

THE GREEN-EYED MONSTER STRIKES BACK:
MODERATORS AND MEDIATORS OF THE RELATIONSHIP BETWEEN
DISTRIBUTIVE JUSTICE AND THEFT

By

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ABSTRACT

Unfair pay can have deleterious consequences for employees because they may experience envy and engage in workplace theft when they are paid unfairly. Studies show that the fairness of outcomes, or in other words, distributive justice, does not consistently predict behaviours such as theft, and as such, there may be important mediators and moderators that influence the relationship. While the impact of distributive justice on theft is an important area of research, there is limited research on discrete emotions such as envy as a potential mediator between justice and behaviours such as theft.

Affective events theory suggests that emotions generally influence how individuals respond to work events, but there is some debate about which specific emotions arise from organizational injustice. There is also some uncertainty as to which individual and situational factors reduce the effects of unfair pay. The purpose of the dissertation is to empirically test affective events theory through a model that suggests that envy partially mediates the relationship between distributive justice and theft, and to explore potential moderators that are associated with reduced theft. In particular, individual factors such as personality (e.g., honesty-humility) and a positive psychological state (e.g., psychological capital), as well situational factors (e.g., token gestures) are studied.

The model is tested using a 2 (underpaid or equitably paid) x 2 (token provided or no token provided) experimental design. The validity of the findings is strengthened because different sources were used to measure the independent

and dependent variables, the variables were measured at different times, and an objective measure of theft was used. The experimental design tests affective events theory and builds on self-verification theory. Practical implications for organizations include a better understanding of how employees feel when faced with unfair pay. Organizations may also reduce theft through employee screening and training initiatives.

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TABLE OF CONTENTS

Descriptive Note	ii
Abstract	iii
Acknowledgements	v
List of Illustrations, Charts, and Diagrams	ix
CHAPTER I: INTRODUCTION	
Mediating Role of Discrete Emotions	1
Potential Individual and Situational Moderators	4
Contributions	5
Overview	7
CHAPTER 2: LITERATURE REVIEW	
Distributive Justice and Theft	9
Counterproductive Workplace Behaviours.	12
Summary	13
The Role of Discrete Emotions	14
Discrete emotions as a response to low levels of distributive justice	14
Discrete emotions	17
Affective states	19
Summary	20
Discrete Emotions as a Predictor of Theft	21
Discrete emotions	21
Affective states	22
Discrete emotions as a mediator between justice and theft	24
Moderators of the Impact of Discrete Emotions on Theft	27
Personality traits	28
Honesty-humility	29
State-like moderators	32
Psychological capital	33
Situational Moderators	35
Token Gestures	36
Control Variables	39
CHAPTER 3: PILOT STUDIES	
Pilot Study 1	41
Pilot Study 2	43
Summary	46
CHAPTER 4: MAIN STUDY	
Sample	48
Procedure	49

Measures	
Independent variable	57
Mediators	58
Individual moderators	59
Situational moderator	60
Control variables	61
Dependent variables	61
Manipulation check	63
Analyses	63
Direct Effects	64
Moderators	64
Mediators	64
CHAPTER 5: RESULTS	66
CHAPTER 6: DISCUSSION, CONCLUSIONS, AND FUTURE RESEARCH	
Dissertation Summary	83
Distributive Justice	85
Theft	86
Discrete Emotions	87
Psychological Capital	88
Conscientiousness	89
Practical Implications	92
Potential Limitations	96
Future Research	100
Conclusion	103
REFERENCES	105
APPENDIX	
Appendix A: MREB Approval Certificate	128
Appendix B: Pilot Study 1 Recruitment Script	129
Pilot Study 1 Letter of Consent	130
Pilot Study Questionnaire (Part One)	132
Pilot Study Questionnaire (Part Two)	133
Appendix C: Pilot Study 2 Recruitment Script	134
Pilot Study 2 Letter of Consent	135
Pilot Study 2 Debrief	137
Appendix D: Main Study Recruitment Script	138
Main Study Letter of Consent	139
Debriefing Letter	141
Appendix E Main Study Questionnaire	149
Appendix F Common Features Used For Comparing The Websites	156

LIST OF ILLUSTRATIONS, CHARTS, DIAGRAMS

Table 1: Means, Standard Deviations, Correlations, and Reliability Estimates for Study Variables	67
Table 2: Pairwise ANOVA comparisons for Study Variables	69
Table 3: Fit Indices for Mediation Test	73
Table 4: Hierarchical Regression Results for Honesty-Humility Moderation Test	76
Table 5: Hierarchical Regression Results for Psychological Capital Moderation Test	79
Table 6: Hierarchical Regression Results for Token Gestures Moderation Test	80
Table 7: Hierarchical Regression Results for Conscientiousness Moderation Test	81
Table 8: Summary of Results	82
Figure 1: Hypothesized Model	8
Figure 2: Histogram of Fair Compensation Levels	43
Figure 3: Sequence of Events for Experiment	51
Figure 4: Standardized Parameter Estimates for Whole Mediation Model	71
Figure 5: Standardized Parameter Estimates for the Hypothesized Mediation Model	73
Figure 6: Graphed Results for Psychological Capital Moderation Test	79
Figure 7: Graphed Results for Conscientiousness Moderation Test	81

CHAPTER I

INTRODUCTION

The consequences of unfair pay can be painful, significant, and enduring for employees (Barclay & Skarlicki, 2009). Employees may respond to unfair pay, or what is known as low levels of distributive justice, by engaging in workplace theft (Greenberg, 1993). This type of theft occurs when employees take organizational property without authorization and is among the most serious problems in human resource management because it may result in higher prices for customers, reduce corporate profits, and may even bankrupt organizations (Greenberg & Barling, 1996; Greenberg & Scott, 1996; Hollinger & Clark, 1983; Weber, Kurke & Pentico, 2003). Distributive justice has been identified as an important predictor of employee theft because, according to social exchange theory (Blau, 1964), employees may steal to make up for inadequate compensation based on a reciprocal exchange of resources. The issue of distributive injustice is particularly relevant in today's economic climate; employees may be especially likely to perceive that their pay is unfair when organizations implement various cost-cutting approaches, such as salary freezes, salary cuts, and reductions in variable pay (Kennedy, 2003).

Mediating Role of Discrete Emotions

While the impact of distributive justice on theft is an important area of research, there is limited research literature on discrete emotions as a potential mediator between justice and behaviours such as theft (De Cremer & van den

Bos, 2007). Discrete emotions are unique emotional states that include specific emotions such as envy, frustration, anger, disappointment, compassion, and distress (Barrett, 1998). Emotions are discrete when they have distinctive properties such that they may have different associated feelings, thoughts, action tendencies, actions, and goals (Roseman, Wiest, & Swartz, 1994). For example, individuals who feel anger are more inclined to feel like they are going to explode (feeling), think negative thoughts about others (thinking), feel like hitting someone (action tendency), say something nasty to others (action), and want to hurt someone (goal).

