness scale was created to assess how often individuals engaged in spite. The items were created by modifying items of various existing measure and these items were not created with distinct categories in mind. Three principle axis factor analyses were conducted to assess the dimensionality of the of measure. Because the final number of factors was not known, the eigenvalue standard was used for the first analysis. Factor solutions with an eigen value higher than 1.0 were retained. The second and third factor analyses were then conducted to assess a two and three factor solution. We will only be reporting the second exploratory factor analysis as it was determined to be the best factor solution. Please refer to appendix D for written results of the first and third exploratory factor analysis. To assess the

factor loadings of items, a varimax rotation was used in each analysis. For each analysis, small coefficients below .3 were suppressed, and the maximum number of iterations for convergence was initially set to 25. The Kaiser-Meyer-Olkin measure indicated that the sample size was acceptable for this analysis, KMO = .777.

The second factor analysis was set to extract two factors, which explained 25.98% and 6.95% of the variance respectively. Double loading were present on the factors, and upon cursory glance, there appears to be two distinct categories. Please refer to Table 6 for complete factor loadings. Items 1, 2, 3, 4, 7, 8, 11, 15, 16, 17, 18, 21, and 22 loaded onto factor one. Items 5, 6, 8, 9, 10, 11, 12, 13, 14, and 15 loaded onto factor two. The first factor appears to represent spiteful actions in general (e.g., purposely wasting employers supplies) while the second factor represents spiteful actions directed towards another individual directly (e.g., making fun of someone's personal life to be spiteful). Even with preset double loadings, this factor solution appeared to be the best of distinct differences between the factors are present here while not present in the other two exploratory factor analyses.

Table 6. Exploratory Factor Analysis Factor Loadings for Items Representing Engagement in Spitefulness.

Item	Factor 1 (General Spitefulness)	Factor 2 (Interpersonal Spitefulness)
Item 1	0.60	
Item 2	0.79	
Item 3	0.31	
Item 4	0.52	
Item 5		0.37
Item 6		0.56
Item 7	0.69	
Item 8	0.32	0.41
Item 9		0.55
Item 10		0.62
Item 11	0.60	0.31
Item 12		0.63
Item 13		0.76
Item 14		0.38
Item 15	0.53	0.48
Item 16	0.69	
Item 17	0.53	
Item 18	0.33	
Item 19		
Item 20		
Item 21	0.48	
Item 22	0.32	
Eigenvalue of Factor	5.72	1.53
% of Total Variance	25.98	6.95

Note: Extracted using principle axis factoring. Rotated using Varimax rotation with Kaiser Normalization

Results: Trait Spitefulness

Hypothesis 1, 5, and 11 specified that an individual's belief in negative reciprocity, vengefulness, and HAB would be positively related to trait spitefulness. There was a medium positive zero-order correlation between negative reciprocity beliefs and trait spitefulness ($r = .369, p < .01$), and a small

positive zero-order correlation between vengeance and trait spitefulness ($r = .159, p = .04$). There was a small but non-significant zero-order correlation between hostile attribution bias and trait spitefulness ($r = .148, p = .06$). When all three variables were entered into a linear regression, the model significantly predicted trait spitefulness from negative reciprocity beliefs, vengeance, and hostile attribution bias, Multiple R = .40, $R^2 = .16, F(3, 152) = 9.849, p < .01$. 16.3% of the variability in trait spitefulness is accounted for by the model. Please refer to Table 7 for the complete regression analysis results.

Given this regression, negative reciprocity beliefs significantly predict trait spitefulness, $b = .18, \beta = .53, t(152) = 4.76, p < .01, CI = [.11, .26]$, supporting Hypothesis 1. Revenge beliefs significantly predicted trait spitefulness, $b = -.14, \beta = -.24, t(152) = -2.18, p = .03, CI = [-.26, -.01]$, however as we predicted a positive relationship instead of a negative relationship, thus Hypothesis 5 is not supported. Hostile attribution bias did not predict trait spitefulness, $b = .03, \beta = .03, t(152) = .39, p = .70, CI = [-.11, .17]$, thus not supporting Hypotheses 11 as we predicted a significant positive relationship.

Hypothesis 12 specified that agreeableness would be negatively related to trait spitefulness, and Hypotheses 13 and 16 specified that conscientiousness and trait dominance would be positively related to trait spitefulness. There was a small negative zero-order correlation between agreeableness and trait spitefulness, ($r = -.168, p = .03$). There was no zero-order correlation between conscientiousness and trait dominance to trait spitefulness ($r = -.113, p = .16; r =$

.126, $p = .12$). When all three variables were entered into a linear regression, the model did not significantly predict trait spitefulness from agreeableness, conscientiousness, and trait dominance, Multiple $R = .21$, $R^2 = .04$, $F(3, 151) = 2.255$, $p = .08$. 4.3% of the variability in trait spitefulness is accounted for by the model. Please refer to Table 7 for the complete regression analysis results.

Given this regression, results indicate agreeableness did not significantly predict trait spitefulness, $b = -.09$, $\beta = -.13$, $t(151) = -1.47$, $p = .14$, $CI = [-.21, .03]$, thus not supporting Hypothesis 12 as we predicted a significant negative relationship. Results also indicated that conscientiousness did not significantly predict trait spitefulness, $b = -.03$, $\beta = -.05$, $t(151) = -.57$, $p = .57$, $CI = [-.15, .08]$, thus not supporting Hypothesis 13 as we predicted a significant negative relationship. Results also indicated that trait dominance did not significantly predict trait spitefulness, $b = .29$, $\beta = .12$, $t(151) = 1.47$, $p = .14$, $CI = [-.10, .69]$, thus not supporting Hypothesis 16 as we predicted a significant positive relationship.

Hypothesis 7 specified that proactive aggression would not be related to trait spitefulness, and Hypotheses 8 and 10 specified that reactive aggression and premeditated aggression would be positively related to trait spitefulness. Lastly, Hypotheses 9 specified that impulsive aggression would be negatively related to trait spitefulness. There was a small positive zero-order correlation between proactive aggression and trait spitefulness ($r = .226$, $p < .01$). There was a moderate positive zero-order correlation between reactive aggression and trait

spitefulness ($r = .302, p < .01$). There was a small positive zero-order correlation between premeditated aggression and trait spitefulness ($r = .226, p < .01$). There was no zero-order correlation between impulsive aggression and trait spitefulness ($r = -.028, p = .73$). When all four variables were entered into a linear regression, the model did significantly predict trait spitefulness from proactive, reactive, premeditated, and impulsive aggression, Multiple R = .39, $R^2 = .15, F(4, 151) = 26.712, p < .01$. 15.1% of the variability in trait spitefulness is accounted for by the model. Please refer to Table 7 for the complete regression analysis results.

Given this regression, results indicate that proactive aggression did not significantly predict trait spitefulness, $b = -.10, \beta = -.06, t(151) = -.50, p = .62, CI = [-.48, .29]$, thus supporting Hypothesis 7 as we predicted there would be no relationship. Results also indicate that reactive aggression did significantly predict trait spitefulness, $b = .54, \beta = .35, t(151) = 2.84, p = .01, CI = [.16, .91]$, thus supporting Hypothesis 8 as we predicted a positive relationship. Results also indicate that premeditated aggression did significantly predict trait spitefulness, $b = .13, \beta = .23, t(151) = -2.47, p = .01, CI = [.03, .23]$, thus supporting Hypothesis 10 as we predicted a positive relationship. Results also indicate impulsive aggression did significantly predict trait spitefulness, $b = -.15, \beta = -.27, t(151) = -2.95, p < .01, CI = [-.26, -.05]$, thus supporting Hypothesis 9 as we predicted a negative relationship.

Table 7. Model Summary of Forced Entry Regression Analysis Predicting Realistic Trait Spitefulness.

Group	Variable	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	95% <i>CI L</i>	95% <i>CI U</i>
Group 1	Constant	1.31	0.15		8.78	0.00	1.02	1.61
	1. Hostile Attribution Bias	0.03	0.07	0.03	0.39	0.70	-0.11	0.17
	2. Negative Reciprocity Beliefs	0.18	0.04	0.53	4.76	0.00	0.11	0.26
	3. Vengefulness	-0.14	0.06	-0.24	-2.18	0.03	-0.26	-0.01
Group 2	Constant	1.74	0.38		4.64	0.00	1.00	2.48
	4. Agreeableness	-0.09	0.06	-0.13	-1.47	0.14	-0.21	0.03
	5. Conscientiousness	-0.03	0.06	-0.05	-0.57	0.57	-0.15	0.08
	6. Trait Dominance	0.29	0.20	0.12	1.47	0.14	-0.10	0.69
Group 3	Constant	1.12	0.19		6.02	0.00	0.75	1.49
	7. Impulsive Aggression	-0.15	0.05	-0.27	-2.95	0.00	-0.26	-0.05
	8. Premeditated Aggression	0.13	0.05	0.23	2.47	0.01	0.03	0.23
	9. Reactive Aggression	0.54	0.19	0.35	2.84	0.01	0.16	0.91
	10. Proactive Aggression	-0.10	0.20	-0.06	-0.50	0.62	-0.48	0.29

Note: * denotes significance at the $p < .05$ level. ** denotes significance at the $p < .001$ level.

Results: Engagement in Spiteful Behaviors

Hypotheses 2, 6, 15, and 17 specified that negative reciprocity, revenge beliefs, conscientiousness, and trait dominance, respectively, would be positively related to self-reported engagement in spiteful behaviors. Hypotheses 14 specified that agreeableness would be negatively related to engagement in spiteful behaviors. There was a moderate positive zero-order correlation between negative reciprocity beliefs and engagement in spiteful behaviors ($r = .369, p < .01$). There was a small positive zero-order correlation between vengefulness and engagement in spiteful behaviors ($r = .159, p < .01$). There was a small but nonsignificant zero-order correlation between conscientiousness and engagement in spiteful behaviors ($r = -.113, p = .19$). There was a small but nonsignificant zero-order between trait dominance and engagement in spiteful behaviors ($r = .126, p = .59$). There was a small negative zero-order correlation between agreeableness and engagement in spiteful behaviors ($r = -.168, p < .01$). When all four variables were entered into a linear regression, the model did significantly predict engagement in spite from negative reciprocity, revenge beliefs, conscientiousness, trait dominance, and agreeableness, Multiple $R = .49$, $R^2 = .25$, $F(5, 149) = 9.821, p < .01$. 24.8% of the variability in engagement in spiteful behaviors is accounted for by the model. Please refer to Table 8 for the complete regression results.

Negative reciprocity significantly predicted engagement in spiteful behaviors, $b = .12$, $\beta = .39$, $t(149) = 3.72$, $p < .01$, $CI = [.05, .18]$, thus supporting Hypotheses 2. Results also indicate that vengeance did not significantly predict engagement in spiteful behaviors, $b = .01$, $\beta = .02$, $t(149) = .14$, $p = .89$, $CI = [-.10, .11]$, thus not supporting Hypotheses 6 as we predicted that there would be a significant positive relationship. Results also indicate that conscientiousness did not significantly predict engagement in spiteful behaviors, $b = .01$, $\beta = .02$, $t(149) = .22$, $p = .83$, $CI = [-.08, .10]$, thus not supporting Hypothesis 15 as we predicted a significant negative relationship. Results also indicate that agreeableness did not significantly predict engagement in spiteful behaviors, $b = -.10$, $\beta = -.17$, $t(149) = -1.88$, $p = .06$, $CI = [-.20, .01]$, thus not supporting Hypothesis 14 as we predicted a significant negative relationship. Results also indicate that trait dominance did not significantly predict engagement in spiteful behaviors, $b = -.10$, $\beta = -.05$, $t(149) = -.62$, $p = .54$, $CI = [-.40, .21]$, thus not supporting Hypothesis 17 as we predicted a significant positive relationship.

