WISDOM AND POST-TRANSGRESSION RESPONSES: A COGNITIVE AND

BEHAVIOURAL PERSPECTIVE

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Abstract

Despite psychology's renewed interest in the ancient notion of wisdom, few studies have examined how wisdom influences victims' post-transgression responses (PTRs). It was hypothesized that wiser (vs. low-wisdom) victims of transgressions would respond to an interpersonal transgression using more forgiveness and inhibition, and less grudge, revenge, and behavioural aggression (hypothesis 1). It was also predicted that the relation between victims' wisdom and their PTRs would depend on the intent of the transgressor (unintentional, intentional) (hypothesis 2). Results ($N = 137$) confirmed that wisdom was associated with higher forgiveness, and lower unforgiveness. However, wisdom did not predict inhibition and behavioural aggression. In addition, the interaction between victims' wisdom and transgressors' intent predicted forgiveness and grudge, but not inhibition, revenge, and behavioural aggression. A reconciliation index was also predicted by wisdom directly, and by the interaction of wisdom and intent. Overall, wiser individuals appear to be more prosocial following a transgression.

Dedication

This thesis is dedicated to my mother, whose unconditional compassion kept me hopeful in uncertain times, my father whose strength encouraged me to be bold in face of life challenges, and my brother whose presence has filled my life with joy.

Acknowledgement

I would like to thank my supervisor, Dr. Ward Struthers for his exceptional dedication to his students and scientific research. He spent tens of hours every month, beyond what is expected from a graduate supervisor, to help me learn the process of research. He was always open to my diverse research interests, and did not try to change my direction. Instead, he patiently walked me through the systematic ways of approaching them. I feel eternally blessed to have this relationship with such an inspiring mentor and human being.

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Introduction

"Between stimulus and response there is a space. In that space is our power to choose our response. In our response lies our growth and our freedom."

-Victor Frankl, Man's Search for Meaning

As fundamentally social beings, we are motivated to build and sustain relationships with other individuals (Baumeister & Leary, 1995). However, human relationships are rife with conflicts. Research shows that approximately 40 to 50% of marriages in North America end in divorce (Family Life – Divorce, n.d.; Popenoe & Whitehead, 2007). Moreover, a study of conflict in the workplace showed that 99% of the responders had experience with conflict at some point, and around 40 percent mentioned that they deal with conflicts all the time (Psychometrics, 2009). Such conflicts originate from perceived interpersonal transgressions, defined as violations of social norms (Exline, Baumeister, Zell, Kraft, & Witvliet, 2008) or any offense that is deemed unjust and hurtful. Victims of such transgressions often experience threat (McGregor, Nash, Mann, & Phills, 2010) and respond in variety of ways including harboring a grudge, seeking revenge, or forgiving (Worthington, 2006; Worthington & Sotoohi, 2011). It is also possible to suppress the desire for an immediate response to a transgression and act in inhibitory ways by using cognitive inhibition (See Gorfein & MacLeod, 2007 for a review) or cognitive control (Diamond, 2013).

Each of these post-transgression responses (PTRs) can have adaptive and maladaptive effects on the outcome and trajectory of interpersonal relationships and therefore it is important to better understand what factors influence victims' choice of PTR (McCullough, Kurzban, & Tabak, 2013; McNulty, 2010). In this thesis, it is proposed that making appropriate decisions about responding to transgressions require a combination of insight, experience, knowledge,

equanimity, perspective taking, context-appropriate analysis, agency, and an ethical value system as a guiding principle. One individual difference that captures these qualities is wisdom.

Wisdom

Until recently, scientific exploration of wisdom has been largely neglected (Blanchard-Fields & Norris, 1995). One of the early discussions of wisdom is from Aristotle, who distinguished between sophia or theoretical wisdom, and phronesis which is translated as practical wisdom (Osbeck & Robinson, 2005). Both sophia and phronesis were deemed necessary for experiencing a good life, however, sophia was given a higher status as it was functional in seeking the truth. Recently, a comparable distinction has been made between personal wisdom and general wisdom (Mickler & Staudinger, 2008). Personal wisdom refers to the capacity of an individual to understand and successfully handle a personal predicament such as a conflict with a partner or a colleague. Conversely, general wisdom concerns one's ability to understand and advise another person on an appropriate approach toward solving a problem.

Even though this research is concerned with the personal aspect of wisdom, it is necessary to mention that personal and general wisdom should not be considered as distinct entities. It is indeed beneficial to distinguish between advice giving and applying recommendations in one's life, but these two sides of wisdom are interdependent and co-develop. For example, it is unlikely that a person would have an authentic and deep insight about the problems of other people without having an analogous insight in his/her own life. That is why counsellors and psychotherapists, in order to become more adept helpers, are encouraged to seek personal growth as part of their training (Sanders, 2011).

Despite the breadth of conceptualizations of wisdom, there is a meaningful degree of overlap in terms of how it is conceptualized (Staudinger & Glück, 2011). Paul Baltes, Ursula

Staudinger, and their colleagues described wisdom as an expert knowledge system regarding practical issues of life (Baltes & Smith, 1990; Baltes & Staudinger, 2000). They postulated that wisdom becomes apparent when this expert knowledge system is applied during problem solving. Furthermore, there is an important emphasis on striking a balance between intra-, inter-, and trans-personal interests while applying this expert knowledge system (Sternberg, 1998). Difficult life situations, books, and good mentors are considered as some sources of gaining wisdom (Baltes & Staudinger, 2000). It is also generally agreed that wisdom is a multidimensional construct (e.g., Ardelt, 1997; Labouvie-Vief, 1990; Sternberg, 1998).

For the purpose of this thesis, wisdom is defined as a highly developed stage of perceptual growth (Erikson & Erikson, 1997; Maslow, 1943). This perceptual growth facilitates two capacities. First, it affords a genuine desire and the necessary skills to cultivate interpersonal harmony. Second, it allows an individual to contemplate and remain open toward what is not yet, or cannot be known.

One consequence of this expanded perception is that a wiser person would process the incoming information from a neutral perspective, without rigid schemas that would activate automatic and instinctual patterns of response. This non-automatic information processing may also delay, and possibly eliminate the need to show an immediate response when facing an unexpected event.

In addition, an openness toward the realm of the unknown may allow a wiser individual to consider a wide host of reasons behind the occurrence of events, including chance, and therefore would reduce the likelihood of using antagonistic and hostile reactions toward others. In other words, wiser individuals' capacity for contextualization of events (Baltes & Smith, 1990) can reduce their impulsive decision making.

Given that decision making is the capacity most frequently emphasized among various theories of wisdom (Bangen, Meeks, & Jeste, 2013), it is argued that studying how wiser individuals decide to respond following interpersonal transgressions may help illuminate what PTRs have more adaptive properties.

Wisdom and PTRs

Wisdom and Forgiveness

Although the blanket use of forgiveness can lead to experiencing abuse by transgressors (McNulty, 2010), when used aptly, it is beneficial to victims' personal health (Witvliet, Ludwig, & Vander Laan, 2001), and relationships (Braithwaite, Selby, & Fincham, 2011), and therefore facilitates the intra- and inter-personal aspects of wisdom (Sternberg, 1998). Recent theoretical (e.g., Ardelt, 2008; Wink & Dillon, 2013) and empirical (Plews-Ogan, May, Owens, Ardelt, Shapiro, & Bell, 2016) evidence has linked forgiveness to wisdom. Bergsma and Ardelt (2012) argue that wiser individuals have a deep and empathic understanding of other people, and therefore, have a proclivity toward the use of compassionate love and forgiveness when encountered with negative experiences (Ardelt, 2008). Moreover, given that wisdom is associated with seeking a balance between personal and interpersonal interests for reaching a common good (Sternberg, 1998), it can be argued that a wise victim of a transgression would have a stronger motivation to let go of an interpersonally negative incident. Therefore, it is suggested in this thesis that, compared to those lower in wisdom, wiser individuals would have a greater tendency to use forgiveness when they face interpersonal transgressions. It is also reasonable to examine wisdom's role in unforgiving responses such as seeking revenge or holding a grudge as they can also be adaptive (McCullough, Kurzban, & Tabak, 2013).

Wisdom and Unforgiveness

Grudge. Harboring a grudge or holding onto a negative sentiment toward a transgressor, is viewed as an intra- and inter-personally harmful PTR (Witvliet, Ludwig, & Vander Laan, 2001). However, it has the benefit of keeping a victim vigilant against possible future harms. One factor that prevents grudge from turning into vengeance is whether the victim is high in power or not (Struthers, 2015). Therefore, even though grudge has a utilitarian value, it can also increase the possibility of rumination and anger (Bushman, 2002), which, in the long run, may outweigh the benefit of staying vigilant on a chronic basis. Also, given that wiser individuals have a compassionate and empathic approach toward their social interactions (Ardelt, 2008), they may find it easier to move past a transgression and experience lower levels of grudge compared to those low in wisdom.