Although there is still debate about whether discrete emotions are “basic” or “natural” (e.g., Barrett, Gendron, & Huang, 2009; Colombetti, 2009), Izard (2007) suggests that studying discrete emotions is useful because they have distinct predictors and consequences. Many studies on emotions have grouped emotions into affective states (e.g., my job makes me feel negatively) rather than study discrete emotions (e.g., my job makes me feel envious). Discrete emotions are different from affective states in that affective states are comprised of “positive” or “negative” discrete emotions that form an overall measure or composite index of affect (Weiss, Suckow, & Cropanzano, 1999). Essentially emotions that may be considered negative (e.g., anger, fury, anxiety) are combined into an overall measure of negative emotions. This overall measure has been termed various names such as “core affect” (Russell, 2003), “dimensions” (Barrett, 1998), or “general affect” (Spencer & Rupp, 2009). Operationalizing

emotions as affective states may be problematic because some of the measures have not been validated and are not grounded in theory (Cohen-Charash & Byrne, 2008). There is a need for research to explore how discrete emotions rather than general states influence specific behaviours (Cohen-Charash & Byrne, 2008; Lazarus & Cohen-Charash, 2001; Weiss et al., 1999). These calls for research are based on the premise that grouping emotions into general states ignores the particular consequences that may occur as a result of certain discrete emotions (Spencer & Rupp, 2009). In other words, behaviours such as theft may be a function of some emotions (e.g., envy) and not others (e.g., disappointment).

Although theories such as affective events theory suggest that emotions mediate the relationship between justice and responses, few studies have examined how emotions affect the way in which individuals respond to low levels of justice (Barclay, Skarlicki, & Pugh, 2005). Affective events theory suggests that emotions generally influence how individuals respond to work events, but there is some debate about which discrete emotions arise from organizational justice (e.g., Bembenek, Beike, & Schroeder, 2007). Some authors suggest that anger is a typical response to low levels of distributive justice (e.g., Homans, 1961), but other authors disagree and suggest that unfair pay leads to disappointment (e.g., Bembenek et al., 2007). It has also been proposed that individuals experience envy when they make social comparisons with others about fairness (Cohen-Charash & Byrne, 2008; Smith et al., 1994). Because the goal of envious individuals is to reduce their gap with envied individuals, envy is

likely to elicit theft in order to equalize outcomes with individuals who receive fair pay. It is therefore important to ascertain how envy exerts influence on how individuals respond to low levels of distributive justice.

Potential Individual and Situational Moderators

Studying potential moderators is important because there have been calls for research to examine individual and situational influences on how people respond to and recover from justice violations (e.g., Barclay et al., 2009; Stouten et al., 2007). This research is also important because previous studies have found that distributive justice is an inconsistent predictor of retaliatory responses (Colquitt, Conlon, Wesson, Porter, & Ng, 2001). These mixed findings may be explained by the mediators and moderators investigated in this dissertation. In particular, individuals who are more sincere, fair, modest, and lack greed, or score high on the personality trait “honesty-humility” will likely engage in less theft based on self-verification theory (Swann, 1983). Individuals who are also confident, optimistic, hopeful, and perseverant, or possess high levels of psychological capital, will likely see unfair pay less negatively and engage in lower magnitudes of theft. The same phenomenon may occur when individuals are given token gestures (e.g., a pen) because they will experience a greater sense of compensatory justice and less negative emotional states when they are underpaid.

The purpose of the dissertation is to therefore address two main research questions. Specifically, (1) does envy mediate the relationship between

distributive justice and theft? and (2) do honesty-humility, psychological capital, and providing token gestures affect how individuals respond to distributive injustice? The dissertation extends the work of Greenberg (1993) by developing and testing a theoretical model that proposes that envy partially mediates the relationship between distributive justice and theft, and examines individual and situational moderators that may reduce theft. Affective events theory (Weiss & Cropanzano, 1996) is used to propose that envy will mediate the effects of distributive justice on theft. Self-verification theory (Swann, 1983) and compensatory justice (Boxill, 1979) hold particular promise to explain why the individual and situational factors studied in this dissertation may reduce the effects of low levels of distributive justice.

Contributions

An experimental design is used to address these research questions. Calls for research have been made to use more laboratory experiments to examine the causal relationships between unfairness, envy, and counterproductive workplace behaviours (Cohen-Charash & Mueller, 2007). Most of the existing literature uses questionnaire methodologies, cross-sectional data, and single sources to measure independent and dependent variables (Cohen-Charash & Byrne 2008; Spector & Fox, 2002); hence, the studies are not able to draw causal conclusions and may suffer from artifactual covariance. The validity of the dissertation is strengthened by using different sources to measure the independent and dependent variables. Because some cross-sectional studies have encountered issues with the

respondent's organizational deviant behaviours possibly increasing his or her perceptions of distributive justice (e.g., Bechtoldt, Welk, Hartig, & Zapf, 2007), it is imperative to measure these variables at different times. The experimental design will enable conclusions to be drawn about causal effects, which is important because theft may intensify emotions, which would heighten perceptions of distributive justice. Ascertaining causal effects provides an important theoretical contribution of testing affective events theory. Empirical findings may contribute to theory by building, extending, and testing theory (Colquitt & Zapata-Phelan, 2007). Another important strength of laboratory experiments is that they are an outlet for measuring actual as opposed to self-reported behaviour (Colquitt, 2008). Measuring actual theft and not reported accounts of theft will reduce the social desirability bias associated with self-reported and peer-reported theft.

The results of the experiment offer several potential contributions to practice including a better understanding of how employees feel when faced with low levels of distributive justice. As such, managers will be better equipped to help employees deal with difficult situations. This contribution is especially important for managers whose daily business includes dealing with employees' emotions (Muchinsky, 2000). Another contribution is the importance of screening candidates based on their personality in order to reduce theft. Intervention training may be offered to employees to increase their psychological capital.

Overview

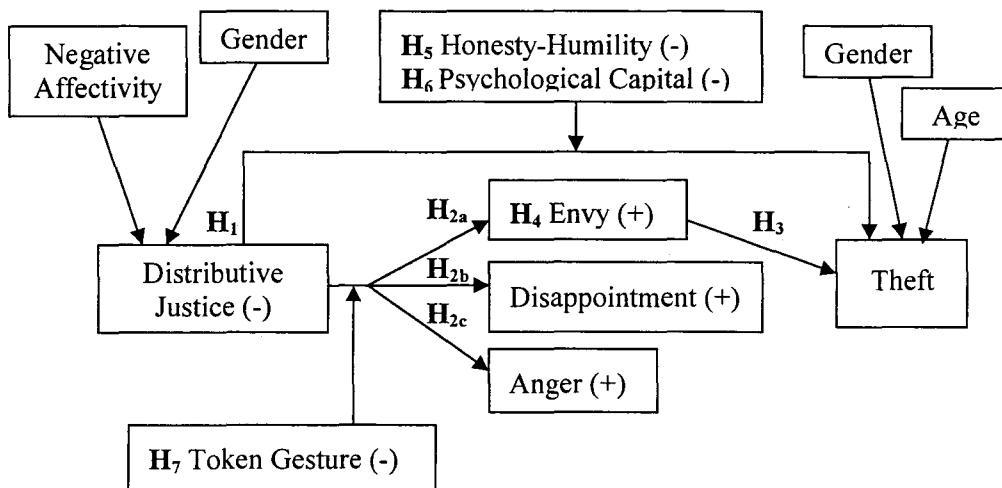
The dissertation is organized as follows: The second chapter outlines the relevant literature on distributive justice, discrete emotions, and theft, and draws on literature that has examined the mediating role of emotions, as well as moderators that may reduce theft. Specific attention is given to gaps in the literature. Theoretical justifications are outlined in detail and provide support for the hypotheses. The pilot studies and main study are described in the third and fourth chapters, the results are discussed in the fifth chapter, and the sixth chapter discusses the findings and opportunities for future research.