Table 8. Model Summary of Forced Entry Regression Analysis Predicting Engagement in Spiteful Behaviors.

Variable	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	95% <i>CI L</i>	95% <i>CI U</i>
Constant	1.47	0.33		4.48	0.00	0.82	2.12
1. Agreeableness	-0.10	0.05	-0.17	-1.88	0.06	-0.20	0.01
2. Conscientiousness	0.01	0.05	0.02	0.22	0.83	-0.08	0.10
3. Negative Reciprocity Beliefs	0.12	0.03	0.39	3.72	0.00**	0.05	0.18
4. Vengefulness	0.01	0.05	0.02	0.14	0.89	-0.10	0.11
5. Trait Dominance	-0.10	0.15	-0.05	-0.62	0.54	-0.40	0.21

Note: * denotes significance at the $p < .05$ level. ** denotes significance at the $p < .001$ level.

Results: Mediation

A mediation analysis was conducted using the PROCESS dialog in IBM SPSS 25 to test the two hypotheses that trait spitefulness predicts engagement in spiteful behaviors with expectancy beliefs and normative beliefs of aggression serving as intervening variables between the two (H3 & H4). The overall model significantly predicts engagement in spiteful behaviors, Multiple R = .43, $R^2 = .18$, $F(3, 137) = 10.0893$, $p < .01$. 18.1% of the variability in engagement in spitefulness is accounted for.

When looking at the direct impact of trait spitefulness on the mediating variables in the model, trait spitefulness significantly positively predicts normative aggression beliefs, $b = .217$, $t(139) = 2.80$, $p = .01$, $CI = [.06, .37]$. Additionally, trait spitefulness does not significantly predict expectancy beliefs, $b = -.275$, $t(139) = -1.33$, $p = .18$, $CI = [-.68, .13]$.

When looking at the direct impact of each variable in the model on engagement in spiteful behaviors, trait spitefulness does significantly positively predict engagement in spiteful behavior, $b = .167$, $t(137) = 6.404$, $p = .02$, $CI = [.69, 1.30]$. Normative aggression beliefs do significantly predict engagement in spiteful behaviors, $b = .215$, $t(137) = 2.93$, $p < .01$, $CI = [.07, .36]$. Additionally, expectancy beliefs do significantly predict engagement in spiteful behaviors, $b = -.081$, $t(139) = -2.95$, $p < .01$, $CI = [-.13, -.03]$.

Hypothesis 3 was not supported, expectancy beliefs towards engaging in spite did not serve as an intervening variable between trait spitefulness and

engagement in spiteful behaviors, $b = .022$, $CI = [-.01, .06]$. Hypothesis 4 was also not supported, normative beliefs of aggression did not serve as an intervening variable between trait spitefulness and engagement in spiteful behaviors, $b = .04$, $CI = [-.00, .15]$. Please refer to Figure 4 for a complete diagram of the relationships.

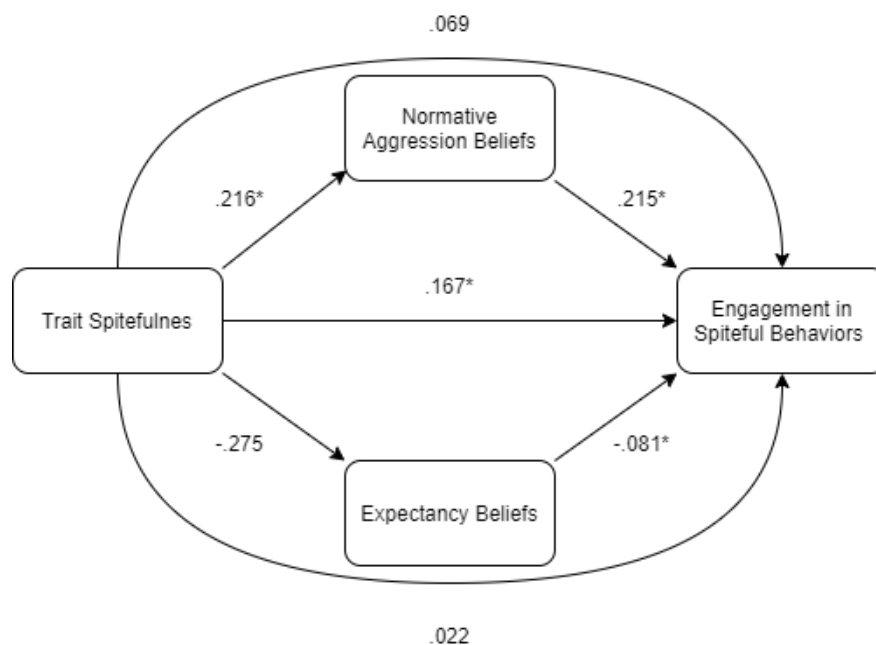


Figure 4. Diagram of Mediation Analysis Relationships. ** denotes correlation is significant at the 0.01 level (2-tailed). * denotes correlation is significant at the 0.05 level (2-tailed).

Results: Subject Matter Expert Feedback of Items

Of all SME's contacted, only three responded with feedback to the measures. Of the quantitative feedback given on the items, Scenarios 2, 4, and 5 have the most consensus amongst raters indicating that these scenarios either definitely or probably demonstrate a situation where spite may naturally arise.

Items 1 and 3 had less favorable feedback, with raters indicating that these scenarios may or may not demonstrate a scenario in which spite may naturally arise. Of the quantitative feedback given on the response categories to the posed scenarios, raters had generally had favorable feedback. For each of the five items, raters indicated that the three response categories either definitely or probably demonstrate a spiteful, accommodating, and natural response to the posed scenario. For Item 1, qualitative feedback of the item included SME's suggesting removing the initial apologies in each of the response options. For Item 3, qualitative feedback included SME's suggesting making it clearer that the actor in the scenario is "in the right", as it was not clear in the scenario.

SME feedback of the Engagement in Spitefulness Scale was generally mixed, with no clear consensus on many of the items. Items 1, 2, 3, 4, 14, 15, 17, and 18 were deemed mostly not representative of spite. In contrast, Items 5, 7, 8, 10, 11, 13, 21, and 22 were deemed mostly representative of spite. Items 6, 9, 12, 16, 19, and 20 had no consensus amongst SME's. For the items that were deemed representative of spite, these generally represented interpersonal behaviors directed at another individual (e.g., ignored someone at work to be spiteful). For the items deemed not representative of spite, these generally represented items aimed not at individuals but instead institutions (e.g., wasted supplies at work to be wasteful). While the divisions are not precisely clear, these were the general patterns, suggesting that some of the items can be removed

from future revisions to make the measure more distinct from its predecessor measures.

CHAPTER FOUR: DISCUSSION

The purpose of this study was to create a comprehensive and refined conceptualization of the psychological construct of spite that would help differentiate it from other similarity aggressive behaviors, along with elucidating in which conditions spite can arise. Before delving into the findings of the hypotheses, the findings of our attempt to create a new trait spitefulness measure and engagement in trait spitefulness measure should be discussed. Specifically, in our measure of trait spitefulness, we attempted to differentiate two forms of spitefulness, which are spite that individuals would realistically engage (or not engage) when taking into consideration obstacles in their situation, and spite that individuals would like to ideally engage in if they did not have to worry about obstacles. This was done by providing respondents with ten items in the form of a situational judgement test and giving respondents three response choices that were meant to capture spiteful, accommodating, and neutral responses. When given the response categories, respondents were asked which of the response categories they would realistically engage in, and which response they would like to engage in. If none of the options represented an act they would engage in, we also gave respondents the option to write in their own response, in which we would return and categorize later.

After analyzing the results of the items, it became evident that the realistic spite portion of the measure had low and unacceptable reliability, whilst the

idealistic spite portion of the measure was not reliable measure at all. One reason for this could be that the difference between what respondents would realistically do and what they would ideally do was not made clear enough. Each posed situation was also different, and even if individuals may have a tendency to be spiteful, the role of context is still present in their actions, and ideally forecasted behaviors are difficult to predict.

In addition, four of our five spiteful response choices in the situational judgement test were more reminiscent of direct aggression. Gender differences in aggression exist in the literature, most notably women are found to be more prone to utilizing indirect aggression rather than direct aggression, which may explain why our sample largely scored low in spitefulness (Bjorkqvist, 2018). Based off these findings, we proceeded to analyze the rest of hypotheses only using the results from the realistic spite items. After analyzing the results of the engagement in spitefulness, the measure was found to be generally reliable, even with it being arguable which factor solution is truly the best solution. Regardless, the measure should be refined, shortened, and modified in future studies to help better distinguish it from similar measures.

When looking at the results of our hypotheses, the first and second hypothesis predicted that an individual's belief in the importance of negative reciprocity would be positively related to trait spitefulness and engagement in spiteful behaviors. In both cases, the hypotheses were supported as there were positively significant relationships present between negative reciprocity beliefs

and both forms of spitefulness. These findings support our original proposition, as negative reciprocity is thought to occur in cases where pain has occurred to one actor, leading to the other actor returning pain to the transgressor (Gouldner, 1960). As our developed trait spitefulness scale presents hypothetical situations where respondents are harmed in some way, and because scores in trait spitefulness related to scores in negative reciprocity beliefs, this supports the idea that our scale is inducing a process consistent with negative reciprocity research. Likewise, the fact that we had a significant but not drastically large correlation also helps imply that these are two distinct but related measures. Similar relationships also exist when looking at different variables. When looking at the relationship between abusive supervision and workplace deviance, it was found that negative reciprocity beliefs served as a moderating variable (Mitchell & Ambrose, 2007). Specifically, the relationship between the two variables is stronger when negative reciprocity beliefs are stronger, and while we did not test negative reciprocity beliefs as a moderating variable, the fact that the variables are related may imply that a similar relationship exists (Mitchell & Ambrose, 2007).

The third and fourth hypotheses predicted that trait spitefulness would be positively related to self-reported engagement in spiteful behaviors, mediated by either perceptions of social acceptability or expectancy beliefs. In both cases, the hypotheses were not supported, as both variables did not serve as mediating variables. However, when looking at the direct relationship between trait

spitefulness and engagement in spite, a significant relationship was present. Lack of support for the third and fourth hypotheses, but the presence of a relationship between trait spitefulness and engagement in spite is reminiscent of the relationship that support for violence beliefs has with aggression (Paul Poteat, Kimmel, & Wilchins, 2010). The presence of a strong main effect between trait spitefulness and spite engagement also likely accounts for more variances than an indirect (mediating) effect between the variables. Specifically, having violence supporting beliefs is related to engaging in bullying behavior, fighting behavior, and relational aggression, which according to our results, is similar to how being a spiteful person is positively related to engaging in spiteful behaviors (Paul Poteat, Kimmel, & Wilchins, 2010). This finding alone implies that engagement in spite may be predictable, and it is found that these relationships between violence beliefs and aggression are stronger amongst men than they are women, so it is also possible our mediating variables would take effect in a sample with a larger male population (Paul Poteat, Kimmel, & Wilchins, 2010).

The fifth and sixth hypotheses predicted that revenge beliefs would be positively related to trait spitefulness and engagement in spiteful behavior. In both cases, the hypotheses were not supported, as revenge was negatively related to trait spitefulness, and revenge did not significantly predict engagement in spitefulness. While this result may be counter-intuitive as spite is a form of revenge, this highlights the complex interplay of both dispositional and contextual

factors. Specifically, our trait spitefulness scale incorporated context before asking participants how they would react to a situation, whilst the revenge scale we used was just about general revenge taking beliefs. It has been noted in the literature that contextual factors such as perceived aggression culture in a workplace influence whether employees seek revenge in their workplace (Restubog, Zagenczyk, Bordia, Bordia, & Chapman, 2015). Specifically, when employees perceive their workplace culture as aggressive, they will be more likely to engage in acts of revenge (Restubog et al., 2015). This is relevant as a revenge measure that incorporates context may be related to our trait spitefulness scale. Additionally, the fact that revenge was not related to our engagement in spitefulness scale which also lacks contextual factors in the questions may imply that revenge and spite are naturally distinct.