Revenge. Taking revenge is commonly seen as a maladaptive and irrational response to a transgression as it can escalate a conflict and trigger long-term animosity between the parties involved (Jacoby, 1983). However, there is a growing body of evidence showing that vengeance can also be seen as an adaptive response to transgressions (McCullough, 2008). From a pragmatic view, whether vengeance is an adaptive or maladaptive response to transgressions depends on the context of a transgression. In an anarchic environment, revenge could play the role of preventing injustice and can deter a potential transgressor from inflicting harm. However, when justice can be established without personal input (e.g., through a judicial system), revenge becomes a futile act. Despite the value of following a pragmatic approach, wiser individuals may transcend a utilitarian view of establishing justice (Curnow, 1999) and therefore avoid revenge as much as possible, even when they are the victim of an unjust harm. Reasons for this speculation can lie in wiser people's capacity for empathy (Ardelt, 2008), their high standards for morality (Sternberg, 1998), or their perceived sense of interconnectedness between individuals. Given that

revenge can take the form of aggressive and destructive social behaviours, it would also be important to examine whether wisdom would also lead to lower aggression.

A study in which participants were given the opportunity to take revenge showed that participants were inaccurate about forecasting their emotional state after taking revenge (Carlsmith, Wilson, & Gilbert, 2008). Those who were given the opportunity to take revenge reported worse feelings after exacting revenge, compared to those who were not given this opportunity. Ironically, in the next phase of the study, both groups mentioned that taking revenge would boost their feelings whereas revenge had actually worked against those who were given this opportunity. A possible explanation is that avengers keep the transgression alive through rumination, but those who are not given this opportunity will trivialize the harm. Importantly, this is also in line with the idea that wisdom concerns the long-term benefits of an action, regardless of how it manifests itself in the short run (Sternberg, 1998).

I do not equate grudge and revenge as they play different roles in our interpersonal interactions, and it may be plausible to even associate the contemplative aspect of grudge with wiser reasoning. However, given that revenge and grudge (together labelled as unforgiveness) involve antisocial cognitions, it is proposed in this thesis that they don't represent wise functioning because wisdom entails a prosocial orientation (Ardelt, 2008). Therefore, it is proposed that in general, wiser individuals are lower in their proclivity toward unforgiveness.

Wisdom and Inhibition

The notion of inhibition, as a mode of PTR, was partially adapted from the concept of inhibitory control, defined as the ability to intentionally (or unintentionally) inhibit and regulate a strong or automatic behavioural or attentional response (Gorfein & MacLeod, 2007). Inhibition is defined as the capacity of a transgression victim to supress their response toward the

transgressor. This thesis is not concerned with the specific mechanism or motivation behind such a suppression, but it is suggested that inhibition could occur through either a trivialization of the transgression or a simple decision to observe the transgression situation from a non-judgmental perspective. Also, inhibition is different from avoidance as avoidance connotes a reactive and aversive attitude which is other-focused, whereas inhibition is a self-directed, non-reactive, and non-judgmental orientation. The wisdom literature has not directly addressed this capacity in wiser individuals, but research on self-regulation, which is a key component of wisdom (e.g., Clayton & Birren, 1980; Webster, 2003), suggests that individuals who are more adept at self-regulation, are better able to inhibit behaviours that place them at the risk of group exclusion (Heatherton, 2011). As an extension of this idea, it is proposed that inhibition is a major component of wisdom, as wise individuals are conceptualized as those who, in addition to the aforementioned characteristics, are more proactive (agentic) and less reactive.

Wisdom and Understanding the Context

Perception of intent. Psychology research has shown that individuals' perceptions of their environment, social interactions, and information in general, can be tainted by personal biases (Caverni, Fabré, & Gonzalez, 1990). For example, individuals tend to pay attention to situational factors when they commit a misdeed but attribute a similar wrongdoing to another person's character or personality (Ross, 1977). In general, people tend to interpret situations differently when it concerns themselves (Leary, 2005). This self-serving perspective can get even more difficult to overcome when a person is experiencing anger (Thiel, Connelly, & Griffith, 2011), a common emotion that follows the experience of a transgression. Wiser individuals' perspective-taking capacity may help reduce biased reasoning in difficult situations (Baltes & Staudinger, 2000). In line with this view, Zen Buddhism, considered a tradition for seeking wisdom,

encourages people to be skeptical of self-serving judgements (Leary, 2005). Moreover, an accurate understanding of the intentions of other individuals is an integral component of mentalization (or theory of mind; Wellman & Liu, 2004; Woodward, Sommerville, & Guajardo, 2001), and moral judgment (Killen & Smetana, 2008; Turiel, 2006), which are considered as building blocks of wisdom among other factors.

Many wisdom scholars have also argued that wisdom entails a self-transcendent and impartial access to reality (e.g., Ardelt, 2000; Kekes, 1995; Kramer, 2000). Thus, given that wiser people's perception is not heavily influenced by self-serving partiality, they should perceive the intent of a transgressor in a non-judgmental manner. This can in turn allow them to perceive the inevitably situation-dependent and complex nature of human actions, reduce their predisposition toward judging a transgressor's action as vicious, and therefore increase their tendency toward reacting with a prosocial response.

Using unforgiveness is not always unwise. Under severe transgressions, an unforgiving attitude may be justifiable as prosocial responses can render the victim incapable of functioning, or it may undermine morality (McCullough, Kurzban, & Tabak, 2013). However, I propose that from a general perspective, wisdom affords an enhanced tolerance for transgressions. As a result, wiser individuals, due to their lower tendency to attribute intent to transgressors, are more likely to use forgiveness and inhibition, and less likely to use unforgiveness.

Perception of frequency. Wiser individuals are also postulated to be highly adept at processing a broad perspective (Peterson & Seligman, 2004) and perhaps not too vulnerable to momentary perturbations. Following this view, it is plausible to argue that wiser individuals are not highly disconcerted with infrequent offenses, not only due to their higher empathic capacity, but also because ultimately, it may be unwise to stay involved in a transgression that may resolve

on its own or may never happen again. Disregarding, tolerating, forgiving, or adopting a neutral stance to an offense might be hurtful at the moment, but it can bring about social harmony and optimal self-development in the long run. This is in line with how wisdom is conceptualized as a balanced perspective between short-term and long-term goals (Sternberg, 1998). In addition, given that it is not uncommon to misperceive the reason for a transgression (Graham & Folkes, 1990), the higher tolerance of uncertainty (Baltes & Smith, 1990; Baltes & Staudinger, 2000) in wiser individuals may allow them to overlook a transgression, especially if it has happened for the first time. In contrast, despite wiser individuals' empathic capacity, when they are victims of frequent transgressions, they should be more likely to use unforgiving responses to regulate their relationships.