CHAPTER II

LITERATURE REVIEW

The literature review is divided into three main sections. The first section uses social exchange theory (Blau, 1964) to illustrate how low levels of distributive justice may increase employee theft. Some support is obtained from empirical findings on theft and counterproductive workplace behaviour. The second section introduces discrete emotions as a potential response to unfair pay and envy as a predictor of theft. Affective events theory (Weiss & Cropanzano, 1996) is used to explain how envy may partially mediate the relationship between distributive justice and theft. The third section discusses potential individual and situational moderators. The hypothesized model is provided in Figure 1.

Figure 1. Hypothesized Model



Distributive Justice and Theft

As noted above, distributive justice is a significant cause of theft, which has been described as one of the most serious problems in human resource management (Greenberg, 1990; Greenberg & Scott, 1996). Unfair pay may prompt theft because individuals steal to make up for inadequate rewards (Greenberg, 1990). Theft as a response to low levels of distributive justice may be explained by social exchange theory, which suggests that relationships are characterized by a reciprocal exchange of tangible or intangible resources (Blau, 1964). In particular, a fair situation involves the two-way transfer of resources between individuals, whereas a violation to this norm of reciprocity is indicative of an unfair situation. In an organizational context, employees may reciprocate the fair resources (e.g., compensation) that they receive from their organization by being productive. An unfair situation infringes on these norms of reciprocity so that employees who receive fewer resources (e.g., less compensation) than they desire or feel they deserve may restore fairness by engaging in behaviours that are harmful to their organizations (Cohen-Charash & Mueller, 2007).

Engaging in harmful behaviours to restore equity is also consistent with equity theory. Employees who are dissatisfied with their pay may restore fairness by altering their work contributions (i.e., inputs) or compensation (i.e., outcomes) in order to restore equity, thus making the ratio of inputs to outcomes less negative (Adams, 1965; Cohen-Charash & Spector, 2001; Homans, 1961; Walster, Walster, & Berscheid, 1978). These responses to reduce inequity may

include counterproductive workplace behaviours such as theft (Cohen-Charash & Spector, 2001). Employees may also engage in theft to “get even” or seek revenge (Tripp, Bies, & Aquino, 2007). Indeed, there is empirical evidence to suggest that low levels of distributive justice may lead to either behaviour intended to restore equity or retaliate (e.g., Ambrose, Seabright, & Schminke, 2002). Hence, theft is associated with low levels of distributive justice.

Some empirical work has examined the effect of distributive justice on theft. Greenberg (1990) studied non-union employees working in several manufacturing plants who underwent temporary wage cuts of 15% as opposed to layoffs. Plants that had temporarily cut wages experienced higher theft rates than plants that left wages constant. In another study by Greenberg (1993), participants were promised \$5 for completing an exercise that involved finding items in a department catalogue, but were later told that they would only receive \$3. The treatment and information provided to participants was manipulated. The results are important because they show that other types of justice may reduce the impact of distributive injustice on theft; however, the study did not specifically investigate the potential mediating role of discrete emotions. Umphress, Ren, Bingham, and Gogus (2009) slightly modified this experiment but instead of underpaying participants, the authors manipulated the amount of extra credit points given to 126 undergraduate students. The findings suggest that participants stole more money under conditions with low distributive justice than when it was

high but again the potential influence of discrete emotions was not investigated in the study.

In other studies, however, distributive justice was not a robust predictor of theft. Shapiro, Trevino, and Victor (1995) sampled employees at 18 fast food restaurants and found that coworker-observed theft was unrelated to distributive justice. Retired garment employees in another study also did not report that they engaged in theft in response to low levels of distributive justice, and instead, voiced their concerns with the union (Sieh, 1987). The null results may be partly explained by range restriction in both the predictor and criterion variables because the level of distributive justice was high and the frequency of observed theft was low. Coworkers may have observed low theft rates because theft is often performed in private (Jones, 2009). Employees may have also been hesitant to report theft because it is perceived as a socially undesirable behaviour and may also fear reprimand for self-reporting deviant behaviours (Murphy, 1993). Self-report measures may be a more valid assessment of theft than peer reports because deviant behaviours tend to be performed discreetly, but there is a social desirability bias associated with reporting theft. Theft rates may also be low because employees may perceive taking work property as a deserved outcome for being unfairly treated, and may not consider it as theft. As a result, there may be less variability in the findings in the empirical literature due to the underreporting of theft. These findings address the importance of using more objective measures of theft, such as measuring the actual shrinkage of goods.

Counterproductive Workplace Behaviours. Related studies have looked at theft as a part of broader set of behaviours that are intended to harm organizations. Different terms have been used to describe these behaviours including counterproductive workplace behaviours (e.g., Spector, Fox, Penney, Bruursema, Goh, & Kessler, 2006), deviance (e.g., Robinson & Bennett, 1995), aggression (e.g., Douglas & Martinko, 2001), revenge (e.g., Bies, Tripp, & Kramer, 1997), and retaliation (e.g., Skarlicki & Folger, 1997). All of the terms have overlapping behaviours such as theft (Spector & Fox, 2005). Empirical evidence suggests a small to medium negative relationship between distributive justice and deviant behaviours. Colquitt et al.'s (2001) meta-analysis found an overall negative relationship between distributive justice and negative reactions such as organizational retaliatory behaviours (ORBs) ($r_c = -.30$). The overall weighted means in other meta-analytic studies on justice and counterproductive workplace behaviours (CWBs) have been comparable ($r_c = -.22$ in Cohen-Charash & Spector, 2001 and $r_c = -.18$ in Dalal, 2005). Meta-analytic findings also suggest that low levels of distributive justice predict aggressive behaviours toward organizations ($r = .15$ in Hershcovis, Turner, Barling, Arnold, Dupre, Inness, LeBlanc, & Sivanathan, 2007).