The seventh and eight hypotheses predicted that proactive aggression would not be related to trait spitefulness, while reactive aggression would be positively related to trait spitefulness. In both cases, the hypotheses were supported. The main reasoning for these hypotheses was that we conceptualized spite as a purely retaliatory behavior that's only goal is to enact harm after being wronged. A similar finding can be spotted in Book, Visser, Volk, Holden, and D'Agata's (2019) paper that takes a closer look at the relationship between revenge and proactive and reactive aggression. Specifically, we found earlier that revenge was not related to trait spitefulness or engagement in spiteful behaviors, and Book et al. (2019) found that different personality traits predicted reactive

aggression and revenge. It was found that emotionality (how much a person reacts when presented with emotional stimuli) was negatively related to revenge but positively related with proactive aggression (Book et al., 2019). Further analyses revealed that anxiety seemed to account for the relationship between emotionality and reactive aggression, and that it appears that reactive aggression is more of an anxiety driven response, while revenge is more of a predatory response to negative experiences (Book et al., 2019). Given these findings, it not only sheds light on why we failed to find a relationship between spitefulness and revenge, but also explains why there is no relationship between proactive aggression and spitefulness, as proactive aggression is more of a predatory behavior, while we consider spite to be a reactionary behavior (Book et al., 2019).

The ninth and tenth hypotheses predicted that impulsive aggression would be negatively related to trait spitefulness while premeditated aggression would be positively related to trait spitefulness. The reasoning behind both hypotheses was that we believed that spite is a planned and goal-directed behavior rather than an immediate outburst or loss of control. In both cases, the hypotheses were supported, which supports spite being conceptualized as a planned behavior taken in response to threats or harm, similar to premeditated aggression, and not a random outburst of aggression (Helfitz-Sinville & Stanford, 2014).

Support for our hypotheses also highlights an interesting aspect of retaliation and spite in that individuals need to exhibit some self-control that is

present in premeditated aggression to engage in spite. While it is typically thought that individuals who have a high degree of self-control are less likely to engage in aggression altogether, there is a distinct lack of research that analyzes cases where spite may increase or enable spite (Denson, DeWall, & Finkel, 2012). A self-control measure would be worthwhile to include future studies to further understand the link between premeditated aggression and spite.

The eleventh hypotheses predicted that hostile attribution bias would be positively related to trait spitefulness. This was not supported, as there was no correlation or significant relationship between the two variables. This finding is generally not found in the literature when looking at similar revenge taking behavior variables and their engagement. Specifically, when looking at the related variable to spite, negative reciprocity beliefs, Eisenberger et al. (2004) found that when individuals are subjected to unfavorable treatment from other individuals, they harbor more anger and desire for retribution when it was perceived that that mistreatment was voluntary and not a result of external constraints. The lack of a relationship may be a result of the different nature of situations posed in the two measures.

Specifically, in our used hostile attribution bias measure, the situations and whether harm was intended was ambiguous, and the measure attempts to assess if an individual will assess those situations as hostile. In contrast, our measure has already placed individuals in a situation where they were wronged, and whether if that act was intended to be hostile does not matter in the victims.

Instead, a factor such as a respondent's negative reciprocity beliefs may be more important, and as noted earlier, a significant relationship exists between reciprocity beliefs and trait spitefulness,

The twelfth and thirteenth hypotheses predicted that agreeableness and conscientiousness would be negatively related to trait spitefulness. In both cases, the hypotheses were not supported. The fourteenth and fifteenth hypotheses assumed that agreeableness and conscientiousness would be negatively related to engagement in spiteful behaviors. In both cases, the hypotheses were not supported. Lack of support for the twelfth, thirteenth, fourteenth, and fifteenth hypotheses may imply that conscientiousness and agreeableness are not reflective of individuals likelihood of acting vengeful or aggressive. Rather, there may be different personality traits that can mediate the relationship between conscientiousness and agreeableness with spite or have a better direct relationship with spite. Specifically, the trait of honesty/humility maybe more predictive of willingness to engage in spite, as this trait is defined someone's truthfulness, fairness, and reluctance to exploit others (Thompson, Carlson, Hunter, & Whitten, 2016). Previous studies indicate this trait correlates more highly with the vengeful behavior of organizationally directed deviance when compared to conscientiousness and agreeableness (Thompson et al., 2016). Additionally, individuals low in Honestly-Humility have been found to have stronger reactions to harm done by co-workers (Berkowitz, 1993).

The sixteenth and seventeenth hypotheses predicted that trait dominance would be positively related to trait spitefulness and engagement in spiteful behaviors. In both cases, the hypotheses were not supported. Lack of support for the sixteenth and seventeenth hypotheses may imply again that different personality traits may serve as better predictors of spite. Specifically, it has been found that a variable related to spite, negative reciprocity beliefs, not related to trait dominance (Eisenberger et al., 2004). Specifically, endorsing negative reciprocity beliefs is not related to having a disposition that prefers dominance in social situations, as these beliefs are more rooted in beliefs in justice and the psychological contract of just and fair interactions (Eisenberger et al., 2004). These findings corroborate our earlier results, given the fact that our spite measures were related to negative reciprocity beliefs, trait dominance should not be related to our spite measures.

Perceived organizational justice (POS) and self-control were two variables that were absent in our analysis but may possibly explain some of our results. POS generally refers to the fairness of management decisions while self-control refers to the ability of an individual to control their emotions and desires or their expression (O'Neill, Lewis, & Carswell, 2011; Restubog, Garcia, Wang, & Cheng, 2010). Previous literature has found both justice perceptions and self-control to be related to workplace deviance, such that when individuals perceive various facets of their organization to be unfair (e.g., rewards not being distributed fairly)

and when individuals have low self-control, they are more likely to engage in workplace deviance (O'Neill et al., 2011; Restubog et al., 2010).

Our hypotheses that revenge would be related to both spite measures was based upon the idea that individuals who exhibit a degree of self-concern would engage in defensive revenge behavior when they perceive injustice (Bobocel, 2013). It may be likely that the individuals in our sample did not perceive their retaliatory behavior as vengeful, but rather necessary behaviors to correct injustices in their workplace. POS may serve as a better predictor in future studies.

Additionally, our hypotheses that expectancy beliefs and normative aggression beliefs would serve as mediating variables in the relationship between trait spitefulness and engagement in spiteful behaviors was rooted in the ideas of Expectancy Theory (Vroom, 1964) and the Theory of Planned Behavior (Ajzen, 1991). Both hypotheses may still be a mediating or moderating factor in the relationship, but self-control may serve as a better measurable variable. The Theory of Planned Behavior states behavioral intentions are influenced by subjective norms and perceived behavioral control (Ajzen, 1991). Self-control has already been found to impact the relationship between negative reciprocity beliefs and workplace deviance, such that individuals who have strong self-control will have a lower frequency of workplace deviant behaviors regardless of their negative reciprocity beliefs (Restubog et al., 2010). In comparison, individuals who do not have self-control will have increased

workplace deviance as function of their negative reciprocity beliefs (Restubog et al., 2010). It possible that modifying our model to have self-control and negative reciprocity beliefs as mediating or moderating variables between the relationship of trait spitefulness and engagement in spiteful behaviors would yield more information in a future study.

Limitations and Future Research

A limitation of our study may be the demographic makeup of our convenience sample. Specifically, our sample was mainly female (96%) and worked primarily in the workforces of education, sales, and food preparation (50%). Gender is relevant as mentioned previously, the relationship between violence believes and engagement in aggression is stronger in men (Paul Poteat, Kimmel, & Wilchins, 2010). Occupation is relevant as the main occupations our sample may offer participants any opportunity to act in a retaliatory manner, as job security in sales and food preparation careers is typically poor. Future research should administer our survey to a larger and more diverse population to capture construct differences in different occupations and genders. Specifically, individuals in occupations with more job security and longer tenures may engage in spite more freely due to the lack of fear of losing their jobs.

Additionally, administering to a population with a balanced gender ratio can possibly highlight differences in spite engagement as one gender may perceive themselves as under more scrutiny in their workplace, which may discourage or encourage engagement. Future research should also add

previously mentioned construct and personality measures such as self-control, honesty-humility, and perceived organizational justice to help further understand spite as a construct. This would be worthwhile as these traits are more reflective of individuals' perceptions of themselves as volitional and free actors, and the presence of a relationship between these traits and spite would further support spite's conceptualization of a calculated behavior.

Furthermore, it is unclear if trait spitefulness is a trait that remains stable across time amongst respondents, or if it changes across time due to circumstances and workplace culture. The amount of negative affectivity an individual has can change across time, and the temporary presence of increased negative affectivity may be related to sudden increase in trait spitefulness and engagement in spiteful behaviors. Future research should apply a longitudinal method to track spitefulness and the previously mentioned personality traits across time to help determine if an individual's level of spitefulness is constant or fluid.

Theoretical Implications

This study has several theoretical implications for future research. First, the results of this study help establish a different conceptualization of the spite construct, primarily by distinguishing it from a previously created measure that had a narrower definition. Specifically, we have helped establish that spite as a trait is distinct from other forms of aggression, such as revenge, impulsive aggression, and proactive aggression, primarily by establishing it as a more goal-

directed and planned behavior with relationships to reactive aggression and premeditated aggression. A lack of relationship with acts such as impulsive aggression and revenge also implies that spite entails a degree of choice clarity and that acting spiteful is not merely a failure of impulse control. Specifically, individuals who engage in spite or want to engage are aware that they have been wronged and want to be spiteful, with factors such as negative reciprocity beliefs serving as possible predictors as to who endorses acting spitefully.

Additionally, we have both created a measure of engagement in spiteful behaviors and established a link between trait spitefulness and engagement in spiteful behaviors. This link implies that engagement in spiteful behaviors may be a predictable behavior going forward. However, what may mediate and moderate this relationship is not clear, as our included mediators of expectancy beliefs and aggression normality beliefs did not influence the relationship between the two. Constructs such as self-control and honestly-humility are prime candidates for inclusion in future models. Lastly, this study opens up the possibility of investigating spite and spitefulness in new contexts outside of psychopathology. Some of these new frontiers include the psychology of spitefulness in economics and investing or the psychology of voting behaviors in certain populations that may feel attacked and disenfranchised.

Practical Implications

With the establishment of a link between trait spitefulness and engagement in spiteful behaviors, an important practical implication is the need

for managers to account for the trait spitefulness of their employees. If future research includes longitudinal methods and assessors of workplace culture and confirms that trait spitefulness is a malleable trait influenced by environment, it would be in employers' best interests to minimize factors that can cause employees to feel spiteful. Likewise, assessing if employees are feeling spiteful can provide managers the opportunity to deescalate conflict where one actor intends to harm another individual, but has not acted on that intent yet. Additionally, the engagement in spitefulness scale can be used to keep track of spite or violence and aggressive acts within the workplace, which will allow managers to take necessary measures to reduce future spiteful acts.

Additionally, some employers may take interest in having highly spiteful employees, as an individual who values reciprocity and acts when wrongfully harmed may be valuable in some occupations. Likewise, some employers may want to be conscious of when a spiteful employee is in their workforce and carefully design an environment or workforce culture that avoids wrongfully harming employees to avoid organizational losses either in the form of workplace deviance or turnover.