In one online study, we showed that wisdom positively predicted forgiveness and inhibition, but not unforgiveness (Eghbali, van Monsjou, Guilfoyle, & Struthers, 2017). In particular, participants read a transgression scenario and imagined themselves as the victim of a transgression at work. Two characteristics of the transgression were manipulated: intent of the transgressor (unintentional, intentional), and frequency of transgression (low, high). In the unintentional transgression condition, a colleague had deleted the participant's (victim's) important computer files by accident, whereas in the intentional transgression, the participant's files were deleted on purpose with the stated assumption that "they didn't seem important". In the low-frequency condition, it was the first time this had happened, whereas in the high-frequency condition, it was the third time this had happened. A significant three-way interaction between wisdom, intent, and frequency predicted forgiveness and inhibition but not unforgiveness (See Figure 1). The pattern of responses for forgiveness and inhibition were
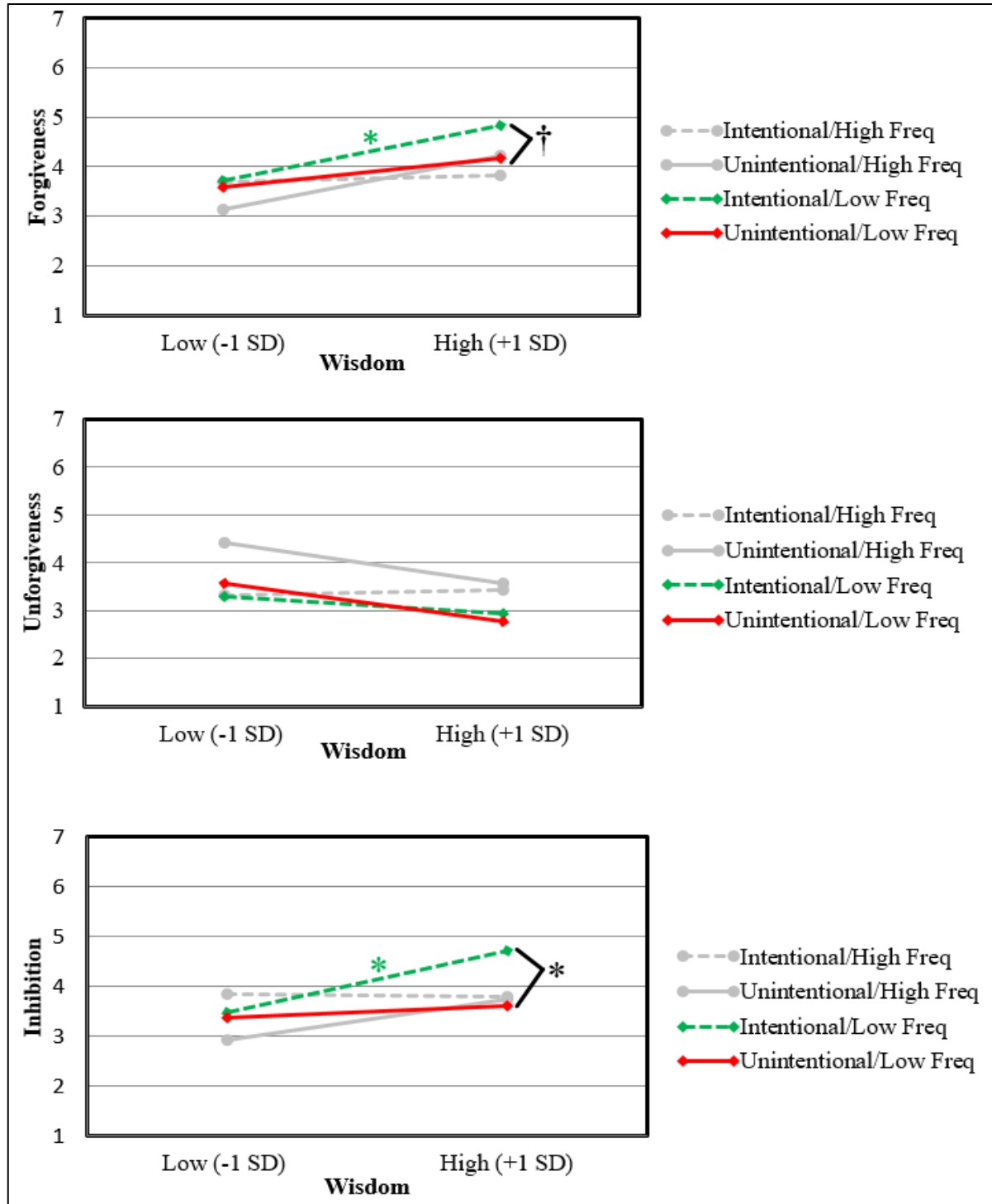
Figure 1. From Eghbali, van Monsjou, Guilfoyle, & Struthers (2017): PTRs in four transgression conditions (Intent: 2 levels x Frequency: 2 levels) at low and high levels of wisdom. Low-Wisdom represents one standard deviation below the mean, and High-Wisdom represents one standard deviation above the mean. Freq = Frequency.

similar. Although nonsignificant, the pattern of responses for unforgiveness was as expected, showing that wiser participants can be less unforgiving.

In general, wisdom was associated with higher levels of forgiveness and inhibition, especially with regard to unintentional and first-time transgressions. Those who are lower in wisdom (vs. high-wisdom participants) were more sensitive to a severe transgression (intentional, high-frequency condition) and seemed to have a higher tendency to take revenge or harbor a grudge in this condition.

Overview of the Current Research and Hypotheses

The role played by victims' wisdom on their PTRs is under-studied. Most research on wisdom is focused on explicating different dimensions of wisdom (e.g., Weststrate, Ferrari, & Ardelt, 2016) rather than examining its role in dealing with challenging life situations such as transgressions. The purpose of this thesis was to systematically replicate and extend the findings of the study described in the previous section (Eghbali et al., 2017). In addition, this study incorporated a number of methodological improvements including the use of a laboratory setting and a virtual confederate (as transgressor) to manipulate the transgression (rather than using participants' imagination). Participants' PTRs were also examined from both cognitive and behavioural perspectives. It was decided to specifically focus on the intent of the transgressor, because intent has been shown to be one of the most critical determinants of the outcome of interpersonal conflicts (Struthers, Eaton, Santelli, Uchiyama, & Shirvani, 2008). In particular, this research demonstrated that when a victim attributes intent to a transgressor's behaviour, it is difficult to restore harmony to a relationship, even after apologizing. However, because wisdom is associated with the cultivation of relationships and acceptance of uncertainty, it might be one factor that can influence victims' decision to respond in a prosocial manner. In addition, grudge

and revenge were examined separately (vs. unforgiveness as the combination of the two) to better understand their unique pattern as a function of their associations with wisdom and intent.

Therefore, this thesis examined the roles of victims' wisdom and transgressors' intent on victims' PTRs. Based on the previous theorizing, the following predictions were tested:

Hypothesis 1

Compared to those lower in wisdom, wiser individuals will be more likely to choose prosocial (forgiveness and inhibition) PTRs and less likely to choose antisocial (grudge, revenge, and behavioural aggression) PTRs toward transgressors.

Hypothesis 2

Wiser individuals (vs. those lower in wisdom) will be more sensitive to the context of a transgression (i.e., intent of the transgressor). In particular, they will be more likely to use forgiveness and inhibition, and less likely to use revenge, grudge, and behavioural aggression when facing transgressions that are low vs. high in intent.

Method

Design

This study used a wisdom by intent of transgressor (intentional, unintentional) quasi-experimental design to test the predictions. Wisdom was a continuous measured variable, whereas intent was a manipulated variable. The participants were randomly assigned to the different experimental conditions, and both self-reported (forgiveness, grudge, revenge, inhibition) and behavioural (aggression) measures of the dependent measures were taken.

Participants

Participants were undergraduate students who were enrolled in introductory psychology at York University. Based on an a priori power analysis to attain 80% power with a medium effect

size (Cohen's d = 0.50), and alpha of 0.05, 153 participants were tested in this study. A number

of participants were excluded (N=16) because of indiscriminate responding or if they were more

than 2 SD away from the mean on the manipulation check items. Therefore, the final sample size

was 137 (93 females, 1 unspecified). The sample was diverse in religion (43.07% Christian,

16.79% Muslim, 8.76% Atheist, 7.30% Agnostic, 2.19% Jewish, 6.57% Hindu, and 15.33%

Other) and ethnicity (29.20% Caucasian, 19.71% South Asian, 10.95% East Asian, 16.79%

Middle Eastern, 8.76% Black, 4.38% Latin American, 1.46 Aboriginal, and 8.76% who

identified as Other). On average, participants were 20.14 years old ($SD = 4.11$) and received 1%

toward their introductory psychology course in exchange for their participation.

Materials

  Wisdom. Wisdom was measured using the 12-item version of Three-Dimensional Wisdom

Scale (See Appendix A; 3D-WS-12; Thomas, Bangen, Ardelt, & Jeste 2015). The dimensions of

3D-WS-12 are cognitive, reflective, and compassionate dimensions. Previous analyses have

shown satisfactory construct, content, predictive, discriminant, and convergent validity for this

scale (Ardelt, 2003; Thomas, Bangen, Ardelt, & Jeste 2015). All items were measured using a 7-

point scale ranging from 1 = *Strongly disagree* to 7 = *Strongly agree*. The cognitive dimension (4

items) assesses the desire to understand the truth and gain an in-depth knowledge about life. An

example item from the cognitive dimension is "*A problem has little attraction for me if I don't*

think it has a solution" (reversed item). The reflective dimension (4 items) measures the capacity

for perspective taking and objectivity. An example item from the reflective dimension is

"*Sometimes I get so charged up emotionally that I am unable to consider many ways of dealing*

with my problems" (reversed item). The compassionate dimension (4 items) assesses individuals'

nurturing and caring capacities. An example item from the compassionate dimension is "*I don't like to get involved in listening to another person's troubles*" (reversed item).

Self-report PTRs. Participants also completed a self-report questionnaire that measured their forgiveness, grudge, revenge, and inhibition after experiencing a transgression in the laboratory (See Appendix B). Each of the 4 PTRs was measured using 2 items. Participants used a 7-point scale that ranged from 1 = *Strongly disagree* to 7 = *Strongly agree*, to indicate the degree to which they were inclined toward using each of the 4 PTRs toward the other participant. The items were presented as a "Disrupted Session Form" in order to restrict participants' ability to guess the research hypotheses (see the procedure section for details). An example **forgiveness** item was, "*I have forgiven my research partner.*" An example **grudge** item was "*I am holding onto my negative sentiment toward this person.*" An example **revenge** item was "*I feel vengeful toward my partner in this study.*" An example **inhibition** item was, "*I decided not to get emotionally involved in what happened.*" Higher score in each of the PTRs indicated more of that PTR.

Manipulation checks. Two questions assessed the degree to which participants perceived the behaviour of the other participant (the transgressor) as intentional. The first manipulation check question was "*My research partner had no intent in causing the incident*" and the second question was "*The incident that occurred in this study was intentional*."