The meta-analytic results are important because they quantitatively summarize the literature on distributive justice and counterproductive workplace behaviours, which is important because some studies have found that distributive justice was unrelated to CWBs and ORBs. For example, distributive justice did

not predict organizationally directed misbehaviour (e.g., stealing property) in a study of 214 employees from various companies including banks and local government (Ferguson, 2007). In another study, Jones (2009) found that distributive justice did not significantly predict CWBs (e.g., stealing property) towards one's supervisor or organization. Distributive justice was also unrelated to aggressive behaviours (e.g., theft) in a study that presented four scenarios to 139 participants (Kennedy, Homant, & Homant, 2004). A plausible explanation for these inconsistent findings is that there were methodological issues with measuring justice and theft simultaneously. For example, Bechtoldt et al. (2007) asked 559 participants in an Internet study about their perceptions of distributive justice and the extent to which they engaged in deviant behaviours (e.g., steal property). Contrary to expectations, findings show that distributive justice was positively related to organizational deviance (e.g., theft), with no statistically significant effects for interpersonal deviance. The authors of the study speculated that the participants perceived a sense of distributive justice *because* they engaged in CWBs, which may be indicative of the problem with cross-sectional studies measuring independent and dependent variables concurrently.

Summary. The literature on the relationship between distributive justice and theft is somewhat mixed. The inconsistent findings may be explained by common measurement issues of using subjective measures of theft (e.g., self-reports) and studying independent and dependent variables at the same time. Correcting for these measurement issues by using an objective measure of theft

and measuring distributive justice and theft at different times will strengthen the results from the hypothesis that individuals who perceive that their compensation is fair will engage in a lower magnitude of theft.

Hypothesis 1: Individuals who perceive distributive justice will engage in a lower magnitude of theft.

The Role of Discrete Emotions

Although unfair pay has been identified as an important predictor of employee theft, another potential antecedent may influence how employees behave (Hollinger & Clark, 1983; McClurg & Butler, 2006). The following sections will first review the literature on discrete emotions as a response to distributive justice, then discrete emotions as a predictor of theft, and finally discrete emotions as a potential mediator of the relationship between distributive injustice and theft. Within each section, the theory behind the proposed relationships will first be discussed, then the relevant literature on discrete emotions, and then for comparison, the literature on affective states.

Discrete emotions as a response to low levels of distributive justice.

Examining how justice affects emotions is an important aspect in understanding how justice shapes organizational life (Weiss et al., 1999). A sense of unfair pay may elicit a number of emotions, which include jealousy, envy, resentment, indignation, and anger (Ben-Ze'ev, 1992; Montada, 1994). Emotional responses to unfair pay are based on the premise of affective events theory. According to this theory, work events trigger emotional reactions from employees, which influence

their attitudes and behaviours (Weiss & Cropanzano, 1996). Events at work may be positive (e.g., promotion) or negative (e.g., loss of a sale) and cause employees to experience distinct emotions. Because a negative work event, such as reduced compensation or a pay freeze, elicits an emotional response from employees, emotions are the most proximal outcomes of unfair work events and may influence how individuals respond.

Affective events theory is a broad perspective for understanding how employees respond to work events, but some authors suggest that situations are more nuanced and should be analyzed when exploring the impact of emotions (Weiss et al., 1999). More specifically, it has recently been suggested that the ensuing emotional state depends on the kind of organizational injustice (Bembenek et al., 2007). Equity theorists have suggested that individuals who perceive unfair or inequitable outcomes may feel distressed or dissatisfied (Walster et al., 1978). Adams (1965) specifically suggests that individuals experience anger when they receive unfair pay. Anger includes feelings of irritation, resentment, bitterness, and fury (Spencer & Rupp, 2009). In contrast, Bembenek et al. (2007) suggests that disappointment and not anger is elicited from low levels of distributive justice and that anger arises instead from low levels of procedural or interactional justice. Disappointment refers to “a psychological reaction to an outcome that does not match up to expectations” (Bell, 1985, p. 1).

Some studies have explored the relationship between distributive justice and emotions such as anger. For example, Bies, Martin, and Brockner (1993) found that skilled employees experienced distributive injustice and anger when layoffs were distributed unfairly. Scher (1997) also found that anger was a consequence of low levels of distributive justice in a vignette study on underpaid and overpaid employees. Individuals who were treated unjustly also reported feelings of anger and sadness (which includes disappointment) in other studies by Mikula (1986, 1987). The findings by Mikula are important because they show that anger and sadness are emotions that relate to unjust events; however, the particular studies did not specify the type of organizational justice. Instead, participants were simply asked about the degree of unfairness in a situation. It is therefore not clear that participants recalled events of distributive justice.

Even though anger has received much of the attention in the literature, it has also been argued that low levels of justice may provoke feelings of envy within individuals when they make social comparisons with others (Cohen-Charash & Byrne, 2008; Cohen-Charash & Mueller, 2007; Smith et al., 1994). Envy is “characterized by feelings of inferiority, longing, resentment, and disapproval” (Parrott & Smith, 1993, p. 906). More specifically, envious individuals make social comparisons about things that are central to their self-concept with referent others who are similar to them. When they notice that their referent other has something that they desire, they experience envy because the desired possession or condition is central to how they perceive themselves

(Cohen-Charash & Mueller, 2007). Envious individuals do not necessarily feel inadequate but they feel disadvantaged to their referent other (Schoeck, 1969). Heider (1958) suggests that envy stems from a strong belief premised on the notion that what individuals receive should be equal with their referent other.

Discrete emotions. Few empirical studies have examined the relationship between unfairness and envy, but studies consistently find that unfairness is associated with envy. Smith et al. (1994) conducted a study that asked 427 students to recall an autobiographical account of a time when they experienced envy. Students responded to questions about the fairness of the envied person's advantage, how inferior they felt, and the extent to which they felt hostile and depressed. Results showed that students experienced hostility when they felt unjustly treated and believed that others would consider the advantage to be unfair. Smith et al. (1994, p. 705) suggest that "envy, especially in its typically hostile form, may need to be understood as resulting in part from a subjective, yet robust, sense of injustice." While this assertion is important, it was not specifically tested in the study.

Another study by Feather and Sherman (2004) investigated the envy experienced after individuals read a scenario about students failing a final exam. Participants first read one of four profiles about different types of students (high achievers, average achievers) and how much effort they put into a course (low, high). Justice was conceptualized as a discrete emotion that loaded onto the general factor of resentment. The findings are important because they suggest that

envy and resentment can coexist but that individuals can envy others without believing that their advantage was undeserved. While these findings shed light on differences between resentment and envy, it is more established to treat justice as a perception of fairness (Colquitt, Scott, Judge, & Shaw, 2006) and not a discrete emotion.

Scenarios were also used in studies about the antecedents of envy (Lieblich, 1971). Participants read scenarios about fictional students with different “lots” or in this case, grade outcomes, to gauge how envious the fictional students would be of each other. For example, both John and Dick are good students, know their topic, and have a background in the field. The outcome of the final exam for John was an A but an F was given to Dick. Participants then gauged how envious Dick was of John. Results suggest that a greater inequity of the lots (i.e., grades) was associated with a higher envious reaction by the fictional characters. The findings suggest a relationship between distributive justice and envy but further research is needed using actual situations where participants experience envy as a result of unfair outcomes (Feather & Sherman, 2004).