Conclusion

By integrating research into the construct from various research areas, we created a new path to drive future spitefulness research. In this thesis, a more comprehensive definition of spitefulness was crafted that defines spite as a planned, goal-directed behavior that can have varied outcomes. Although the

findings of the initial measure development were not completely ideal, we have created the first building block that future scale revisions can be based off, and eventually applied to different contexts. Ultimately, the present research serves as a refutation of previous narrow conceptualizations of spitefulness as a trait, provides theoretical and practical implications, and serves as the first foray into a more complex conceptualization of spite that takes into consideration interdisciplinary research and findings.

APPENDIX A:
COMPLETE PATH MODEL AND HYPOTHESES TABLE

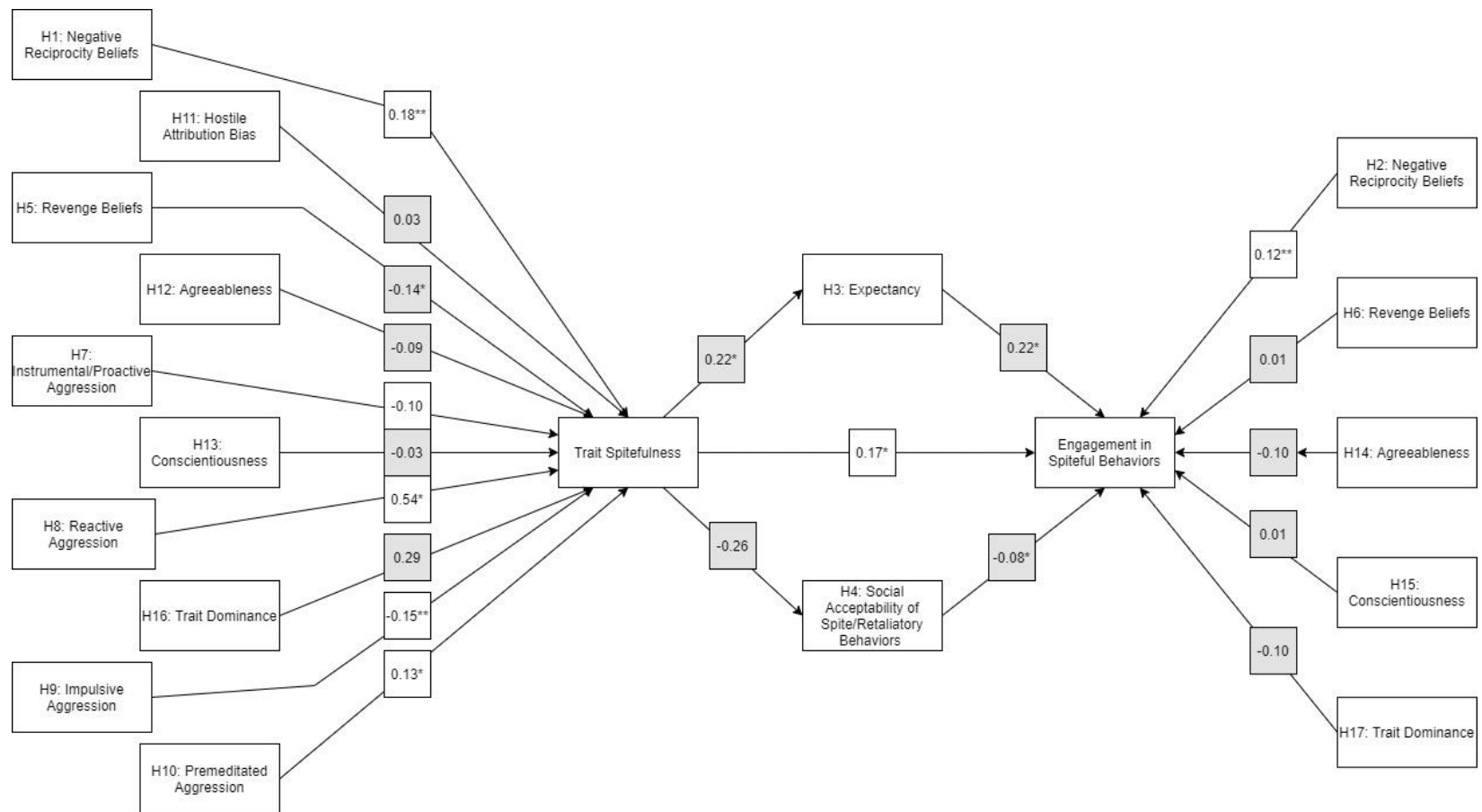


Figure 5. Complete Path Model with Regression Coefficients Amongst Variables. ** denotes correlation is significant at the 0.01 level (2-tailed). * denotes correlation is significant at the 0.05 level (2-tailed). White coefficient boxes represent supported hypotheses, grey coefficient boxes represented unsupported hypotheses.

Table 9. Hypothesis Results Table.

Hypothesis	Result
H1	Supported
H2	Supported
H3	Not supported
H4	Not supported
H5	Not supported
H6	Not supported
H7	Supported
H8	Supported
H9	Supported
H10	Supported
H11	Not supported
H12	Not supported
H13	Not supported
H14	Not supported
H15	Not supported
H16	Not supported
H17	Not supported

APPENDIX B:
SCALES

Spitefulness Situational Judgement Test

(Created by Arturo Covarrubias-Paniagua)

You will be presented with five hypothetical situations. Please read the situations carefully and envision yourself in the same situation. You will be presented with follow-up questions on what actions you would take in response to the situation, along with other questions that assess your thoughts about what transpired in the hypothetical situation.

Scenario 1: Imagine you are at work sitting at your desk while playing music at a moderately low volume. While you initially thought that you were playing the music at a volume that wouldn't disturb others, one of your colleagues stops by your desk and complains to you that you are playing the music too loud, even though you initially thought it was at a reasonable volume.

Based on the previous scenario, which of the following actions would best describe the response you would like to take in an ideal world?

- I would apologize for inconveniencing my colleague and turn down my music even lower, even though I think it was already low enough.
- I would apologize to my colleague, but leave it at its current volume as it is reasonable by my standards.
- I would initially apologize to appease my colleague, but actually increase the volume of my music to further irritate him or her.
- Other, please indicate:

Based on the previous question and in consideration of any obstacles that may present themselves, which of the following four actions would best describe the response you would take in reality?

- I would apologize for inconveniencing my colleague and turn down my music even lower, even though I think it was already low enough.
- I would apologize to my colleague, but leave it at its current volume as it is reasonable by my standards.
- I would initially apologize to appease my colleague, but actually increase the volume of my music to further irritate him or her.
- Other, please indicate:

Based on your response for what action would you like to take in an ideal world, how strongly do you believe that the colleague deserved your indicated response?

- They did not deserve that type of response at all.
- They somewhat did not deserve that type of response.
- They neither deserved nor did not deserve that type of response.
- They somewhat deserved that type of response.
- They deserved that type of response a great deal.

If you indicated that your ideal action was to be more retaliatory in nature, how much was the action you would take in reality influenced by your beliefs in your ability to actually carry out that behavior?

- A great deal.
- A lot.
- A moderate amount.
- A little.
- None at all.
- My ideal action was not retaliatory.

Scenario 2: Imagine you are walking to your car in a crowded parking lot after a tiring day. As you approach your car, it appears that another driver is impatiently waiting for your parking space by gesturing you to “hurry up” and honking at you as you enter your car.

Based on the previous scenario, which of the following actions would best describe the response you would like to take in an ideal world?

- I would try to situate myself as quickly as possible in my car and leave promptly, even if the other driver is being rude.
- I would take situate myself in my car as I normally would, and leave at a normal pace without consideration of the other driver trying to rush me.
- I would intentionally take longer to situate myself in my car to purposely make the other driver more frustrated and/or late, along with leaving slowly to further irritate the other driver.
- Other, please indicate:

Based on the previous question and in consideration of any obstacles that may present themselves, which of the following four actions would best describe the response you would take in reality?

- I would try to situate myself as quickly as possible in my car and leave promptly, even if the other driver is being rude.
- I would take situate myself in my car as I normally would, and leave at a normal pace without consideration of the other driver trying to rush me.
- I would intentionally take longer to situate myself in my car to purposely make the other driver more frustrated and/or late, along with leaving slowly to further irritate the other driver.
- Other, please indicate:

Based on your response for what action would you like to take in an ideal world, how strongly do you believe that the colleague deserved your indicated response?

- They did not deserve that type of response at all.
- They somewhat did not deserve that type of response.
- They neither deserved nor did not deserve that type of response.
- They somewhat deserved that type of response.
- They deserved that type of response a great deal.

If you indicated that your ideal action was to be more retaliatory in nature, how much was the action you would take in reality influenced by your beliefs in your ability to actually carry out that behavior?

- A great deal.
- A lot.
- A moderate amount.
- A little.
- None at all.
- My ideal action was not retaliatory.

Scenario 3: Imagine you are speaking at a team meeting in your workplace. Midway through your presentation, you notice that your colleague who is slated to speak next begins gesturing you to “speed it up” by rolling his eyes, looking at his/her watch persistently, and taking deep breaths.

Based on the previous scenario, which of the following actions would best describe the response you would like to take in an ideal world?

- I would be considerate of the time of my colleagues and try to speed up my presentation as quickly as possible to allow my colleague enough time to speak for their presentation.
- I would ignore my colleagues gestures as him/her just being rude and go about my presentation normally without hurrying.
- I would intentionally prolong my presentation by speaking slowly, adding additional information off the top of my head, and answering any and all questions in order to purposely irritate my colleague.
- Other, please indicate:

Based on the previous question and in consideration of any obstacles that may present themselves, which of the following four actions would best describe the response you would take in reality?

- I would be considerate of the time of my colleagues and try to speed up my presentation as quickly as possible to allow my colleague enough time to speak for their presentation.
- I would ignore my colleagues gestures as him/her just being rude and go about my presentation normally without hurrying.
- I would intentionally prolong my presentation by speaking slowly, adding additional information off the top of my head, and answering any and all questions in order to purposely irritate my colleague.
- Other, please indicate:

Based on your response for what action would you like to take in an ideal world, how strongly do you believe that the colleague deserved your indicated response?

- They did not deserve that type of response at all.
- They somewhat did not deserve that type of response.
- They neither deserved nor did not deserve that type of response.
- They somewhat deserved that type of response.
- They deserved that type of response a great deal.

If you indicated that your ideal action was to be more retaliatory in nature, how much was the action you would take in reality influenced by your beliefs in your ability to actually carry out that behavior?

- A great deal.
- A lot.
- A moderate amount.
- A little.
- None at all.
- My ideal action was not retaliatory.

Scenario 4: Imagine you are at work and you notice that one of the utensils that you usually need for your job is missing from your workstation. After looking around briefly, you notice that it is currently at the workstation of one of your colleagues who is not currently at their workstation.

Based on the previous scenario, which of the following actions would best describe the response you would like to take in an ideal world?

- I would take my utensil back and leave a note saying that they are free to use the utensil at anytime as long as they properly notify you first.
- I would take the utensil back without leaving any note.
- I would take my utensil back but also take a utensil of my colleagues without asking to inconvenience them.
- Other, please indicate:

Based on the previous question and in consideration of any obstacles that may present themselves, which of the following four actions would best describe the response you would take in reality?

- I would take my utensil back and leave a note saying that they are free to use the utensil at anytime as long as they properly notify you first.
- I would take the utensil back without leaving any note.
- I would take my utensil back but also take a utensil of my colleagues without asking to inconvenience them.
- Other, please indicate:

Based on your response for what action would you like to take in an ideal world, how strongly do you believe that the colleague deserved your indicated response?

- They did not deserve that type of response at all.
- They somewhat did not deserve that type of response.
- They neither deserved nor did not deserve that type of response.
- They somewhat deserved that type of response.
- They deserved that type of response a great deal.