Procedure

This research was conducted in a laboratory setting and it was framed as a study on attention and social interactions. Participants were led to believe that 4 participants would be beginning the study at the same time in 4 different rooms in the building and that after responding to a questionnaire in the first part of the study, the computer would randomly connect

each participant to another participant (their partner and teammate) in another room in order to complete two joint tasks. In fact, there were no other participants in other rooms and these interactions were all programmed responses by the computer. In other words, participants interacted with a virtual partner. After the introduction, participants completed a questionnaire assessing demographic variables and a wisdom scale.

Transgression and false feedback. Next, participants were informed that they would take part in five rounds of Boggle, a word search game, in which their team (they and their partner) would play against another team (the other 2 players). The computer screen then showed that they were connected to their partner, named "Mike." The instructions informed them that they and Mike would play separate Boggles games but their scores would be combined and compared to the other team to determine who the winner is. Instructions also indicated that they had a chance to win $100 if their team achieved the highest score. In each round of Boggle, participants had 60 seconds to identify and type as many words as possible from a matrix of letters. The matrices of letters were designed to be simple and participants were instructed to detect and enter any word (or name) that were two letters or longer. In Boggle, a participant's score is based on the number of words they record. At the end of the 5 rounds, individual and combined scores were calculated and displayed. All participants received identical false feedback, regardless of their performance. In particular, participants were informed that they had performed very well (score: 79) and that Mike (their partner) had performed very poorly (score: 38). Unlike the participant and Mike, the other two participants (the other team) had similar scores (59 and 62), however the participant's team (participant and Mike) lost the game (117 vs. 121) and the chance to win $100, and this was ostensibly due to the poor performance of their partner (Mike).

Manipulation of intent. Next, participants were randomly assigned to one of the two transgression conditions in which the intent of the transgressor (Mike) was manipulated. In order to do this, after seeing the results and their score (false feedback) the computer instructed the participant to call the researcher in order to enter a password for the continuation of the study. At this point, the researcher was on the phone, ostensibly talking to his colleague in another room. After asking the participant to wait for a few seconds until the phone call was over, the researcher informed the participant that his colleague had faced an issue in the other room and needed to talk to him. The researcher mentioned that he would return in a minute. After 60 seconds, the researcher returned to the room and informed the participant that his colleague has noticed that one of the participants (Mike) has performed very poorly and that this was unusual. In the unintentional transgression condition the participant was told that Mike had been focused and paying attention to the task but still performed poorly. In the intentional transgression condition, the participant was told that his colleague had noticed that Mike was checking his phone during the Boggle task. At this point, the researcher entered the password and asked the participants to continue the study and complete the second joint task with the partner (Mike).

Behavioural aggression (noise blast). Next, participants received instruction about the second task, which was framed as an attention-sustainment (noise-administration) task with the aim of understanding how individuals perform in a noisy (distracting) environment. Instructions indicated that the participant was randomly assigned to the noise-administrator role and that Mike (same partner) would play 5 more rounds of Boggle (15 seconds each) with another chance of winning $100 (for himself). Participants listened to 7 levels of sample noises, with level 0 (98 Hz) being the quietest, and level 6 (6272 Hz) the loudest noise level. In the main task, the default noise level was set at the midpoint (level 3: 783 Hz). Participants were instructed to use a

joystick to increase, decrease, or leave the noise level at the midpoint. Instructions emphasized that they could choose any noise level that they desired while Mike was playing each of the 5 Boggle rounds. Given that the participants had lost the chance to win $100 due to their partners' (Mike's) poor performance in the previous round, this task examined the degree to which they used aggression toward Mike. Following this measure of behavioural aggression, the self-reported PTR measures were assessed using the Disrupted Session Form.

Disrupted Session Form: self-report PTRs. Following the noise-administration task, as participants responded to a number of questions regarding their experience in the study, the screen turned black and presented a 'Disruption Session Form'. The form noted that a negative event had been detected and when such events occur, ethical guidelines require that researchers assess participants in terms of their experience. Participants were informed that they were required to complete this form to assess their experience. In fact, the form was designed to measure participants PTRs (forgiveness, grudge, revenge, and inhibition) but was framed as a Disrupted Session Form to limit participants' potential suspiciousness concerning the ostensible purpose of the research. At the end of the experiment, all participants received a written debriefing.

Results

Preliminary Analyses

Variable construction. In addition to the aforementioned variables, a reconciliation variable was constructed by subtracting the average of the two antisocial responses (antisocial = mean of grudge and revenge) from the average of the two prosocial responses (prosocial = mean of forgiveness and inhibition) [i.e., reconciliation = (prosocial)-(antisocial)]. Based on acceptable levels of internal consistency and inter-item correlations among the items for each variable, mean

variable scores were created for wisdom ($M = 4.41$, $SD = 0.78$, $\alpha = .67$), forgiveness ($M = 5.42$,

$SD = 1.27$, $r = .46$), grudge ($M = 1.77$, $SD = 1.05$, $r = .68$), revenge ($M = 2.09$, $SD = 1.23$, $r =$

.63), inhibition ($M = 6.14$, $SD = 1.01$, $r = .31$), behavioural aggression ($M = 2.87$, $SD = 1.31$),

and reconciliation ($M = 3.84$, $SD = 1.74$).

Manipulation Checks

A one-way ANOVA on the first manipulation check item confirmed that participants in the

unintentional ($M = 6.68$, $SD = 0.47$) condition perceived the transgression as more unintentional

than those in the intentional ($M = 4.66$, $SD = 1.74$) condition, $F(1,135) = 76.14$, $p < .001$, $\eta^2 =$

.36. The second item also corroborated this finding by showing that participants in the

unintentional ($M = 2.68$, $SD = 2.10$) condition perceived the incident to be less intentional than

those in the intentional ($M = 3.68$, $SD = 1.75$) condition, $F(1,135) = 9.07$, $p = .003$, $\eta^2 = .06$. The

average of the two items (first item was reverse coded to account for opposite valences),

indicated that the incident was perceived to be relatively low on intent ($M = 2.84$, $SD = 1.57$).

Main Analyses

With regard to the first hypothesis, zero-order correlations between all key variables were

calculated (see Table 1). Wisdom was positively correlated with forgiveness ($r = .19$, $p = .023$)

and reconciliation ($r = .23$, $p = .007$), and negatively correlated with grudge ($r = -.18$, $p = .032$)

and revenge ($r = -.19$, $p = .030$). Wisdom was not significantly correlated with inhibition ($r =$

.14, $p = .113$) and behavioural aggression ($r = -.042$, $p = .627$). The correlation between wisdom

and gender (males = 0, females = 1) was also nonsignificant ($r = -.12$, $p = .157$).

The second hypothesis was that the relation between victims' wisdom and their PTRs

would depend on transgressors' intent. To test this hypothesis, using 6 separate regression

Table 1

Zero Order Pearson Correlations between Variables

Variable	Wis.	For.	Gru.	Rev.	Inh.	Beh. A	Rec.	Gen[a]
Wis.	---	.19*	-.18*	-.19*	.14	-.08	.23**	-.12
For.		---	-.47**	-.42**	.40**	.03	.77**	-.06
Gru.			---	.59**	-.51**	.12	-.83**	-.06
Rev.				---	-.27**	.14	-.77**	.01
Inh.					---	-.16†	.69**	.10
Beh. A.						---	-.12	.04
Rec.							---	.02
Gen								---

Note. $^*p < .05$, $^{**}p < .01$, $^\dagger p < .1$

Wis. = Wisdom, For. = Forgiveness, Gru. = Grudge, Rev. = Revenge, Inh. = Inhibition, Beh. A. = Behavioural Aggression, Rec. = Reconciliation, Gen = Gender

[a] Gender was coded as 0=males and 1=females. One participant who did not indicate gender was eliminated from the correlation of gender with other variables.

analyses, victims' PTRs were regressed onto victims' wisdom, transgressors' intent, and their interaction.

Forgiveness response. A significant relation between intent and forgiveness was found, b = -3.64, $t(133)$ = -2.93, p = .004. This relations was qualified by the predicted two-way interaction between victims' wisdom and transgressors' intent, b = 0.67, $t(133)$ = 2.45, p = .016 (see Table 2 and Figure 2). This two-way interaction was probed by conducting simple slope tests for low (-1 SD), and high (+1 SD) levels of wisdom. For participants in the intentional condition, a significant positive relation was found between wisdom and forgiveness, b = 0.50, $t(133)$ = 3.01, p = .003, 95% CI [0.17, 0.83]. In other words, higher wisdom was associated with more forgiveness in the intentional condition. There was no significant relation between wisdom and forgiveness in the unintentional condition, b = -0.17, $t(133)$ = -0.79, p = .433, 95% CI [-0.60, 0.26].

Given the exploratory nature of this research, additional simple slope tests were conducted to probe the relation between intent and forgiveness for those who were low and high in wisdom (-1 and +1 SD). For participants who were low in wisdom, a significant relation was found between intent and forgiveness, b = -1.20, $t(133)$ = -3.90, p < .001, 95% CI [-1.81, -0.59]. In other words, low-wisdom participants in the intentional condition reported less forgiveness than low-wisdom participants in the unintentional condition. An analogous simple slope test for those who were high in wisdom, was nonsignificant, b = -0.15, $t(133)$ = -0.52, p = .606, 95% CI [-0.72, 0.42]. The same analytic strategy was used for the remaining PTRs.