The relationship between envy and unfairness has been studied in the context of bank tellers being considered for promotion after two years of employment (Schaubroeck & Lam, 2004). Feelings of “promotion envy” and the justice of the reward allocation were measured after promotion decisions had been made. Results suggest a positive and significant relationship between perceived reward allocation unfairness and promotion envy ($\beta = .66, p < .001$). Thus, when

individuals had high levels of promotion envy, they felt that the rewards that they received were unfair. Although these findings show a strong relationship between envy and low levels of distributive justice in a field setting, inferences about causality cannot be made because the two variables were measured simultaneously. Schaubroeck and Lam (2004) suggest that envy actually precedes unfairness because affect serves as a diagnostic function and signals to individuals that an outcome is unfair. Thus, a laboratory study is needed to experimentally examine the relationship between justice and envy.

Affective states. As noted above, much of the organizational research on justice and emotions has focused on how distributive justice influences affective states (e.g., my job makes me feel negatively) rather than discrete emotions (e.g., my job makes me feel angry). A meta-analysis of 190 studies found that distributive justice predicted emotional reactions such as negative moods ($r_c = -.27$; Cohen-Charash & Spector, 2001). Other general states that include elements of anger (e.g., irritability, hostility) and sadness (e.g., distress) have also been studied in relation to distributive justice. Barksy and Kaplan (2007) conducted a meta-analysis on the effects of distributive justice on state negative affect and found a negative relationship ($r_c = -.25$). Fox, Spector, and Miles (2001) also found a moderate relationship between negative emotions and distributive justice ($r = -.38$) when they asked 292 employees about their rewards and emotions (e.g., anger, anxiety). Negative emotions were measured using the Job-Related Affective Well-Being Scale (JAWS). Negative emotions have also been measured

in the context of negotiations and reward equity (Hegtvedt, 1990; Hegtvedt & Killian, 1999; Stecher & Rosse, 2005). Austin and Walster (1974) studied the affective reactions of 117 students in response to a decision about their compensation. Participants expected \$2 for completing a proofreading task, but they were placed in one of three conditions \$1 (underpayment), \$2 (equitable payment), or \$3 (overpayment). Those participants who received less than expected were the most distressed (e.g., anxious, aggressive, depressed). Anxiety and distributive justice has also been studied in the context of reactions of layoff survivors (Paterson & Cary, 2002).

Summary

The literature consistently finds that distributive justice is negatively related to discrete emotions and that individuals simultaneously experience a number of different emotions when they receive outcomes that are unfair. It is therefore expected, based on affective events theory, that individuals who perceive that their compensation is fair will experience less envy, disappointment, and anger.

Hypothesis 2a: Individuals who perceive distributive justice will experience less envy.

Hypothesis 2b: Individuals who perceive distributive justice will experience less disappointment.

Hypothesis 2c: Individuals who perceive distributive justice will experience less anger.

Discrete Emotions as a Predictor of Theft. Although there is some research that links discrete emotions with aggressive or harmful behaviours (e.g., Cohen-Charash & Mueller, 2007; Roseman et al., 1994), there is a paucity of research that has looked at the specific relationship between discrete emotions and theft. Weiss et al. (1999) suggest that it is important to explore how discrete emotions influence specific behaviours because theft may be a function of some discrete emotions (e.g., envy) and not other emotions (e.g., frustration, fear). Broadly grouping discrete emotions to form general affective states may not capture the particular effects of certain discrete emotions. As explained below, the level of measurement (specific or broad) may be an important factor in finding a relationship between distributive justice and theft.

Discrete emotions. The empirical evidence suggests that only certain discrete emotions are related to theft. A study by Chen and Spector (1992) asked four hundred employees about the extent to which they were frustrated or angry at work over the past 30 days and how often they engaged in theft. Correlational results show that theft was unrelated to frustration ($r = .05$) and weakly related to anger ($r = .12$). Another study, by Tunstall, Penney, Hunter, and Weinberger (2006) looked at the emotions that participants recalled when they engaged in theft. The results show that participants recalled a wide range of discrete emotions such as anger/frustration, anxiety, guilt, and pleasure. While the findings of the aforementioned study show that discrete emotions were associated with theft, the design of the study also does not support causal inferences. Participants may have

recalled emotions that they experienced after stealing (e.g., pleasure, guilt) rather than the emotions that lead them to steal (e.g., anger). Moreover, participants recalled events that were related to justice but the participants were not instructed to focus only on events that pertained to distributive justice.

While there is evidence that there are discrete emotions that relate to theft, studies that use broader measures of workplace deviance (which include theft) have not found a significant relationship. For example, Lee and Allen (2002) found that discrete emotions such as fear, sadness, and guilt did not predict deviance, whereas hostility had a moderate relationship with workplace deviance (e.g., stealing property). Moreover, Fox and Spector (1999) found that frustration did not predict serious organizational CWBs, which included stealing items from work.

Affective states. Studies on broad measures of emotions have found that affective states do not predict theft. For example, results from a study by Spector et al. (2006) show that the negative emotions of upset ($r = .05$) and boredom ($r = .06$) were unrelated to theft. Negative emotions were measured using the Job-Related Affective Well-being Scale (JAWS), which proposes two distinct factors: upset (e.g., anger, fatigue, fear) and boredom. On the other hand, researchers found that general affective measures of emotions predict broad measures of workplace deviance. For instance, Fox et al. (2001) also used the JAWS measure and found a strong positive relationship with organizational CWBs (e.g., theft).

Likewise, Bruk-Lee and Spector (2006) also found a positive relationship between negative emotions using the JAWS scale and CWBs.

An explanation for the inconsistent findings may be that broad measures of emotions (e.g., affective states) are useful to predict broad deviant behaviours, but that discrete emotions may be more suitable to predict specific behaviours such as theft. This explanation is consistent with Weiss et al. (1999) who suggest that studying discrete emotions in favour of affective states can increase our ability to predict specific behaviour. Researchers are better able to predict certain behaviours because discrete emotions of similar negative valence (e.g., guilt, envy) have distinct antecedents and outcomes (Cohen-Charash & Byrne, 2008; Lazarus & Cohen-Charash, 2001). In other words, discrete emotions such as envy may predict specific types of CWBs such as theft. This explanation highlights the importance of the having measures reflect the appropriate level of measurement (e.g., specific or broad).

Measuring discrete emotions will also enable the current investigation to determine which emotion predicts theft. Appraisal models suggest that there are particular consequences of certain emotions (e.g., Frijda, 1987; Oatley & Johnson-Laird, 1987). The typical response of an emotion in the sadness category such as disappointment is forfeiting unattainable goals or withdrawing, whereas the basic emotion of anger tends to elicit aggressive behaviours to remove obstacles or regain threatened outcomes (Ellsworth & Smith, 1988; Levine, 1996; Oatley & Johnson-Laird, 1987). Thus, disappointment will not elicit theft because

individuals who are disappointed tend to forfeit or withdraw. Because theft is a behaviour intended to regain threatened outcomes, individuals are more likely to steal as a result of being angry. Shaver, Schwartz, Kirson, and O'Connor (1987) propose that anger is comprised of the discrete emotions of anger (rage), irritation, frustration, disgust, torment, and envy. The goal of envious individuals is to reduce their gap with envied individuals because envy is a very unpleasant emotion to experience (Heider, 1958). Envy is characterized by the desire to eliminate one's inequality compared to others (Ben-Ze'ev, 1992). In this particular dissertation, the goal of individuals who receive unfair pay would be to equalize outcomes with individuals who are paid fairly. One way to do so is to engage in harming behaviours such as theft. Engaging in this type of CWB can help envious individuals in three ways: (1) it can regulate the emotions that envious individuals experience, (2) it equalizes the lots between the envious and the envied, and (3) it can protect the self-esteem of envious individuals (Cohen-Charash & Mueller, 2007; Penney & Spector, 2008). Based on these appraisal models, I expect that only envy and not disappointment or anger will predict theft because envious individuals will tend to equalize outcomes by stealing.