If you indicated that your ideal action was to be more retaliatory in nature, how much was the action you would take in reality influenced by your beliefs in your ability to actually carry out that behavior?

- A great deal.
- A lot.
- A moderate amount.
- A little.
- None at all.
- My ideal action was not retaliatory.

Scenario 5: Imagine you are at work and it is time for performance evaluations. After a few months of working diligently you personally believe that you are entitled to a good evaluation. However, when you meet with your immediate supervisor to discuss your performance, you are evaluated poorly by them and told to “put in better work”.

Based on the previous scenario, which of the following actions would best describe the response you would like to take in an ideal world?

- I would thank my supervisor for the evaluation and promise to improve your performance.
- I would thank my supervisor and leave the room promptly with no intentions to “improve my performance” as you believe your work is already good enough.
- I would thank my supervisor but leave the room with the intention to purposely put in less effort in your job as your previous efforts went unappreciated.
- Other, please indicate:

Based on the previous question and in consideration of any obstacles that may present themselves, which of the following four actions would best describe the response you would take in reality?

- I would thank my supervisor for the evaluation and promise to improve your performance.
- I would thank my supervisor and leave the room promptly with no intentions to “improve my performance” as you believe your work is already good enough.
- I would thank my supervisor but leave the room with the intention to purposely put in less effort in your job as your previous efforts went unappreciated.
- Other, please indicate:

Based on your response for what action would you like to take in an ideal world, how strongly do you believe that the colleague deserved your indicated response?

- They did not deserve that type of response at all.
- They somewhat did not deserve that type of response.
- They neither deserved nor did not deserve that type of response.
- They somewhat deserved that type of response.
- They deserved that type of response a great deal.

If you indicated that your ideal action was to be more retaliatory in nature, how much was the action you would take in reality influenced by your beliefs in your ability to actually carry out that behavior?

- A great deal.
- A lot.
- A moderate amount.
- A little.
- None at all.
- My ideal action was not retaliatory.

Spitefulness Self-Report

(Created by Arturo Covarrubias-Paniagua with modified items from Spector & Bauer, 2010; Einarsen et al., 2009; & Cortina et al., 2001)

The following represent various behaviors that can be considered as spiteful. Please indicate if you have engage in any of these behaviors in the past six months.

Never 1	Once or twice 2	Once or twice per month 3	Once or twice per week 4	Every day 5
------------	--------------------	---------------------------------	--------------------------------	----------------

1. Purposely wasted your employer's materials/supplies to be spiteful.
2. Told people outside the job what a lousy place you work for to be spiteful.
3. Came to work late without permission to be spiteful.
4. Stayed home from work and said you were sick when you weren't to be spiteful.
5. Insulted someone about their job performance to be spiteful.
6. Made fun of someone's personal life to be spiteful.
7. Ignored someone at work to be spiteful.
8. Started an argument with someone at work to be spiteful.
9. Insulted or made fun of someone at work to be spiteful.
10. Put someone down or was condescending to someone to be spiteful.
11. Paid little attention to a statement someone made or showed little interest in their opinion to be spiteful.
12. Made demeaning, rude, or derogatory remarks about someone to be spiteful.
13. Addressed someone in unprofessional terms publicly to be spiteful.
14. Addressed someone in unprofessional terms privately to be spiteful.
15. Doubted someone's judgement to be spiteful.
16. Ignored or purposely fail to speak to someone to be spiteful.
17. Made jokes at someone else's expense to be spiteful.
18. Yelled, shouted, or swore at someone to be spiteful.
19. Withheld information that was important to someone else's job to be spiteful.
20. Spread gossip or rumors about someone you don't like to be spiteful.
21. Repeatedly reminded someone about their errors or mistakes to be spiteful.
22. Persistently criticized someone else's work and performance to be spiteful.

Original Spitefulness Scale

(Marcus et al., 2014)

Please indicate how strongly you agree or disagree with the following statements.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

1. It might be worth risking my reputation in order to spread gossip about someone I did not like.
2. If I am going to my car in a crowded parking lot and it appears that another driver wants my parking space, then I will make sure to take my time pulling out of the parking space.
3. I hope that elected officials are successful in their efforts to improve my community even if I opposed their election.
4. If my neighbor complained that I was playing my music too loud, then I might turn up the music even louder just to irritate him or her, even if meant I could get fined.
5. If I had the opportunity, then I would gladly pay a small sum of money to see a classmate who I do not like fail his or her final exam.
6. There have been times when I was willing to suffer some small harm so that I could punish someone else who deserved it.
7. I would rather no one get extra credit in a class if it meant that others would receive more credit than me.
8. If I opposed the election of an official, then I would be glad to see him or her fail even if their failure hurt my community.
9. I would be willing to take a punch if it meant that someone I did not like would receive two punches.
10. I would be willing to pay more for some goods and services if other people I did not like had to pay even more.
11. If I was one of the last students in a classroom taking an exam and I noticed that the instructor looked impatient, I would be sure to take my time finishing the exam just to irritate him or her.
12. If my neighbor complained about the appearance of my front yard, I would be tempted to make it look worse just to annoy him or her.
13. I would take on extra work at my job if it meant that one of my co-workers who I did not like would also have to do extra work.
14. I would be happy receiving extra credit in a class even if other students received more points than me.

15. Part of me enjoys seeing the people I do not like fail even if their failure hurts me in some way.
16. If I am checking out at a store and I feel like the person in line behind me is rushing me, then I will sometimes slow down and take extra time to pay.
17. It is sometimes worth a little suffering on my part to see others receive the punishment they deserve.

Reactive-Proactive Questionnaire

(Raine et al., 2006)

There are times when most of us feel angry, or have done things we should not have done. Don't spend a lot of time thinking about the items - just give your first response

Never
1

Sometimes
2

Often
3

1. Yelled at others when they have annoyed you.
2. Had fights with others to show who was on top.
3. Reacted angrily when provoked by others.
4. Taken things from others.
5. Had temper tantrums.
6. Vandalized something for fun.
7. Damaged things because you felt mad.
8. Had a gang fight to be cool.
9. Gotten angry when frustrated.
10. Hurt others to win a game.
11. Become angry or mad when you lost a game.
12. Used physical force to get others to do what you want.
13. Threatened and bullied someone.
14. Gotten angry when others threatened you.
15. Used force to obtain money or things from others.
16. Damaged things because you felt angry.
17. Made obscene phone calls for fun.
18. Felt better after hitting or yelling at someone.
19. Threatened or forced someone to have sex.
20. Gotten angry or mad when you lost a game.
21. Hit others to defend yourself.
22. Carried a weapon to use in a fight.
23. Gotten angry or mad or hit others when teased.

Impulsive-Premeditated Aggression Scale

(Stanford et al., 2003)

Please consider aggressive acts you have committed in the past six months and indicate how strongly you agree with the following statements.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

1. I think the other person deserved what happened to them during some of the incidents.
2. I am glad some of the incidents occurred.
3. I wanted some of the incidents to occur.
4. The act led to power over others or improved social status for me.
5. Some of the acts were an attempt at revenge.
6. I feel my actions were necessary to get what I wanted.
7. I feel my outbursts were justified.
8. I planned when and where my anger was expressed.
9. I was under the influence of alcohol or other drugs during the acts.
10. Sometimes I purposely delayed the acts until a later time.
11. Anything could have set me off prior to the incident.
12. I felt pressure from others to commit the acts.
13. I consider the acts to have been impulsive
14. I feel I lost control of my temper during the acts.
15. I feel I acted out aggressively more than the average person during the last 6 months.
16. I was in control during the aggressive acts.
17. When angry, I reacted without thinking.
18. My behavior was too extreme for the level of provocation.
19. I understood the consequences of the acts before I acted.
20. I usually can't recall the details of the incidents well.
21. I knew most of the persons involved in the incidents.
22. I typically felt guilty after the aggressive acts.
23. I feel some of the incidents went too far.
24. Prior to the incidents, I knew an altercation was going to occur.
25. My aggressive outbursts were usually directed at a specific person.
26. I became agitated or emotionally upset prior to the acts.

Vengeance Scale Shortened

(Stuckless & Goranson, 1992)

Please indicate how strongly you agree or disagree with the following statements:

Strongly Disagree 1	Disagree 2	Neither Agree nor Disagree 3	Agree 4	Strongly Agree 5
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1. It's not worth my time or effort to pay back someone who has wronged me.
2. It is important for me to get back at people who have hurt me.
3. I try to even the score with anyone who hurts me.
4. It is always better not to seek vengeance.
5. There is nothing wrong in getting back at someone who has hurt you.
6. I don't just get mad, I get even.
7. I am not a vengeful person.
8. I believe in the motto "An eye for an eye, a tooth for a tooth."
9. If I am wronged, I can't live with myself unless I get revenge.
10. Honor requires that you get back at someone who has hurt you.

Normative Beliefs about Aggression Scale

(Huesmann, Guerra, Miller, & Zelli, 1998)

The following questions ask you about whether you think certain behaviors are wrong or ok. Using the scale below, write the answer that best describes what you think.

It's really wrong	It's sort of wrong	It's sort of ok	It's perfectly ok
1	2	3	4

Suppose a young man says something bad to another young man, John.

1. Do you think it's OK for John to scream at him?
2. Do you think it's OK for John to hit him?

Suppose a young man says something bad to a young woman.

3. Do you think it's wrong for the young woman to scream at him?
4. Do you think it's wrong for the girl to hit him?

Suppose a young woman says something bad to another young woman, Mary.

5. Do you think it's OK for Mary to scream at her?
6. Do you think it's OK for Mary to hit her?

Suppose a young woman says something bad to a young man.

7. Do you think it's wrong for the young man to scream at her?
8. Do you think it's wrong for the boy to young man to hit her?

Suppose a young man hits another young man, John.

9. Do you think it's wrong for John to hit him back?

Suppose a young man hits a young woman.

10. Do you think it's OK for the young woman to hit him back?

Suppose a young woman hits another young woman, Mary.

11. Do you think it's wrong for Mary to hit her back?

Suppose a young woman hits a young man.

12. Do you think it's wrong for the young man to hit her back?

The following questions ask you about whether you think certain behaviors are wrong or ok. Using the scale below, write the answer that best describes what you think.

13. In general, it is wrong to hit other people.
14. If you're angry, it is OK to say mean things to other people.
15. In general, it is OK to yell at others and say bad things.
16. It is usually OK to push or shove other people around if you're mad.
17. It is wrong to insult other people.
18. It is wrong to take it out on others by saying mean things when you're mad.

19. It is generally wrong to get into physical fights with others.
20. In general, it is OK to take your anger out on others by using physical force.

Negative Reciprocity Belief Scale

(Eisenberger, Lynch, Aselage, & Rohdieck, 2004)

Please indicate how strongly you agree or disagree with the following statements:

Strongly Disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1	2	3	4	5	6	7

1. If someone dislikes you, you should dislike them.
2. If a person despises you, you should despise them.
3. If someone says something nasty to you, you should say something nasty back.
4. If a person wants to be your enemy, you should treat them like an enemy.
5. If someone treats me badly, I feel I should treat them even worse.
6. If someone treats you badly, you should treat that person badly in return.
7. If someone has treated you poorly, you should not return the poor treatment.
8. If someone important to you does something negative to you, you should do something even more negative to them.
9. A person who has contempt for you deserves your contempt.
10. If someone treats you like an enemy, they deserve your resentment.
11. When someone hurts you, you should find a way they won't know about to get even.
12. You should not give help to those who treat you badly.
13. When someone treats me badly, I still act nicely to them.
14. If someone distrusts you, you should distrust them.