Grudge response. A significant association between transgressors' intent and grudge was found, b = 2.61, $t(133)$ = 2.51, p = .013. This relation was qualified by a significant victims' wisdom by transgressors' intent two-way interaction, b = -0.49, $t(133)$ = -2.13, p = .035 (see

Table 2

Summary of Regression Analysis Predicting Forgiveness from Wisdom, Intent of the

Transgressor, and the Interaction Term

Predictor	*b*	*SE*	*t*	*p*	LLCI	ULCI
Constant	6.60	1.00	6.57	.000	4.61	8.58
Intent	-3.64	1.24	-2.93	.004*	-6.09	-1.19
Wisdom	-0.17	0.22	-0.79	.433	-0.60	0.26
Wisdom x Intent	0.67	0.27	2.45	.016*	0.13	1.21

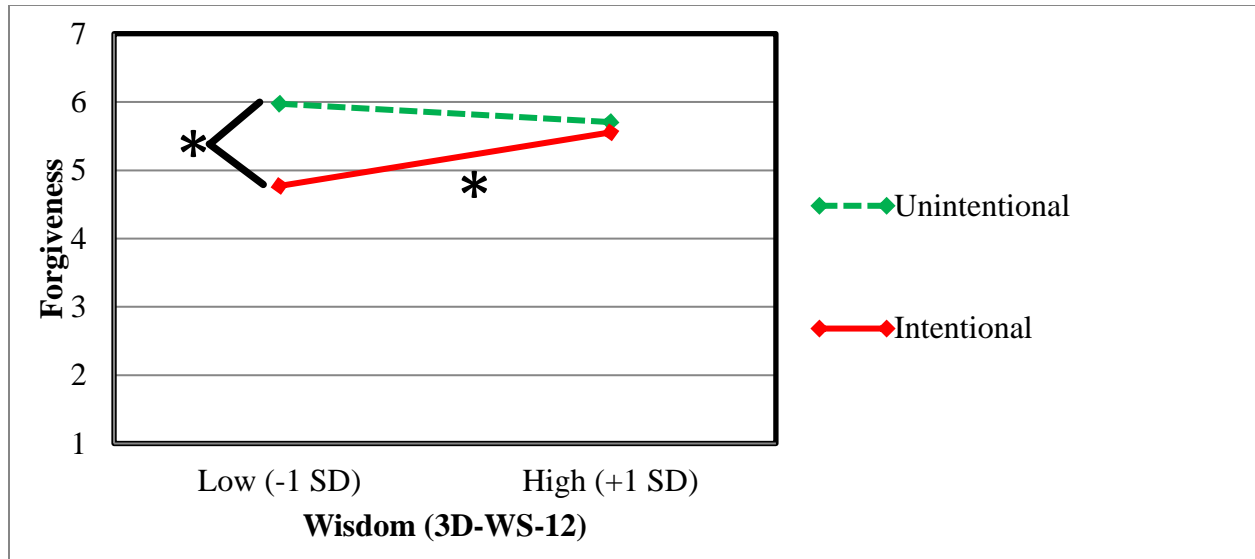*Note.* $^*p < .05$, $^{**}p < .01$, $^\dagger p < .1$

Figure 2. Visual depiction of forgiveness prediction for the two transgression conditions at low and high levels of wisdom. Low-wisdom represents one standard deviation below the mean, and High-wisdom represents one standard deviation above the mean.

Table 3 and Figure 3). Again, the two-way interaction was probed by conducting simple slope

tests for low (-1 SD), and high (+1 SD) levels of wisdom.

For participants in the intentional condition, a significant negative relation was found

between wisdom and grudge, $b = -0.38$, $t(133) = -2.75$, $p = .007$, 95% CI [-0.66, -0.11]. In other

words, higher wisdom was associated with less grudge in the intentional condition. There was

no significant relation between wisdom and grudge in the unintentional condition, $b = 0.11$,

$t(133) = 0.58$, $p = .565$, 95% CI [-0.26, 0.47].

Additional simple slope tests revealed that low-wisdom participants (-1 SD) in the

intentional condition reported more grudge than low-wisdom participants in the unintentional

condition, $b = 0.84$, $t(133) = 3.24$, $p = .002$, 95% CI [0.33, 1.35]. An analogous simple slope test

comparing high-wisdom participants in unintentional and intentional conditions was

nonsignificant $b = 0.07$, $t(133) = 0.29$, $p = .769$, 95% CI [-0.41, 0.55].

Revenge response. The two-way victims' wisdom by transgressors' intent interaction on

revenge was nonsignificant, $b = -0.21$, $t(133) = -0.79$, $p = .431$ (see Table 4 and Figure 4). The

main effects for intent and wisdom were also nonsignificant.

Inhibition response. The two-way victims' wisdom by transgressors' intent interaction on

inhibition was nonsignificant, $b = 0.06$, $t(133) = 0.28$, $p = .781$ (see Table 5 and Figure 5). The

main effects for intent and wisdom were also nonsignificant.

Behavioural aggression response. The two-way victims' wisdom by transgressors' intent

interaction on behavioural aggression was nonsignificant, $b = 0.41$ $t(133) = 1.38$, $p = .169$ (see

Table 6 and Figure 6). The main effects for intent and wisdom were also nonsignificant.

Reconciliation. A significant association between transgressors' intent and reconciliation

was found, $b = -4.38$, $t(133) = -2.66$, $p = .009$. This relation was qualified by a marginally

Table 3

Summary of Regression Analysis Predicting Grudge from Wisdom, Intent of the Transgressor, and the Interaction Term

Predictor	*b*	*SE*	*t*	*p*	LLCI	ULCI
Constant	1.02	0.84	1.21	.227	-0.64	2.68
Intent	2.61	1.04	2.51	.013*	0.55	4.66
Wisdom	0.11	0.18	0.58	.565	-0.26	0.47
Wisdom x Intent	-0.49	0.23	-2.13	.035*	-0.94	-0.03

Note. $^{*}p < .05,$ $^{**}p < .01,$ $^{\dagger}p < .1$

Figure 3. Visual depiction of grudge prediction for the two transgression conditions at low and

high levels of wisdom. Low-wisdom represents one standard deviation below the mean, and

High-wisdom represents one standard deviation above the mean.

Table 4

Summary of Regression Analysis Predicting Revenge from Wisdom, Intent of the Transgressor, and the Interaction Term

Predictor	*b*	*SE*	*t*	*p*	LLCI	ULCI
Constant	1.96	0.97	2.02	.045	0.04	3.87
Intent	1.76	1.20	1.47	.143	-0.60	4.13
Wisdom	-0.08	0.21	-0.37	.709	-0.49	0.34
Wisdom x Intent	-0.21	0.26	-0.79	.431	-0.73	0.31

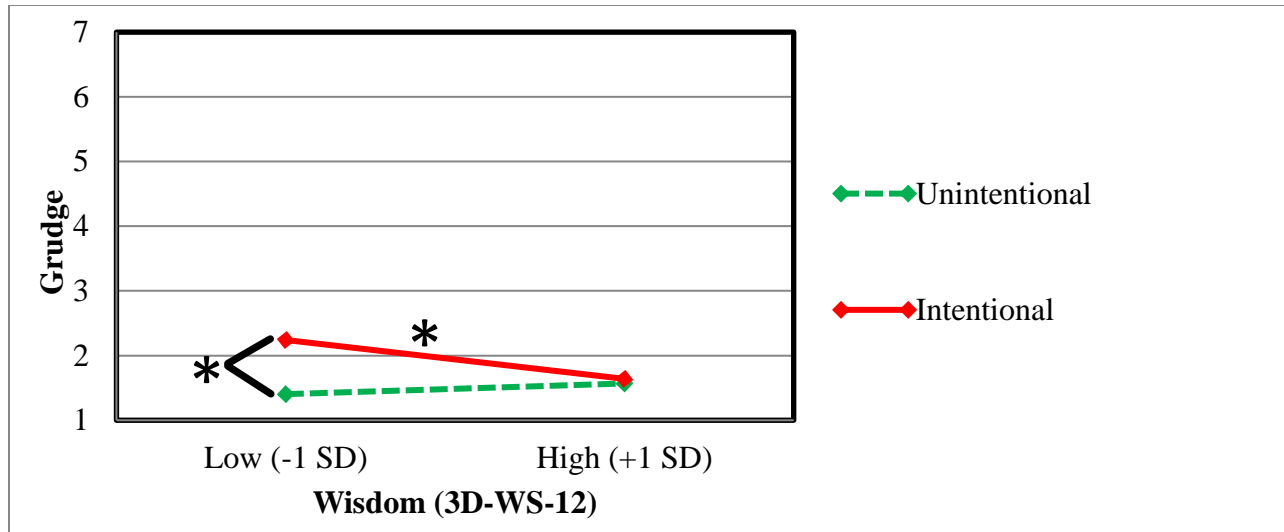*Note.* [*] $p < .05$, [**] $p < .01$, [†] $p < .1$