Hypothesis 3: Individuals who experience envy and not anger or disappointment will engage in a higher magnitude of theft.

Discrete emotions as a mediator between distributive justice and theft.

Understanding the effects of distributive justice on behaviours is an important area of research, but these effects are not well understood, in part, because the

process by which low levels of justice affect behaviours is not a well researched area (Barclay et al., 2005; Brebels, De Cremer & Sedikides, 2008; De Cremer & van den Bos, 2007). Two reasons explain the limited empirical research: (1) discrete emotions have rarely been measured and (2) emotions may not always be necessary to evoke deviant behaviours (Bembenek et al, 2007). Some authors suggest that “there can be little doubt that emotion is one of the central mediators of reactions to perceived injustice” (Mikula, Scherer, & Athenstaedt, 1998, p. 781). The theory that is useful to depict the mediating role of emotions is affective events theory (De Cremer, 2007). As noted above, affective events theory proposes that emotions mediate the relationship between work events and employees’ attitudes and behaviours (Weiss & Cropanzano, 1996). A negative work event elicits some type of emotional response from individuals, which in turn predicts their attitudes and behaviours. This theory holds particular promise for explaining how low levels of distributive justice elicit envy and theft.

Even though few scientific studies have specifically investigated the mediational role of emotions, some research does draw positive conclusions. A study of 292 surveyed employees found that a broad measure of negative emotions (e.g., anger, fury) fully mediated the relationship between distributive justice and organizational CWBs (e.g., stolen something from work; Fox et al., 2001). While this finding sheds light on the important role of emotions, the study broadly examines affective states and CWBs, so it is not yet known how discrete emotions such as envy affect specific reactions such as theft. Another related

study by Fox and Spector (1999) examined how feelings of frustration mediated the relationship between frustrating events/stressors and CWBs, but distributive justice was not specifically investigated.

Additional studies have found that affective states influence other responses to low levels of distributive justice. For example, Bembenek (2006) found that overall negative affect (e.g., hostile, angry, disappointment) partially mediated the relationship between distributive justice and the retributive responses of neglect and penalties to defectors. No mediation effects were found for exit or aggressive voice. An explanation for these findings may be that the chosen task of selecting the number of chips to contribute to a group project was not suitable for eliciting negative affect, which is evident by its low mean score (i.e., 2.24 out of 7). Negative affect has also been shown to mediate the relationship between distributive justice and intentions to exit (e.g., consider changing jobs; Van Yperen, Hagedoorn, Zweers, & Postma, 2000). While these findings are important, most studies have used measures of affective states not discrete emotions. Additionally, most studies have also broadly measured CWBs, rather than specific behaviours such as theft. As noted above, broad measures of emotions such as affective states may be suitable for examining broad counterproductive behaviours but discrete emotions may be more useful to predict specific behaviours such as theft (Weiss et al., 1999). It is therefore important to further understand this relationship.

While affective events theory generally suggests that emotions mediate the relationship between unfair outcomes and theft, the appraisal model (e.g., Frijda, 1987; Oatley & Johnson-Laird, 1987) is used to suggest that the specific mediating emotion is envy because the goal of envious individuals is to reduce their gap with their envied referent other (Heider, 1958). As noted in the previous section, individuals who envy the fair pay received by others in the study are more likely to steal to regain their threatened outcomes and to reduce the pay gap with their envied other. Envy will partially mediate the relationship between distributive justice and theft because emotions are not always necessary to elicit deviant behaviours. Individuals may choose to recognize or ignore their emotions when they respond to unfairness (Bembenek et al, 2007). As a result, it is therefore hypothesized that envy will be a partial mediator between distributive justice and theft.

Hypothesis 4: Envy will partially mediate the relationship between distributive justice and theft such that individuals who perceive distributive justice will experience less envy and engage in a lower magnitude of theft.

Moderators of the Impact of Discrete Emotions on Theft

Previous studies have found that distributive justice is an inconsistent predictor of retaliatory responses (Colquitt et al., 2001), which is indicative of the many ways in which people react to unfair pay. For example, some individuals may easily forgive the transgressor, while other individuals may seek to regain

their threatened outcomes. Moderating variables may affect how people perceive and respond to an unjust situation (Greenberg & Alge, 1998). For example, there may be individual differences that make people more sensitive to certain aspects of an unjust event, which causes them to react differently than others (Stouten et al., 2007). Certain situational aspects may also help people to recover from fairness violations.

Personality traits. Emotion provokes a readiness to engage in particular behaviours, but other factors such as personality characteristics and environmental conditions must be present for individuals to react to distributive justice (Spector & Fox, 2002). Empirical research shows that only some of the studied personality characteristics explain variation in individuals' reactions to unfair outcomes. In a study of 2,700 Australian public service employees, participants responded to a survey on the extent that distributive justice items (e.g., fair compensation) predicted a combined measure of interpersonal and organizational CWBs (e.g., stolen something from work) (Flaherty & Moss 2007). All of the "Big-Five" personality traits, extraversion, conscientiousness, openness to experience, neuroticism, and agreeableness, were measured, but only agreeableness affected CWBs; none of the other personality traits affected employees' responses to distributive justice. Similarly, Colquitt, Scott, Judge, and Shaw (2006) found that none of the Big-Five traits affected how much participants stole. Participants were 238 students who participated in a laboratory experiment that assessed the effects of distributive justice on the amount of stolen pens. The experimenters originally

told participants that they could keep a pen, but they subsequently asked participants to leave the pen due to a pen shortage. Thus, the amount of pens left determined how many pens were stolen. None of the Big Five traits were associated with the extent to which individuals stole pens. Another study found that agreeableness and negative affectivity were not significant moderators of the relationship between distributive justice and a broad measure of retaliatory behaviours (e.g., took supplies without permission; Skarlicki, Folger, & Tesluk, 1999).

Other personality traits have been investigated and most do not affect how individuals respond to distributive justice. The propensity to trust, risk aversion, and trait morality did not affect the extent to which participants stole (Colquitt et al., 2006). On the other hand, participants stole less when they had reached a higher stage of moral development, thus having more mature cognitive reasoning to discern right from wrong (Greenberg, 2002). Trait anxiety and trait anger also did not affect the relationship between distributive justice and CWBs (Fox et al., 2001). What is important here is that even though individuals may vary in how they respond to unfairness (Colquitt et al., 2001), there is still a lot of uncertainty as to what these individual differences may be. It is therefore important to examine other individual moderators that may reduce theft.