Social Information Processing-Attribution Bias Questionnaire

(Coccaro, Noblett, & McCloskey, 2009)

Please read these short stories about relationships with other people and answer all questions asked about the story as honestly as possible. Please select your answers where indicated.

Not at all likely

Unlikely

Likely

Very likely

1

2

3

4

Story 1:

You tell a friend something personal and ask your friend not to discuss it with anyone else. However, a couple of weeks later, you find out that a lot of people know about it. You ask your friend why she/he told other people and your friend says: "Well, I don't know, it just came up and I didn't think it was a big deal."

Why do you think your friend shared your secret when you told them not to share it with anyone?

1. My friend wanted to expose my secret.
2. My friend wanted to impress other people with their secret knowledge about me.
3. My friend forgot that this was an important secret for me.
4. My friend wanted me to feel stupid for asking to keep my secret.

Please select the response that would best describe your reaction in this situation?

1. How likely is it that you would be angry if this happened to you?
2. How likely is it that you would be upset with yourself if this happened to you?

Story 2:

Imagine that you are in a karate class competition and you have to demonstrate your abilities to your instructor. You are matched up to "fight" with someone in the class who you do not know well. While you are being evaluated, your karate classmate hits you in a way other than the way you were taught and you are hurt.

Why do you think your karate classmate hit you in a way other than the way you were taught?

1. My karate classmate wanted to physically hurt me.
2. My karate classmate wanted to win the match.
3. My karate classmate did it by accident.
4. My karate classmate wanted to make me look "bad".

Please select the response that would best describe your reaction in this situation?

1. How likely is it that you would be angry if this happened to you?
2. How likely is it that you would be upset with yourself if this happened to you?

Story 3:

Early one morning (at "rush hour") you go to a busy local coffee shop to get a cup of coffee. While you are waiting, someone you see at the coffee shop regularly, but do not know personally, cuts in the line in front of you.

Why do you think this person cut in line in front of you?

1. This person wanted to make me wait longer to get my coffee.
2. This person was in a hurry to get in to work.
3. This person didn't realize that he (or she) cut in line in front of me.
4. This person wanted me to feel unimportant.

Please select the response that would best describe your reaction in this situation?

1. How likely is it that you would be angry if this happened to you?
2. How likely is it that you would be upset with yourself if this happened to you?

Story 4:

Imagine that you and a group of your co-workers went on a business trip. While at the hotel, waiting to meet a customer, you stop to buy a cup of coffee. Suddenly, one of your co-workers bumps your arm and spills your coffee over your shirt. The coffee is hot and your shirt is wet.

Why do you think your co-worker bumped your arm making you spill your coffee?

1. My co-worker wanted to burn me with the hot coffee.
2. My co-worker was focused on the meeting.
3. My co-worker did it by accident.
4. My co-worker wanted to make me look "bad" to the customer.

Please select the response that would best describe your reaction in this situation?

1. How likely is it that you would be angry if this happened to you?
2. How likely is it that you would be upset with yourself if this happened to you?

Story 5:

You make plans with one of your friends to go on a short trip for the weekend. You're very excited about these plans and have been looking forward to the trip. However, at the last minute, your friend says that he (or she) no longer wants to go on the trip and has made plans with another friend for the weekend.

Why do you think your friend said he/she no longer wanted to go on the trip?

1. My friend doesn't want to be with me.
2. My friend wanted to do something else.
3. My friend forgot about the plans we made.
4. My friend wanted me to feel unimportant.

Please select the response that would best describe your reaction in this situation?

1. How likely is it that you would be angry if this happened to you?
2. How likely is it that you would be upset with yourself if this happened to you?

Story 6:

One day at work you decide to go to the cafeteria for lunch. After you purchase your lunch, you notice that the seating area is very crowded and no empty tables are available. You notice one of your co-workers sitting alone at a small table and ask if you can join him (or her) for lunch. Your co-worker says "no".

Why do you think your co-worker said "no"?

1. My co-worker wanted to exclude me.
2. My co-worker wanted to be alone at that time.
3. My co-worker was "lost in thought" and didn't realize I had asked to join him (or her).
4. My co-worker wanted me to feel bad.

Please select the response that would best describe your reaction in this situation?

How likely is it that you would be angry if this happened to you?

How likely is it that you would be upset with yourself if this happened to you?

Story 7:

Imagine that you go to the first meeting of a club you want to join. You would like to make friends with the other people in the club. You walk up to some of the other club members and say, "Hi!" but they don't say anything back.

Why do you think the club members didn't say anything back to you?

The club members wanted to ignore me.

The club members were more interested in talking among themselves.

The club members didn't hear me say "Hi."

The club members wanted me to feel unimportant.

Please select the response that would best describe your reaction in this situation?

How likely is it that you would be angry if this happened to you?

How likely is it that you would be upset with yourself if this happened to you?

Story 8:

You are driving in to work one day and just after you pull into a parking space, another car pulls up into the space to your right. As the person in the other car, a co-worker, gets out of his/her car, their car door hits your passenger side door and leaves a scratch on your car. The person walks away as you get out of your car.

Why do you think this person acted this way?

1. This person wanted to damage my car.
2. This person was in a hurry to get in to work.
3. This person scratched my car by accident and didn't notice.
4. This person wanted me to feel unimportant.

Please select the response that would best describe your reaction in this situation?

1. How likely is it that you would be angry if this happened to you?
2. How likely is it that you would be upset with yourself if this happened to you?

Big Five Inventory

(John & Srivastava, 1999)

Here are a number of characteristics that may or may not apply to you. Please select a number next to each statement to indicate the extent to which you agree or disagree with that statement.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

1. Tends to find fault with others.
2. Does a thorough job.
3. Is helpful and unselfish with others.
4. Can be somewhat careless.
5. Starts quarrels with others.
6. Is a reliable worker.
7. Has a forgiving nature.
8. Tends to be disorganized.
9. Is generally trusting.
10. Tends to be lazy.
11. Can be cold and aloof.
12. Perseveres until the task is finished.
13. Is considerate and kind to almost everyone.
14. Does things efficiently.
15. Is sometimes rude to others.
16. Makes plans and follows through with them.
17. Likes to cooperate with others.
18. Is easily distracted.

Hypomanic Personality Scale

(Eckbald & Chapman, 1986)

Please answer each item true or false. Please do not skip any items. It is important that you answer every item, even if you are not quite certain which is the best answer. An occasional item may refer to experiences that you have had only when taking drugs. Unless you have had the experience at other times (when not under the influence of drugs), mark it as if you have not had that experience.

True 1	False 2	I have not had this experience 3
-----------	------------	--

1. I consider myself to be pretty much an average kind of person
2. It would make me nervous to play the clown in front of other people.
3. I am frequently so "hyper" that my friends kiddingly ask me what drug I'm taking.
4. I think I would make a good nightclub comedian.
5. Sometimes ideas and insights come to me so fast that I cannot express them all.
6. When with groups of people, I usually prefer to let someone else be the center of attention.
7. In unfamiliar surroundings, I am often so assertive and sociable that I surprise myself.
8. There are often times when I am so restless that it is impossible for me to sit still.
9. Many people consider me to be amusing but kind of eccentric.
10. When I feel an emotion, I usually feel it with extreme intensity.
11. I am frequently in such high spirits that I can't concentrate on any one thing for too long.
12. I sometimes have felt that nothing can happen to me until I do what I am meant to do in life.
13. People often come to me when they need a clever idea.
14. I am no more self-aware than the majority of people.
15. I often feel excited and happy for no apparent reason.
16. I can't imagine that anyone would ever write a book about my life.
17. I am usually in an average sort of mood, not too high and not too low.
18. I often have moods where I feel so energetic and optimistic that I feel I could outperform almost anyone at anything.

19. I have such a wide range of interests that I often don't know what to do next.
20. There have often been times when I had such an excess of energy that I felt little need to sleep at night.
21. My moods do not seem to fluctuate any more than most people's do.
22. I very frequently get into moods where I wish I could be everywhere and do everything at once.
23. I expect that someday I will succeed in several different professions.
24. When I feel very excited and happy, I almost always know the reason why.
25. When I go to a gathering where I don't know anyone, it usually takes me a while to feel comfortable.
26. I think I would make a good actor, because I can play many roles convincingly.
27. I like to have others think of me as a normal kind of person.
28. I frequently write down the thoughts and insights that come to me when I am thinking especially creatively.
29. I have often persuaded groups of friends to do something really adventurous or crazy.
30. I would really enjoy being a politician and hitting the campaign trail.
31. I can usually slow myself down when I want to.
32. I am considered to be kind of a "hyper" person.
33. I often get so happy and energetic that I am almost giddy.
34. There are so many fields I could succeed in that it seems a shame to have to pick one.
35. I often get into moods where I feel like many of the rules of life don't apply to me.
36. I find it easy to get others to become sexually interested in me.
37. I seem to be a person whose mood goes up and down easily.
38. I frequently find that my thoughts are racing.
39. I am so good at controlling others that it sometimes scares me.
40. At social gatherings, I am usually the "life of the party".
41. I do most of my best work during brief periods of intense inspiration
42. I seem to have an uncommon ability to persuade and inspire others.
43. I have often been so excited about an involving project that I didn't care about eating or sleeping.
44. I frequently get into moods where I feel very speeded-up and irritable.
45. I have often felt happy and irritable at the same time.
46. I often get into excited moods where it's almost impossible for me to stop talking.
47. I would rather be an ordinary success in life than a spectacular failure.
48. A hundred years after I'm dead, my achievements will probably have been forgotten.

Demographic Questions

What gender do you identify as?

1. Male
2. Female
3. Other

What is your age?: _____

What is the highest degree or level of school you have completed. If currently enrolled, please indicate highest degree received.

1. Some high school.
2. High School graduate, diploma, or equivalent.
3. Some college credit, no degree.
4. Associate degree.
5. Bachelor's degree.
6. Master's degree.
7. Doctorate degree.

Please specify your ethnicity.

1. White
2. Hispanic or Latinx
3. Black or African American
4. Native American or American Indian
5. Asian
6. Native Hawaiian or Pacific Islander
7. Other

Which of the following categories best describes your employment status?

1. Employed, working 1 - 20 hours per week.
2. Employed, working 21 - 40 hours per week.
3. Employed, working 41 or more hours per week.
4. Not employed, looking for work.
5. Not employed, not looking for work.
6. Retired.
7. Disabled, not able to work.

How long have you been working for?

1. 1 - 6 months.
2. 7 - 12 months.
3. 1 - 2 years.
4. 2 - 4 years.
5. Over 5 years.
6. Not currently employed.

If you are currently employed, how long have you been at your current workplace?

1. 1 - 6 months.
2. 7 - 12 months.
3. 1 - 2 years.
4. 2 - 4 years.
5. Over 5 years.
6. Not currently employed.

In which job sector do you currently work in?

1. Production Occupations.
2. Office and Administrative Support Occupations.
3. Architecture and Engineering Occupations.
4. Building and Grounds Cleaning and Maintenance Occupations.
5. Installation, Maintenance, and Repair Occupations.
6. Management Occupations.
7. Healthcare Practitioners and Technical Occupations.
8. Farming, Fishing, and Forestry Occupations.
9. Protective Service Occupations.
10. Construction and Extraction Occupations.
11. Legal Occupations.
12. Personal Care and Service Occupations.
13. Sales and Related Occupations.
14. Community and Social Service Occupations.
15. Arts, Design, Entertainment, Sports, and Media Occupations.
16. Computer and Mathematical Occupations.
17. Business and Financial Operations Occupations.
18. Education, Training, and Library Occupations.
19. Life, Physical, and Social Science Occupations.
20. Healthcare Support Occupations.
21. Food Preparation and Serving Related Occupations.
22. Transportation and Materials Moving Occupations.
23. Other (please specify):

APPENDIX C:
SUPPLEMENTAL EXPLORATORY FACTOR ANALYSES FOR TRAIT
SPITEFULNESS

For the five items meant to assess ideal spite, the Kaiser-Meyer-Olkin measure indicated that the sample size was poor for this analysis, $KMO = .571$. The factor analysis extracted two factors, which explained 12.53% and 6.79% of the variance respectively. The first factor consisted of items 1, 2, and 3, and the second factor consisted of item 4. There were no double loadings on the factors, but the fifth item failed to load on any factor. It is not easily discernable why a two-factor solution came to be, as each item in the measure represents a scenario in which spite may arise. Given the poor sample size, in conjunction with the poor reliability of these five items (Cronbach's Alpha = .35), how spiteful an individual would be in an ideal world is much more difficult to adequately measure.