Figure 4. *Visual depiction of revenge prediction for the two transgression conditions at low and high levels of wisdom. Low-wisdom represents one standard deviation below the mean, and High-wisdom represents one standard deviation above the mean.*

Table 5

Summary of Regression Analysis Predicting Inhibition from Wisdom, Intent of the

Transgressor, and the Interaction Term

Predictor	b	SE	t	p	LLCI	ULCI
Constant	6.01	0.82	7.30	.000	4.38	7.64
Intent	-0.75	1.02	-0.74	.463	-2.76	1.26
Wisdom	0.09	0.18	0.50	.617	-0.26	0.44
Wisdom x Intent	0.06	0.23	0.28	.781	-0.38	0.51

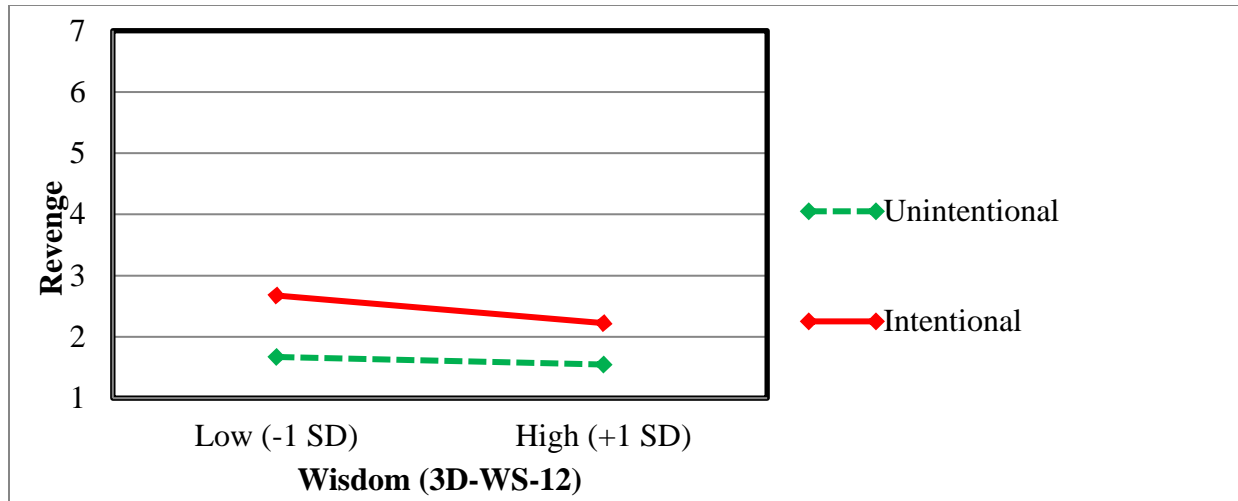*Note.* $^*p < .05$, $^{**}p < .01$, $^†p < .1$

Figure 5. Visual depiction of inhibition prediction for the two transgression conditions at low

and high levels of wisdom. Low-wisdom represents one standard deviation below the mean, and

High-wisdom represents one standard deviation above the mean.

Table 6

Summary of Regression Analysis Predicting Behavioural Aggression from Wisdom, Intent of

the Transgressor, and the Interaction Term

Predictor	b	SE	t	p	LLCI	ULCI
Constant	4.35	1.09	3.98	.000	2.19	6.51
Intent	-1.85	1.35	-1.37	.173	-4.52	0.82
Wisdom	-0.33	0.24	-1.39	.167	-0.80	0.14
Wisdom x Intent	0.41	0.30	1.38	.169	-0.18	1.00

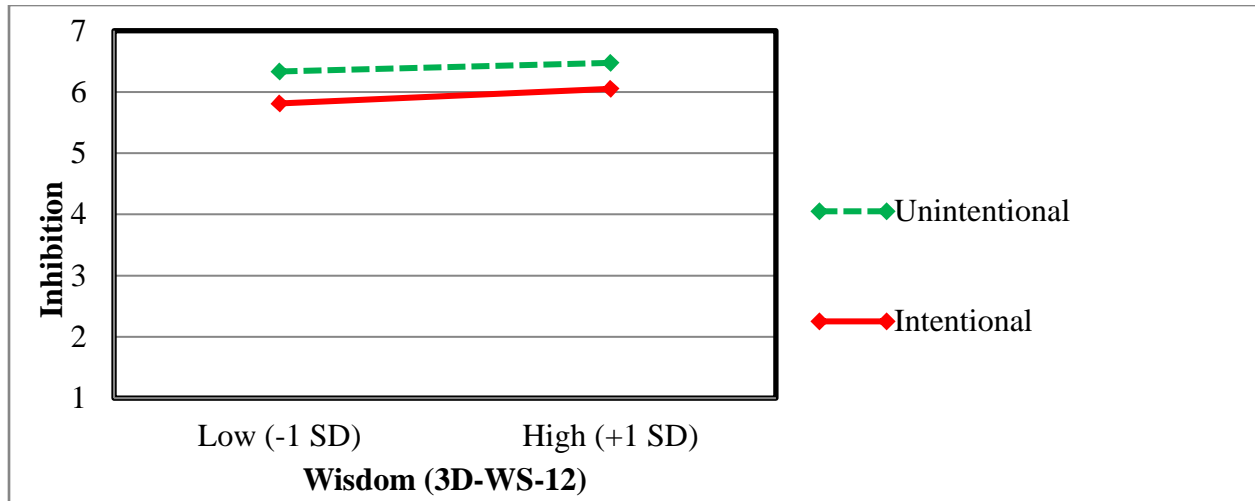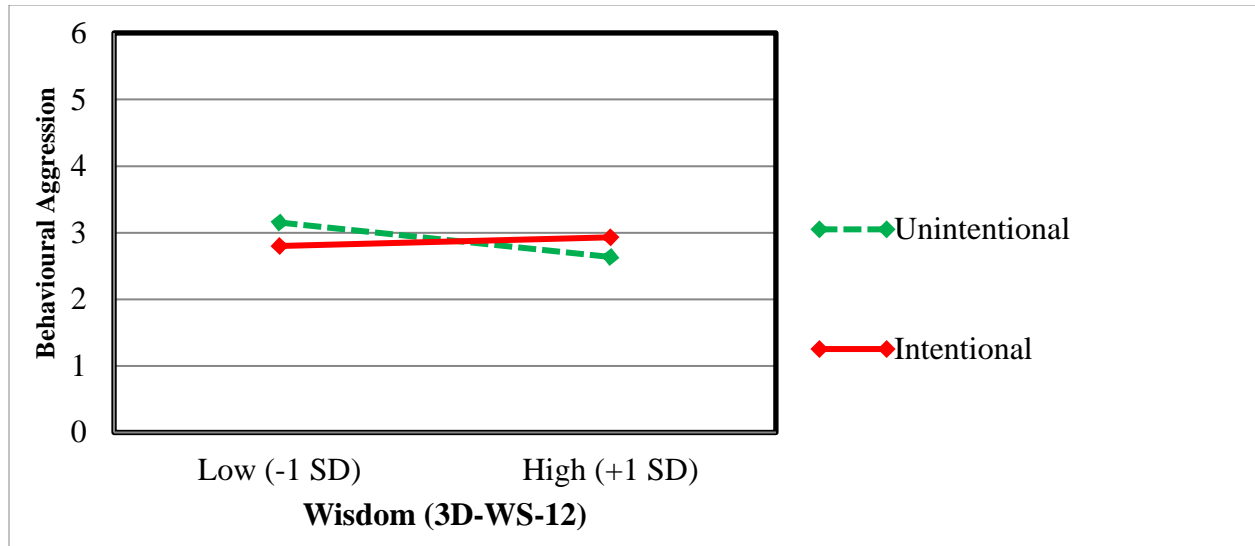*Note.* $^{*}p < .05$, $^{**}p < .01$, $^{†}p < .1$

Figure 6. Visual depiction of behavioural aggression prediction for the two transgression

conditions at low and high levels of wisdom. Low-wisdom represents one standard deviation

below the mean, and High-wisdom represents one standard deviation above the mean.

nonsignificant victims' wisdom by transgressors' intent two-way interaction, $b = 0.72$, $t(133) = 1.97$, $p = .051$ (see Table 7 and Figure 7). The two-way interaction was probed by conducting simple slope tests for low (-1 SD), and high (+1 SD) levels of wisdom.

For participants in the intentional condition, a significant positive relation was found between wisdom and reconciliation, $b = 0.66$, $t(133) = 3.00$, $p = .003$, 95% CI [0.23, 1.10]. In other words, higher wisdom was associated with more reconciliation in the intentional condition. There was no significant relation between wisdom and reconciliation in the unintentional condition, $b = -0.05$, $t(133) = -0.19$, $p = .852$, 95% CI [-0.63, 0.52].