Honesty-humility. Studies show that there are few known individual differences that reduce the impact of low levels of distributive justice on theft, yet individuals may respond differently when they experience unfairness (Colquitt et

al., 2001). One personality trait in particular, honesty-humility which is a part of the HEXACO model, may be especially relevant to understand why some people may be more or less inclined to engage in theft. Honesty-humility pertains to one's sincerity, fairness, lack of greed, and modesty (Ashton & Lee, 2005).

People who score high on the honesty-humility dimension are more genuine when dealing with people (i.e., sincere), avoid corruption and fraud (i.e., fair), are not motivated by material gain (i.e., avoid greed), and are unassuming (i.e., modest; Lee & Ashton, 2004). This dimension is not captured in other personality models (e.g., Big Five) that have generally shown to have little to no effect on theft.

The honesty-humility dimension has been validated and internal consistency scores have been acceptable and have ranged from .71 to .92 (Ashton & Lee, 2005; Lee & Ashton, 2004; Lee, Ashton, & de Vries, 2005a; Lee, Ogunfowora, & Ashton, 2005b, Lee, Ashton, Morrison, Cordery, & Dunlop, 2008). Findings show that the dimension is a broad personality factor (Ashton & Lee, 2005). Thus, the inclusion of honesty-humility is content valid because its empirical distinctiveness provides a more comprehensive portrayal of broad personality domains. The construct validity of the dimension has also been assessed and has shown a strong negative relationship with traits such as Machiavellianism, psychopathy, narcissism, entitlement, and exploitation (Lee & Ashton, 2005; Lee et al. 2008). Honesty-humility has a modest relationship with the Big Five Factors, with a strong relationship with agreeableness ($r = .54$; Ashton & Lee, 2005). Criterion-related validity has been assessed for some

workplace behaviour dimensions; the HEXACO model explained more variance in ethical decision-making task and integrity than the Big Five Factors (Lee et al., 2005a; Lee et al. 2008).

Honesty-humility is likely an important determinant of how individuals respond to low levels of distributive justice based on self-verification theory (Swann, 1983). Individuals behave in such a way to reinforce or confirm their positive or negative self-perceptions. It is the stability of one's positive or negative self-view that affects their efforts to behave consistently (Lecky, 1945). Self-verification theory differs from dissonance theory (Aronson, 1968; Festinger, 1957) because individuals behave according to their self-view and do not transform their self-view to match their behaviours. Instead, individuals seek to maximize the consonance between what they experience and how they view themselves.

Self-verification theory relates to the current investigation because it may explain why high scorers of the honesty-humility dimension will be less likely to engage in theft when they experience distributive injustice. Based on self-verification theory, individuals who perceive themselves to be sincere, avoid fraud and corruption, avoid greed, and are modest are likely to behave consistently with their positive self-view. In other words, when faced with an unjust event and an opportunity to steal, high scorers will be less likely to steal because it is contrary to how they perceive themselves. Low scorers of the personality trait, on the other hand, are more motivated by material gain and are

more likely to engage in fraudulent behaviours; hence, they are more likely to behave consistently with their negative self-view by engaging in theft. Because the behaviour of stealing would be consistent with a negative self-view of honesty-humility, low scorers will be more likely to steal in response to an unjust event. Indeed, some empirical research has found that high scorers of honesty-humility were less likely to engage in organizationally-directed misbehaviour (e.g., theft) after their groups engaged in organizational misbehaviours (Ferguson, 2007). Thus, theft will be lower among individuals with high levels of the honesty-humility.

Hypothesis 5: Honesty-humility will moderate the relationship between distributive justice and theft such that individuals high in honesty-humility will engage in a lower magnitude of theft.

The potential moderating effects of other HEXACO items such as conscientiousness will also be examined because the HEXACO scale has not been used in prior studies in the literature on distributive justice and theft. One personality trait in particular may be relevant in this context. Investigating conscientiousness is important because meta-analytic results suggest that counterproductive workplace behaviours that include measures of theft are heavily influenced by the trait of conscientiousness (Salgado, 2002).

State-like moderators. Honesty-humility may be important to explain why certain individuals engage in less theft, but other individual factors, that are

more malleable than personality traits, may also affect how individuals respond to unjust pay.

Psychological capital. Psychological capital is a state-like construct that may affect how individuals respond to low levels of distributive justice.

Psychological capital is more than what you know (i.e., human capital) and who you know (i.e., social capital); it involves who you are and who you can be (Luthans, Avey, Avolio, Norman, & Combs, 2006).

Psychological capital is more specifically defined as:

An individual's positive psychological state of development that is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals, and when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success (Luthans, Avolio, Avey, & Norman, 2007a, p. 3).

Empirical studies show that PsyCap is a reliable and valid measure.

PsyCap has criterion-related, convergent, and discriminant validity (Luthans et al., 2007a; Luthans, Youssef, & Avolio, 2007b). Criterion-related validity is demonstrated through the ability of PsyCap to predict job satisfaction and performance. Convergent validity is evident through relationships with core self-evaluations and the traits of conscientiousness and extraversion. There is some evidence of discriminant validity because PsyCap does not relate to education, age, openness to experience, or agreeableness (Luthans et al., 2007b). Overall

reliability scores have been positive and have ranged from .88 and .95 (Avey, Wernsing, & Luthans, 2008; Luthans et al., 2007b).

Self-verification theory is also useful to explain why psychological capital may affect the way in which individuals view and react to unfair pay. According to self-verification theory, individuals interpret information that is consistent with how they view themselves (Swann, 1983). Individuals with a positive self-view tend to interpret information in a positive manner that is consistent with their self-view, whereas information is interpreted in a negative manner by individuals with a negative self-view.

Individuals high in psychological capital have certain characteristics that enable them to interpret information more positively. High psychological capital individuals are able to persevere when they face obstacles (self-efficacy), possess the willpower and waypower to obtain their goals (hope), can bounce back from adverse events (resiliency), and view negative events as temporary (optimism) (Luthans & Youssef, 2004). The capacity to bounce back is important to understanding how people face reality and how they adapt to change (Coutu, 2002). As a result, these individuals are likely to see an unfair pay less negatively because they are perseverant, hopeful, resilient, and optimistic (Avey, Luthans, & Youssef, 2010). The way in which individuals interpret low levels of distributive justice is consistent with their self-view of being optimistic and resilient. Indeed, studies show that positive employees (i.e., those with high psychological capital)

express more positive affect (e.g., enthusiasm, inspiration) and are less likely to engage in CWBs such as theft (e.g., Avey et al., 2008).

On the other hand, low psychological capital individuals may interpret distributive injustice more negatively because it is consistent with how they perceive themselves. Low psychological capital individuals are less perseverant, hopeful, resilient, and optimistic, and as a result, they may interpret an unfair outcome more negatively because it is in accordance with their self-view. More specifically, possessing low amounts of characteristics such as optimism and resiliency may cause individuals to interpret an outcome such as unfair pay more negatively, thus, they are more likely to engage in counterproductive workplace behaviours such as theft. It is therefore proposed that psychological capital will moderate the effects of distributive justice on theft.