Table 10. Exploratory Factor Analysis Factor Loadings for Items Representing Realistic Trait Spitefulness.

<i>Item</i>	<i>Factor 1</i>	<i>Factor 2</i>
Ideal Item 1	0.39	
Ideal Item 2	0.47	
Ideal Item 3	0.40	
Ideal Item 4		0.54
Ideal Item 5		
Eigenvalue of Factor	0.63	12.53
% of Total Variance	0.34	6.79

Note: Extracted using Principle Axis Factoring. Rotated using Varimax rotation with Kaiser Normalization

When conducting a factor analysis with all ten items combined, the Kaiser-Meyer-Olkin measure indicated that the sample size was poor for this analysis, $KMO = .502$. The factor analysis extracted five factors, the first three of which explained 17.31%, 11.56%, and 8.84% of the variance, respectively. There were

multiple double loadings on factors. As the items used to measure realistic and ideal spite were identical, with the only difference between them being that one set asking what respondents would realistically do, and one set asking what respondents would ideally do, the extracted factors were mainly pairings of the same realistic and ideal spite items. Establishing a naming convention where A represents the realistic set of items and B represents the ideal set of items, items 1A, 2A, 2B, 3A, and 5A loaded onto factor 1. Items 3A and 3B loaded onto factor 2. Items 4A and 4B loaded onto factor 3 exclusively. Items 5A and 5B loaded onto factor 4. Items 1B and 2B loaded onto factor 5. Please refer to table 10 for complete factor loadings. As mentioned previously, the poor reliability of the ideal spite items implies that better items need to be developed to adequately measure ideal spite.

Table 11. Exploratory Factor Analysis Factor Loadings for Items Representing Realistic Trait Spitefulness and Ideal Trait Spitefulness.

<i>Item</i>	<i>Factor 1</i>	<i>Factor 2</i>	<i>Factor 3</i>	<i>Factor 4</i>	<i>Factor 5</i>
Realistic Item 1	0.42				
Realistic Item 2					0.34
Realistic Item 3	0.72				
Realistic Item 4	0.34				0.65
Realistic Item 5	0.43	0.67			
Ideal Item 1		0.79			
Ideal Item 2			0.70		
Ideal Item 3			0.75		
Ideal Item 4	0.36			0.65	
Ideal Item 5				0.66	
Eigenvalue of Factor	1.73	1.16	0.88	0.77	0.66
% of Total Variance	17.31	11.56	8.84	7.66	6.62

Note: Extracted using Principle Axis Factoring. Rotated using Varimax rotation with Kaiser Normalization

APPENDIX D:
SUPPLEMENTAL EXPLORATORY FACTOR ANALYSES FOR ENGAGEMENT
IN SPITEFULESS

When allowed to vary freely the first factor analyses extracted seven factors, the first three factors of which explained 26.70%, 7.55%, and 5.28% of the variance respectively. Please refer to Table 11 for complete factor loadings. Items 1, 2, 4, 7, 11, 14, 15, 16, and 17 loaded onto Factor 1. Items 8, 9, 10, 12, 13, 14, and 15 loaded onto Factor 2. Items 5, 6, 9, 13, and 15 loaded onto Factor 3. Items 17, 18, and 20 loaded onto Factor 4. Items 18, 21, and 22 loaded onto Factor 5. Items 1 and 8 loaded onto Factor 6. Item 3 loaded onto Factor 7. As there were no discernable patterns evident, and as the variance of each factor after the third factor was notably small, we conclude that a seven-factor solution is not ideal.

Table 12. Factor Analysis Table for Pattern Matrix Loadings.

<i>Item</i>	<i>Factor</i> 1	<i>Factor</i> 2	<i>Factor</i> 3	<i>Factor</i> 4	<i>Factor</i> 5	<i>Factor</i> 6	<i>Factor</i> 7
Item 1	0.45					0.46	
Item 2	0.75						
Item 3							0.80
Item 4	0.39						
Item 5			0.64				
Item 6			0.74				
Item 7	0.76						
Item 8		0.32				0.70	
Item 9		0.35	0.46				
Item 10		0.67					
Item 11	0.60						
Item 12		0.75					
Item 13		0.57	0.38				
Item 14	0.39	0.44					
Item 15	0.47	0.31	0.33				
Item 16	0.74						
Item 17	0.42			0.58			
Item 18				0.35	0.32		
Item 19							
Item 20				0.81			
Item 21					0.49		
Item 22					0.79		
Eigenvalue of Factor	5.87	1.66	1.16	0.90	0.79	0.72	0.65
% of Total Variance	26.70	7.55	5.28	4.08	3.59	3.25	2.97

Note: Extracted using Principle Axis Factoring. Rotated using Varimax rotation with Kaiser Normalization

The third factor analysis was set to extract three factors, which explained 26.16%, 7.03%, and 4.57% of variance respectively. Please refer to table 9 for complete factor loadings. Few double loadings were present among factors. Items 1, 2, 4, 7, 11, 15, 16, 17, and 22 loaded onto factor 1. Items 5, 6, 8, 9, 10, 11, 12, 13, 14, and 15 loaded onto factor 2. Items 13, 17, 18, 20, 21, and 22

loaded onto factor three. There were no discernable differences in what was being captured by the factors. The two-factor solution appears to be the best solution as distinct differences are present.

Table 13. Factor Analysis Table for Pattern Matrix Loadings.

<i>Item</i>	<i>Factor 1</i>	<i>Factor 2</i>	<i>Factor 3</i>
Item 1	0.53		
Item 2	0.77		
Item 3			
Item 4	0.48		
Item 5		0.39	
Item 6		0.55	
Item 7	0.71		
Item 8		0.41	
Item 9		0.58	
Item 10		0.63	
Item 11	0.61	0.33	
Item 12		0.60	
Item 13		0.73	0.31
Item 14		0.40	
Item 15	0.48	0.49	
Item 16	0.74		
Item 17	0.37		0.53
Item 18			0.51
Item 19			
Item 20			0.71
Item 21	0.37		0.36
Item 22			0.37
Eigenvalue of Factor	5.76	1.55	1.01
% of Total Variance	26.16	7.03	4.57

Note: Extracted using Principle Axis Factoring. Rotated using Varimax rotation with Kaiser Normalization

APPENDIX E:
INFORMED CONSENT

INFORMED CONSENT

The study in which you are being asked to participate is designed to investigate the spite and personality traits that contribute to spitefulness. This study is being conducted by Arturo Covarrubias-Paniagua under the supervision of Ismael Diaz, *Assistant Professor of Psychology, California State University, San Bernardino*. This study has been approved by the Institutional Review Board, California State University, San Bernardino.

PURPOSE: This study investigates the correlation between individual's engagement in spiteful acts and various personality traits.

DESCRIPTION: A survey will be administered through either SONA or a direct link. The survey will consist of yes/no, multiple choice, Likert-scale, and free-response questions. There are approximately 250 questions.

PARTICIPATION: Your participation in this study is completely voluntary, and you do not have to answer any questions you do not wish to answer. You may skip or not answer any questions and can freely withdraw from participation at any time.

ANONYMITY: Your name, positions, responses, or any other identifying information will not be attached to your data in any way, so all your responses will be completely anonymous.

DURATION: This survey should take approximately 30 – 35 minutes to complete.

RISKS: This study entails no risks to the participants.

BENEFITS: Student participants will be provided with 1.5 points of SONA credit. Regular participants will be provided with no benefits.

CONTACT: If you have any questions about the study, or wish to hear about the results, please feel free to contact Arturo Covarrubias-Paniagua at Arturo.Covarrubias-Paniagua@csusb.edu.

RESULTS: Results from this study may be presented at scientific conferences and may also be submitted for publication in scientific journals.

CONFIRMATION STATEMENT:

I have read the information above and agree to participate in your study.

SIGNATURE:

Signature: _____ Date: _____

APPENDIX F:
INSTITUTIONAL REVIEW BOARD APPROVAL



October 7, 2019

CSUSB INSTITUTIONAL REVIEW BOARD
Administrative/Exempt Review Determination
Status: Determined Exempt
IRB-FY2020-8

and Ismael Diaz
Department of CSUSB, CSBS - Psychology
California State University, San Bernardino
5500 University Parkway
San Bernardino, California 92407

Dear Ismael Diaz :

Your application to use human subjects, titled "Spitefulness Construct" has been reviewed and approved by the Chair of the Institutional Review Board (IRB) of California State University, San Bernardino has determined that your application meets the requirements for exemption from IRB review Federal requirements under 45 CFR 46. As the researcher under the exempt category you do not have to follow the requirements under 45 CFR 46 which requires annual renewal and documentation of written informed consent which are not required for the exempt category. However, exempt status still requires you to attain consent from participants before conducting your research as needed. Please ensure your CITI Human Subjects Training is kept up-to-date and current throughout the study.

Your IRB proposal (**Spitefulness Construct; FY2020-8**) is approved. You are permitted to collect information from **[200]** participants for **[1.5 SONA units]** from **[CSUSB and other social media forms specified in the proposal]**. This approval is valid from **[10/8/2019]** to **[10/5/2020]**.

The CSUSB IRB has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval notice does not replace any departmental or additional approvals which may be required.

Your responsibilities as the researcher/investigator include reporting to the IRB Committee the following three requirements highlighted below. Please note failure of the investigator to notify the IRB of the below requirements may result in disciplinary action.

- Submit a protocol modification (change) form if any changes (no matter how minor) are proposed in your study for review and approval by the IRB before implemented in your study to ensure the risk level to participants has not increased,
- If any unanticipated/adverse events are experienced by subjects during your research, and
- Submit a study closure through the Cayuse IRB submission system when your study has ended.

The protocol modification, adverse/unanticipated event, and closure forms are located in the Cayuse IRB System. If you have any questions regarding the IRB decision, please contact Michael Gillespie, the Research Compliance Officer. Mr. Michael Gillespie can be reached by phone at (909) 537-7588, by fax at (909) 537-7028, or by email at mgillesp@csusb.edu. Please include your application approval identification number (listed at the top) in all correspondence.

If you have any questions regarding the IRB decision, please contact Dr. Jacob Jones, Assistant Professor of Psychology. Dr. Jones can be reached by email at Jacob.Jones@csusb.edu. Please include your application approval identification number (listed at the top) in all correspondence.

Best of luck with your research.