Additional simple slope tests revealed that low-wisdom participants (-1 SD) in the unintentional condition reported more reconciliation than low-wisdom participants in the intentional condition, $b = -1.78$, $t(133) = -4.36$, $p < .001$, 95% CI [-2.59, -0.97]. An analogous simple slope test for high-wisdom participants showed that high-wisdom participants (+1 SD) in the unintentional condition reported more (marginally nonsignificant) reconciliation than high-wisdom participants in the intentional condition, $b = -0.66$, $t(133) = -1.72$, $p = .088$, 95% CI [-1.42, 0.10].

Discussion

The purpose of this thesis was to explore the role of wisdom in influencing individuals' post-transgression cognitive and behavioural responses as they face interpersonal transgressions.

Through an ostensible transgression, intent of the transgressor (a contextual factor), was manipulated in order to examine whether intent would interact with wisdom to predict PTRs. In line with predictions about wiser individuals' higher proclivity toward prosocial conduct, zero-order correlations showed that wisdom was positively associated with forgiveness and reconciliation, and negatively associated with grudge and revenge. However, unlike predictions,

Table 7

Summary of Regression Analysis Predicting Reconciliation from Wisdom, Intent of the

Transgressor, and the Interaction Term

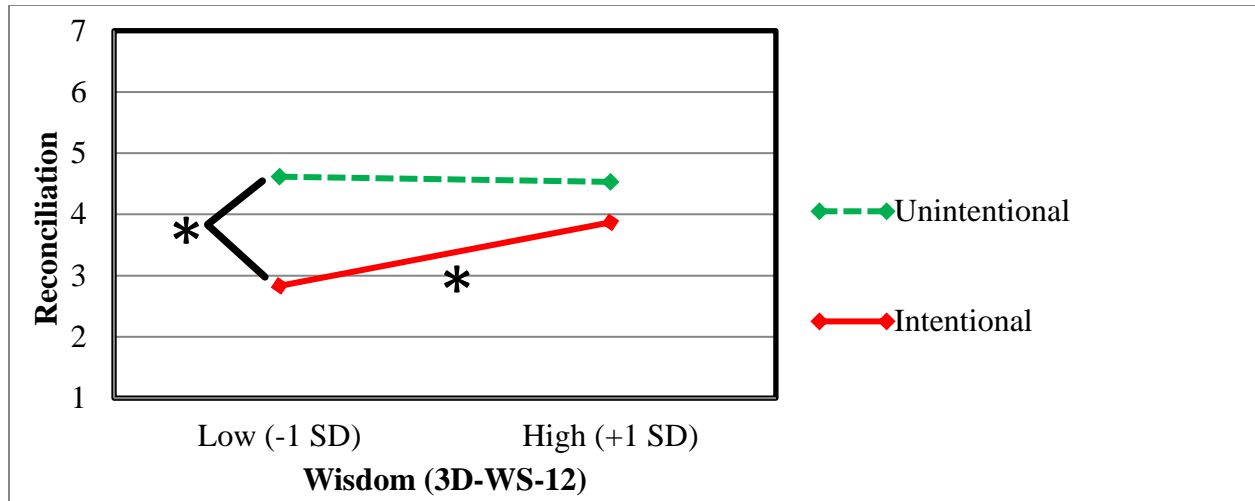| Predictor	*b*	*SE*	*t*	*p*	LLCI	ULCI
Constant	4.81	1.33	3.62	.000	2.18	7.44
Intent	-4.38	1.64	-2.66	.009*	-7.63	-1.13
Wisdom	-0.05	0.29	-0.19	.852	-0.63	0.52
Wisdom x Intent	0.72	0.36	1.97	.051[†]	0.00	1.43

Note. [*] $p < .05$, [**] $p < .01$, [†] $p < .1$

Figure 7. Visual depiction of reconciliation response for the two transgression conditions at low and high levels of wisdom. Low-wisdom represents one standard deviation below the mean, and High-wisdom represents one standard deviation above the mean.

wisdom was not associated with inhibition and behavioural aggression. It is noteworthy that all correlations, including the nonsignificant ones, were in the expected direction. Therefore, hypothesis 1 was partly supported.

The combined effect of victims' wisdom and transgressors' intent predicted forgiveness, reconciliation, and grudge but not revenge, inhibition, and behavioural aggression. Across all dependent variables (PTRs), the unintentional condition was nonsignificant, indicating that perhaps, wisdom does not play a role when individuals encounter a rather benign transgression. Importantly, it appears that wisdom gets invoked when individuals encounter a relatively challenging situation, namely an intentional transgression.

With regard to forgiveness, results indicated that high-wisdom (+1 SD) participants (vs. low-wisdom participants, -1 SD) reported more forgiveness when faced with an intentional transgression (see Figure 2). Contrary to predictions in the second hypothesis, low-wisdom (and not high-wisdom) participants seemed more sensitive to the context (intent) and reported different levels of forgiveness in the two conditions. This may be explained by the fact that the transgression (despite the success in manipulation and the meaningful difference between the two transgression conditions) was not perceived as high in intent across the two conditions as desired. In other words, the transgression may not have been severe enough to warrant a change of attitude toward the transgressor. Therefore, wisdom seems to have buffered participants against the influence of transgressors' intent, within this narrow range of intentionality. This may reflect wiser individuals' more accurate analysis of situations and their ability for contextualization (Baltes & Smith, 1990).

Grudge responses were similar to forgiveness responses but in the opposite and expected direction (see Figure 3). In the intentional transgression condition, high-wisdom (vs. low-

wisdom) participants reported less grudge. Low- but not high-wisdom participants responded with different degrees of grudge to the unintentional and intentional conditions. Once again, wisdom seems to have shielded wiser participants from being affected by the intent of the transgressor.

Reconciliation, the variable that represented the overall tendency of individuals toward prosocial (vs. antisocial) responses was also predicted by the interaction of wisdom and intent (see Figure 7). Results of this moderated effect were similar to forgiveness results. Particularly, wisdom predicted more reconciliation in the intentional condition. High-wisdom participants responded similarly to unintentional and intentional conditions whereas low-wisdom individuals responded with less reconciliation in the intentional condition.

Contrary to predictions, wisdom and intent did not interact to predict revenge, inhibition, and behavioural aggression (see Figures 4-6). Therefore, hypothesis 2 was only partly supported. Possible explanations for the null findings are discussed next.

Interesting Findings

It is interesting that the interaction of wisdom and intent predicted forgiveness and grudge but did not predict inhibition and revenge. Forgiveness is often defined as letting go of a negative sentiment and replacing it with a positive sentiment whereas grudge is defined as holding onto negative sentiment (Struthers et. al., 2008; Baumeister, Exline, & Sommer, 1998). In comparison, inhibition is defined as a stoppage of behavior whereas revenge is defined as a behavioral response intended to hurt someone for a perceived wrong. Given that forgiveness and grudge can be considered as opposite ends of a common affective spectrum (ranging from forgiveness to grudge), and because inhibition and revenge can also be conceptualized as opposite ends of a single behavioural dimension (ranging from inhibition to action), it is

theoretically plausible that wisdom's interaction with intent may predict a change in victim's sentiment but not behaviour. Building on this explanation, another possible explanation for why wisdom and intent affected a change in sentiment but not a change in behaviour, is that a change in sentiment (letting go of negative sentiment and replacing it with positive sentiment) is likely to precede a change in action (replacing acts of revenge with inhibition) and there may not have been enough time in the one-hour study time frame to consider this temporal explanation. Moreover, behavioural aggression (sound blasts) was measured before the sentiment measures, which further complicates this explanation. Although beyond the current study, future research should examine the notion of sentiment and behaviour and temporal sequence.

Also, because context (intent and frequency) did not moderate the relation between wisdom and unforgiveness (grudge and revenge) in a previous study (Eghbali et al., 2017), it may be that when intent is perceived, wisdom is not a determining factor with regard to vengeance (and aggressive responses). Wisdom may generally prevent retaliatory-aggressive behaviours, but suspend this tendency under certain contexts. Given that revenge can teach a transgressor about the consequences of inflicting harm to a victim and their associated kin, it might be wise to keep vengeance as a viable protective option in some circumstances. Perhaps, in wiser individuals (vs. those lower in wisdom), the quality and motivation of aggressive-retaliatory responses would mostly revolve around dissuading more conflict as opposed to inflicting disproportionate and irreversibly destructive harms.

Inhibition, or the capacity for withdrawing or suspending one's response to a transgression, was expected to be associated with wisdom, as it was theorized to play a fundamental role in wise functioning. Theoretically, inhibition can delay and thus provide a cognitive processing capacity through which optimal decisions can be made. Previous research has also documented

the association between wisdom and inhibition (Eghbali et al., 2017). It is suspected that the absence of relationships in this study could be linked to the measurement of inhibition. In particular, there were only two items for assessing inhibition, and the correlation between these two items ($r = .31$) despite being significant, was the weakest among the other measured PTRs.