Sincerely,

Donna Garcia

Donna Garcia, Ph.D., IRB Chair
CSUSB Institutional Review Board

DG/MG

REFERENCES

- Ashton, M. C., & Lee, K. (2009). The HEXACO–60: A short measure of the major dimensions of personality. *Journal of Personality Assessment, 91*(4), 340-345.
- Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211.
- American Psychological Association. (2002). Ethical principles of psychologists and code of Conduct. *American Psychologist, 57*(12). doi: 10.1037//0003-066X.57.12.1060
- Bailey, C. A., & Ostrov, J. M. (2008). Differentiating forms and functions of aggression in emerging adults: associations with hostile attribution biases and normative beliefs. *Journal of Youth and Adolescence, 37*(6), 713-722.
- Berkowitz, L. (1993). *Aggression: Its causes, consequences, and control*. Mcgraw-Hill Book Company.
- Bettencourt, B., Talley, A., Benjamin, A. J., & Valentine, J. (2006). Personality and aggressive behavior under provoking and neutral conditions: A meta-analytic review. *Psychological Bulletin, 132*(5), 751.
- Björkqvist, K. (2018). Gender differences in aggression. *Current Opinion in Psychology, 19*, 39-42.
- Bobocel, D. R. (2013). Coping with unfair events constructively or destructively: The effects of overall justice and self–other orientation. *Journal of Applied Psychology, 98*(5), 720.

- Book, A., Visser, B. A., Volk, A., Holden, R. R., & D'Agata, M. T. (2019). Ice and fire: Two paths to provoked aggression. *Personality and Individual Differences, 138*, 247-251.
- Cortina, L. M., Magley, V. J., Williams, J. H., & Langhout, R. D. (2001). Incivility in the workplace: incidence and impact. *Journal of Occupational Health Psychology, 6*(1), 64.
- Cropanzano, R., & Mitchell, M. S. (2005). Social Exchange Theory: an interdisciplinary review. *Journal of Management, 31*(6), 874-900.
- Coelho, G. L., Monteiro, R. P., Hanel, P. H., Vilar, R., Gouveia, V. V., & Maio, G. R. (2018). Psychometric parameters of an abbreviated vengeance scale across two countries. *Personality and Individual Differences, 120*, 185-192.
- Cooke, E. M. (2016). *A multi-group confirmatory factor analysis of the reactive-proactive aggression questionnaire in a sample of young adults* (Unpublished doctoral dissertation). Sam Houston State University, Texas, United States of America.
- Denson, T. F., DeWall, C. N., & Finkel, E. J. (2012). Self-control and aggression. *Current Directions in Psychological Science, 21*(1), 20-25.
- Eckblad, M. & Chapman, L. J. (1986). Development and validation of a scale for hypomanic personality. *Journal of Abnormal Psychology, 95*, 214-222.
- Edwards, J. R., & Clawson, J. G. (1992). Assessing your behavior pattern.

- Einarsen, S. (1999). The nature and causes of bullying at work. *International Journal of Manpower, 20*(1/2), 16-27.
- Einarsen, S., Hoel, H., & Notelaers, G. (2009). Measuring exposure to bullying and harassment at work: Validity, factor structure and psychometric properties of the Negative Acts Questionnaire-Revised. *Work & Stress, 23*(1), 24-44.
- Eisenberger, R., Lynch, P., Aselage, J., & Rohdieck, S. (2004). Who takes the most revenge? Individual differences in negative reciprocity norm endorsement. *Personality and Social Psychology Bulletin, 30*(6), 787-799.
- Ewing, D., Zeigler-Hill, V., & Vonk, J. (2016). Spitefulness and deficits in the social-perceptual and social-cognitive components of Theory of Mind. *Personality and Individual Differences, 91*, 7-13.
- Forber, P., & Smead, R. (2014). The evolution of fairness through spite. *Proceedings of the Royal Society B: Biological Sciences, 281*(1780), 20132439.
- Forber, P., & Smead, R. (2016). The evolution of spite, recognition, and morality. *Philosophy of Science, 83*(5), 884-896.
- Foster, K. R., Wenseleers, T., & Ratnieks, F. L. (2001). Spite: Hamilton's unproven theory. *Annales Zoologici Fennici, 38*(229-238).
- Gao, Y., & Tang, S. (2013). Psychopathic personality and utilitarian moral judgment in college students. *Journal of Criminal Justice, 41*(5), 342-349.

- Gardner, A., & West, S. A. (2004). Cooperation and punishment, especially in humans. *The American Naturalist*, 164(6), 753-764.
- Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R., & Gough, H. G. (2006). The international personality item pool and the future of public-domain personality measures. *Journal of Research in Personality*, 40(1), 84-96.
- Goodwin, B. E., Sellbom, M., & Salekin, R. T. (2015). Elucidating the construct validity of the Antisocial Process Screening Device (APSD) in a sample of young adults. *Journal of Psychopathology and Behavioral Assessment*, 37(1), 1-11.
- Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *American sociological review*, 161-178.
- Gruys, M. L., & Sackett, P. R. (2003). Investigating the dimensionality of counterproductive work behavior. *International Journal of Selection and Assessment*, 11(1), 30-42.
- Hamilton, W. D. (1970). Selfish and spiteful behaviour in an evolutionary model. *Nature*, 228(5277), 1218-1220.
- Hamilton, W. D. (1971). Geometry for the selfish herd. *Journal of Theoretical Biology*, 31(2), 295-311.
- Hee, O. C. (2014). Validity and reliability of the big five personality traits scale in Malaysia. *International Journal of Innovation and Applied Studies*, 5(4), 309.

- Helfritz-Sinville, L. E., & Stanford, M. S. (2014). Hostile attribution bias in impulsive and premeditated aggression. *Personality and Individual Differences, 56*, 45-50.
- Jensen, K. (2010). Punishment and spite, the dark side of cooperation *Philosophical Transactions of the Royal Society B: Biological Sciences, 365*(1553), 2635-2650.
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). The big five inventory—versions 4a and 54.
- John, O. P., & Srivastava, S. (1999). The Big Five Trait Taxonomy: History, measurement, and theoretical perspectives. *Handbook of Personality: Theory and Research, 2*(1999), 102-138.
- Kimbrough, E. O., & Reiss, J. P. (2012). Measuring the distribution of spitefulness. *PloS ONE, 7*(8), e41812.
- Krings, F., & Bollmann, G. (2011). Managing counterproductive work behaviors. In G. Palazzo & M. Wentland (Eds.), *Responsible Management Practices for the 21st Century* (pp. 151-159). Paris: Pearson
- Levin, S. A. (2014). Public goods in relation to competition, cooperation, and spite. *Proceedings of the National Academy of Sciences, 111*(3), 10838-10845.
- Marsee, M.A., Barry, C.T., Childs, K.K., Frick, P.J., Kimonis, E.R., Centifanti (nee Munoz), L.C., Aucoin, K.J., Fassnacht, G.M., Kunimatsu, M.M., and Lau, K.S., (2011). Assessing the forms and functions of aggression using

- self-report: factor structure and invariance of the Peer Conflict Scale in youths. *Psychological Assessment*, 23(3), 792-804.
- Marcus, D. K., Zeigler-Hill, V., Mercer, S. H., & Norris, A. L. (2014). The psychology of spite and the measurement of spitefulness. *Psychological Assessment*, 26(2), 563.
- Mast, M. S., & Hall, J. A. (2004). Who is the boss and who is not? Accuracy of judging status. *Journal of Nonverbal Behavior*, 28(3), 145-165.
- McAuliffe, K., Blake, P. R., & Warneken, F. (2014). Children reject inequity out of spite. *Biology letters*, 10(12), 20140743.
- Mitchell, M. S., & Ambrose, M. L. (2007). Abusive supervision and workplace deviance and the moderating effects of negative reciprocity beliefs. *Journal of Applied Psychology*, 92(4), 1159.
- O'Neill, T. A., Lewis, R. J., & Carswell, J. J. (2011). Employee personality, justice perceptions, and the prediction of workplace deviance. *Personality and individual differences*, 51(5), 595-600.
- Poteat, V. P., Kimmel, M. S., & Wilchins, R. (2011). The moderating effects of support for violence beliefs on masculine norms, aggression, and homophobic behavior during adolescence. *Journal of Research on Adolescence*, 21(2), 434-447.
- Pearson, C. M., Andersson, L. M., & Porath, C. L. (2005). Workplace incivility. In S. Fox & P. E. Spector (Eds.), *Counterproductive Work Behavior:*

Investigations of Actors and Targets (177-200). Washington, DC, US: American Psychological Association.

- Pillutla, M. M., & Murnighan, J. K. (1996). Unfairness, anger, and spite: emotional rejections of ultimatum offers. *Organizational Behavior and Human Decision Processes*, 68(3), 208-224.
- Raine, A., Dodge, K., Loeber, R., Gatzke-Kopp, L., Lynam, D., Reynolds, C., Stouthamer-Loeber, M., & Liu, J. (2006). The Reactive–Proactive Aggression Questionnaire: Differential correlates of reactive and proactive aggression in adolescent boys. *Aggressive Behavior: Official Journal of the International Society for Research on Aggression*, 32(2), 159-171.
- Ratnieks, F. L., Foster, K. R., & Wenseleers, T. (2011). Darwin's special difficulty: the evolution of “neuter insects” and current theory. *Behavioral ecology and sociobiology*, 65(3), 481-492.
- Restubog, S. L. D., Garcia, P. R. J. M., Wang, L., & Cheng, D. (2010). It's all about control: The role of self-control in buffering the effects of negative reciprocity beliefs and trait anger on workplace deviance. *Journal of Research in Personality*, 44(5), 655-660.
- Restubog, S. L. D., Zagencyk, T. J., Bordia, P., Bordia, S., & Chapman, G. J. (2015). If you wrong us, shall we not revenge? Moderating roles of self-control and perceived aggressive work culture in predicting responses to psychological contract breach. *Journal of Management*, 41(4), 1132-1154.

- Smead, R., & Forber, P. (2012). The evolutionary dynamics of spite in finite populations. *Evolution: International Journal of Organic Evolution*, 67(3), 698-707.
- Spector, P. E., Bauer, J. A., & Fox, S. (2010). Measurement artifacts in the assessment of counterproductive work behavior and organizational citizenship behavior: Do we know what we think we know? *Journal of Applied Psychology*, 95(4), 781.
- Stanford, M. S., Houston, R. J., Mathias, C. W., Villemarette-Pittman, N. R., Helfritz, L. E., & Conklin, S. M. (2003). Characterizing aggressive behavior. *Assessment*, 10, 183–190.
- Stanton, K., Cruitt, P., Kent, A., Stasik-O'Brien, S. M., Ellickson-Larew, S., & Watson, D. (2017). Measures of psychopathology characterized by dominance: articulating their structure and relations with personality and other psychopathology. *Journal of Psychopathology and Behavioral Assessment*, 39(4), 605-619.
- Stuckless, N., & Goranson, R. (1992). The Vengeance Scale: Development of a measure of attitudes toward revenge. *Journal of Social Behavior and Personality*, 7(1), 25.
- Thompson, M., Carlson, D., Hunter, E., & Whitten, D. (2016). We all seek revenge: The role of honesty-humility in reactions to incivility. *Journal of Behavioral and Applied Management*, 17(1), 1165.

- Tremblay, P. F., & Belchevski, M. (2004). Did the instigator intend to provoke? A key moderator in the relation between trait aggression and aggressive behavior. *Aggressive Behavior, 30*(5), 409-424.
- Vrabel, J. K., Zeigler-Hill, V., & Shango, R. G. (2017). Spitefulness and humor styles. *Personality and Individual Differences, 105*, 238-243.
- Vroom, V. (1964). Expectancy theory. *Work and motivation*.
- Wu, L. Z., Zhang, H., Chiu, R. K., Kwan, H. K., & He, X. (2014). Hostile attribution bias and negative reciprocity beliefs exacerbate incivility's effects on interpersonal deviance. *Journal of Business Ethics, 120*(2), 189-199.
- Zeigler-Hill, V., Noser, A. E., Roof, C., Vonk, J., & Marcus, D. K. (2015). Spitefulness and moral values. *Personality and Individual Differences, 77*, 86-90.
- Zeigler-Hill, V., & Noser, A. E. (2018). Characterizing spitefulness in terms of the DSM-5 model of pathological personality traits. *Current Psychology, 37*(1), 14-20.