Impulse control is implicated in almost all psychological anomalies including antisocial and borderline personality disorders (Swann, Lijffijt, Lane, Steinberg, & Moeller, 2013), and those with a limited capacity for inhibitory control, experience a wide range of intra- and inter-personal difficulties (American Psychiatric Association, 2013). Given that wisdom is described by some as the epitome of healthy human functioning (Baltes & Smith, 2008), it is plausible to expect that wisdom would involve a high level of inhibitory control.

The idea of openness toward the realm of the unknown in the proposed conceptualization of wisdom is also in line with the notion of behaving in an inhibited manner. An obsession with gaining an impeccable understanding of events and disregarding the possibility of oblivion and cognitive blind spots can propel individuals in the direction of making definitive or rash decisions as they interact with life events. Wisdom represents the opposite of this state as it allows an individual to accommodate randomness and accept uncertainty as integral parts of any event, personally salient or not. Inhibition of response may convey this understanding in wiser individuals.

This research also partly replicated the findings of a similar previous work (Eghbali et al., 2017) regarding wiser (vs. low-wisdom) individuals' higher prosocial tendencies. That study, unlike the present research, used two non-orthogonal moderators (intent and frequency). However, when examining the analogous conditions from the previous study (unintentional, low-frequency, and intentional, low-frequency conditions), it was the high-wisdom (and not low-

wisdom) group that discriminated between the two conditions. One explanation for this disparity in results may lie in the fact that in the previous study, on average, the transgressions were deemed as highly severe. As suggested earlier, wisdom's role in contextualization is based on each situation and may only get activated when encountering a challenging event. In addition, the difference between the two studies may indicate that individuals' imagined responses to transgressions might not be aligned with their actual responses. This inaccuracy in predicting emotional responses has been long documented and known as the affective forecasting phenomenon (Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998).

The association between forgiveness and wisdom dates back to ancient times. For example, it has been documented that Buddha, known as one of the wisest men in human history, decided to forgive the man who intended to kill him (Nanamoli, 2001). The other historical figure, Jesus, often identified as a wisdom exemplar (Weststrate, Ferrari, & Ardelt, 2016) is mentioned to have said "Father, forgive them, for they do not know what they are doing…" (Luke 23:34 New International Version) while on the cross, looking at a reviling crowd. Despite this long culture of associating wisdom with prosocial cognitions and behaviours, research on this association is scarce. The few studies that were identified on this topic discussed the associations between wisdom and forgiveness at theoretical (e.g., Ardelt, 2008) or correlational (e.g., Taylor, Bates, & Webster, 2011) levels. Forgiveness is also usually discussed briefly as a side topic in wisdom literature. This was one of the first quasi-experimental studies that investigated the link between wisdom and prosocial responses after facing an interpersonal conflict.

Limitations and Future Directions

Despite the success of this study in simulating a transgression in a laboratory setting, experiments can only test individuals' responses to transgressions that are limited in severity

because of ethical considerations. This contributed to participants' high levels of prosocial, and low levels of antisocial responses. Patterns of responses between low- and high-wisdom participants may have been more distinct, had they faced a more deleterious transgression. Give that wisdom can be optimally used under difficult life situations (Baltes & Staudinger, 2000), creating more challenging situations (e.g., through increasing the value of prize for Boggle) and examining how wiser individuals respond under those circumstances can potentially result in more accurate theories about wise functioning.

It is also important to note that wisdom, despite being a topic of interest to philosophers and theologians for a long time (Wink & Dillon, 2013), is only recently tackled by psychologists and requires more research to become established as a cohesive concept. Wisdom scholars, admit that wisdom is an exceptionally difficult concept to define and measure (Sternberg, 1990). This complexity partly originates from wisdom's multi-faceted nature and the different manifestation it can have (e.g., personal vs. general wisdom; Bangen et al., 2013). This complexity is also reflected in the measurement of wisdom.

Deciding about which of the many identified facets (Bangen et al., 2013) to include in a self-report measure of wisdom is not simple. In addition, participants may have no point of reference when rating themselves on a complex capacity (e.g., emotional regulation) and this can increase the likelihood of error in measurement. That is why some scholars have advocated what they refer to as 'performance measures' of wisdom. One such measure of personal wisdom involves asking participants to recall personal dilemmas, and to think-aloud (verbally explain and explore) about their approach toward dealing with such problems (Mickler & Staudinger, 2008). Complexity of reasoning is then coded into a number of criteria and finally translated into a wisdom score. Performance measures of wisdom can also be useful because they can closely

reflect individuals' actual (vs. ideal/imagined) approaches toward decision making and problem solving.

This study also used a virtual partner as a confederate. This has both positive and negative consequences. On the bright side, one can argue that the physical absence of the transgressor allowed participants to behave in a genuine and less socially desirable manner. Conversely, it is possible to suspect that a physically present confederate would have elicited a more realistic behavioural PTR, as opposed to applying noise to distract the transgressor. An alternative procedure that has been successfully utilized in previous research (e.g., Struthers, 2017) is asking a confederate (transgressor) to drop a large bag on coins, and counting the number of coins picked up by the participant (victim) and handed to the confederate as a sign of forgiveness or a prosocial PTR.

With regard to mechanism, it can be theoretically argued that the reason behind wiser individuals' prosocial tendencies such as forgiving others lies in a desire for a balanced state in which the well-being of all parties involved in a transgression is heeded. Therefore, future research can examine the role of common good (Sternberg, 1998) as a mediator in the association between victims' wisdom and their PTRs.

Conclusion

Even though not all PTRs were predicted by the interaction of wisdom and intent, the overall direction of findings indicates that wisdom affords an inclination toward interpersonal harmony (as reflected in the reconciliation results). Also, wisdom may only become functional when facing a relatively severe situation such as an intentional transgression. Furthermore, it appears that wiser individuals are more stable and less reactive to relatively minor contextual factors in a transgression. This could imply that a better understanding the context of a

transgression does not always result in the fine-tuning one's reaction to every situation. Trivial perturbances may not be not worth changing one's normal manner of functioning and decision making.

In addition, wisdom may allow individuals to perceive the impact of external factors as inextricable players beside the parties involved in a transgression. From that lens, prosocial responses may be rendered less costly because transgressions are not perceived to be fully controlled by a transgressor. In other words, an openness toward a limited understanding in difficult situations may facilitate wiser individuals' ability to let go of a negative sentiment and return to a regulated emotional state.

Wisdom may entail the understanding that, as social beings, our survival depends on rich and fulfilling interpersonal bonds (Baumeister & Leary, 1995), and that our well-being is ultimately inseparable from others' well-being. Understanding this notion may allow a person transcend an inordinate attention to self-related interests and cultivate a prosocial dimension.

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Appendix A

Three-Dimensional Wisdom Scale (3D-WS-12)

1. A problem has little attraction for me if I don't think it has a solution (reversed; cognitive).

2. I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something (reversed; cognitive).

3. I prefer just to let things happen rather than try to understand why they turned out that way (reversed; cognitive).

4. I am hesitant about making important decisions after thinking about them (reversed; cognitive).

5. When I am confused by a problem, one of the first things I do is survey the situation and consider all the relevant pieces of information (reflective).

6. Sometimes I get so charged up emotionally that I am unable to consider many ways of dealing with my problems (reversed; reflective).

7. When I look back on what has happened to me, I can't help feeling resentful (reversed; reflective).

8. I either get very angry or depressed if things go wrong (reversed; reflective).

9. I can be comfortable with all kinds of people (compassionate).

10. Sometimes I feel a real compassion for everyone (compassionate).

11. I don't like to get involved in listening to another person's troubles (reversed; compassionate).

12. I'm easily irritated by people who argue with me (reversed; compassionate).

Appendix B

Session Disruption Form and Self-Report PTRs

YORK U
UNIVERSITÉ
UNIVERSITY
Disrupted Session Form

Faculty of Health
Undergraduate Program in Psychology
Disrupted Session Form

SONA (URPP) System has identified a negative event has occurred in the experiment. In accordance with University's ethical protocol, the Department of Psychology requires a "Disrupted Session Form" to be filled out by participants. The study will be intermittingly stopped to assess your current state prior to continuing. This allows insight into the potential discomfort experienced and can aid in future prevention of such incidents.

When you are ready, you may proceed to the form.

Please respond to the following statements about how you are feeling RIGHT NOW at this moment using the scale provided. We will use your anonymous response in order to improve research at York. Therefore, it is important that you respond as honestly as possible.

1. I would like to teach my partner in this study a lesson so he/she would not do what was done again. (revenge 1)

2. I am holding a grudge against my partner in this study. (grudge 1)

3. I feel vengeful toward my partner in this study. (revenge 2)

4. I have forgiven my research partner. (forgiveness 1)

5. I tried not to take the incident personal and moved on. (inhibition 1)

6. I am holding onto my negative sentiment toward this person. (grudge 2)

7. I am replacing / have replaced my negative feeling with a positive feeling for him/her. (forgiveness 2)

8. I decided not to get emotionally involved in what happened. (inhibition 2)