Hypothesis 6: Psychological capital will moderate the relationship between distributive justice and theft such that individuals high in psychological capital will engage in a lower magnitude of theft.

Situational Moderators. Situational factors may also play an important role in determining how individuals respond to low levels of distributive justice because certain situational conditions may influence the magnitude of theft (Spector & Fox, 2002). For example, Greenberg (2002) found that corporate ethics programs reduce theft by sensitizing employees to inappropriate behaviours. It was also found that the source of the compensation (e.g., colleague

or organization) affects theft because employees empathize more with their colleagues and are thus less inclined to steal from other employees. Other types of justice (e.g., interactional, procedural) are also important situational moderators of the effects of distributive justice (e.g., Greenberg, 1990; Greenberg, 1993; Skarlicki et al., 1999; see Colquitt et al., 2006 for an exception). Some factors do not moderate the impact of distributive justice such as codes of conduct (Umphress et al., 2009) and the amount of team commitment and co-worker satisfaction (Flaherty & Moss, 2007). While these findings show that there are ways to mitigate the potentially damaging effects of unfair pay, another strategy of offering token gestures may be just as important.

Token Gestures. Token gestures, which refer to the provision of discounts or gifts (Goodwin & Ross, 1992), may reduce the impact of unfair pay on discrete emotions because they may provide individuals with a sense of compensatory justice (also known as restorative or corrective justice). Compensatory justice refers to the rectification of conditions for individuals who have suffered a loss or injury (Boxill, 1979). There are two forms of compensatory justice: reparation and compensation. The aim of reparation is to correct prior injustices by acknowledging wrongdoings (e.g., admit error), while compensation aims to remedy the present situation by restoring losses (Boxill, 1979). Individuals are given some form of compensation to provide restitution for their losses (Schroeder, Steel, Woodell, & Bembenek, 2003). Without any form of restitution,

individuals feel negatively about their outcomes and are more inclined to feel discrete emotions such as anger or envy (Bembenek et al, 2007).

Compensatory justice is different from distributive justice in that the former “involves a rectifying or reparatory transaction between one person or party and another” and the latter refers to “criteria for the distributions of goods, offices, and honors among the citizens of the state,” (Blackstone, 1975, p. 254). In other words, individuals feel compensatory justice when they are compensated for other’s wrongdoings, but experience distributive justice when goods are distributed fairly.

Token gestures have mainly been studied on the literature on customer responses to service failures. Studies suggest that token gestures (e.g., coupons, gifts) increase customers’ satisfaction with explanations for service failures (Conlon & Murray, 1996). A service failure refers to “an exchange where a customer perceives a loss due to a failure on the part of the service provider” (Patterson, Cowley, & Prasongsukarn, 2006, p. 264). As a result, service providers may offer customers some form of compensation to offset their loss in order to increase their satisfaction and loyalty (Karatepe, 2006). Providing some form of atonement through a token gesture, such as a gift voucher or free drink, suggests to customers that organizations accept blame for service failures (Boshoff & Leong, 1998).

Service providers repair wrongdoings by apologizing for their mistakes and offering compensation to wronged individuals. Studies suggest that

individuals evaluate their situations more fairly when they receive justificatory explanations for unfair outcomes (e.g., Bies & Shapiro, 1987; Greenberg, 1990). Apologies are a particular type of explanation that refers to “confessions of responsibility for negative events which include some expression of remorse” (Tedeschi & Norman, 1985, p. 299). Apologies are often used to express regret and accept responsibility for an injustice. Studies show that token gestures (e.g., coupons) improve customers’ satisfaction with apologies (e.g., Conlon & Murray, 1996). While some authors suggest that customer apologies for service failures are more important than how customers are compensated (e.g., Ozment & Morash, 1994), other authors propose that apologies are insufficient without offering token gestures (e.g., Goodwin & Ross, 1992). Evidently, offering token gestures and apologizing for wrongdoings may both show that organizations are taking responsibility for wrongdoings. Token gestures may therefore be used to correct prior injustices by acknowledging wrongdoings and remedy the situation by restoring some losses.

Research on affective reactions to unfavourable events also suggests that explanations reduce the anger that people experience in response to unfavourable events (Conlon & Murray, 1996). A token gesture may make outcomes less negative through reparation or symbolic compensation by showing that individuals are important and that organizations are remorseful (Bell & Ridge, 1992; Conlon & Murray, 1996). They may also give individuals some sense of compensation for the wrongdoing. It is therefore hypothesized that token gestures

will affect the relationship between distributive justice and discrete emotions because individuals will experience more compensatory justice or the belief that justice has been restored.

Hypothesis 7: Token gestures will moderate the relationship between distributive justice and the discrete emotions of envy, anger, and disappointment such that individuals will be less likely to experience these discrete emotions as a response to distributive justice.

Control Variables

Prior research suggests a relationship between individual characteristics and counterproductive behaviours, hence it is important to control for these variables. Gender has been shown to be related to the propensity to behave unethically such that there is variation in the moral standards and ethical behaviour of males and females; one study in particular found that males behaved less ethically than their female counterparts (Chen & Tang, 2006). Gender is also an important factor in perceptions of justice because males may give higher priority to distributive justice than females when they evaluate their workplace experiences (Sweeney & McFarlin, 1997).

Age is another important variable to control for since some studies indicate that younger employees have higher odds of engaging in theft because they may be less deterrable than their older counterparts (e.g., Hollinger & Clark, 1983). The current investigation also controls for trait negative affect because it tends to

influence the way in which people perceive distributive justice and react to events. In particular, individuals high in trait negative affect tend to be more sensitive and less optimistic about negative events (Barksy & Kaplan, 2007; Douglas & Martinko, 2001).

Chapter III

PILOT STUDIES

Pilot Study 1

The purpose of the first pilot study was to determine suitable compensation for participating in a 45-minute study. Undergraduate students at McMaster University took part in a pilot study to determine the appropriate compensation level. Participants were recruited during the summer semester from a third-year undergraduate course. Recruitment scripts and the letter of consent are provided in Appendix B. The pilot study followed the same protocol as Greenberg's (2002) pilot study, where participants indicated in an open-ended questionnaire what they deemed as fair compensation. In particular, participants indicated the amount of payment that they believed would constitute fair compensation for completing a 45 minute study involving a computer task and questionnaire. Participants also indicated to what extent they valued certain items (e.g., a pen, letter from the Dean) on a seven-item scale as token gestures for participating in the study. The questionnaire is located in Part One of Appendix B.

Means were calculated to determine suitable compensation levels and the token gesture to be provided. Of the 158 students registered in the class, 70 participants returned completed questionnaires (44% response rate). Participants reported an average of \$25.25 to be fair compensation for completing the task. One case was excluded because the participant did not indicate an amount for fair compensation. The average age of participants was 20 years old and just over half

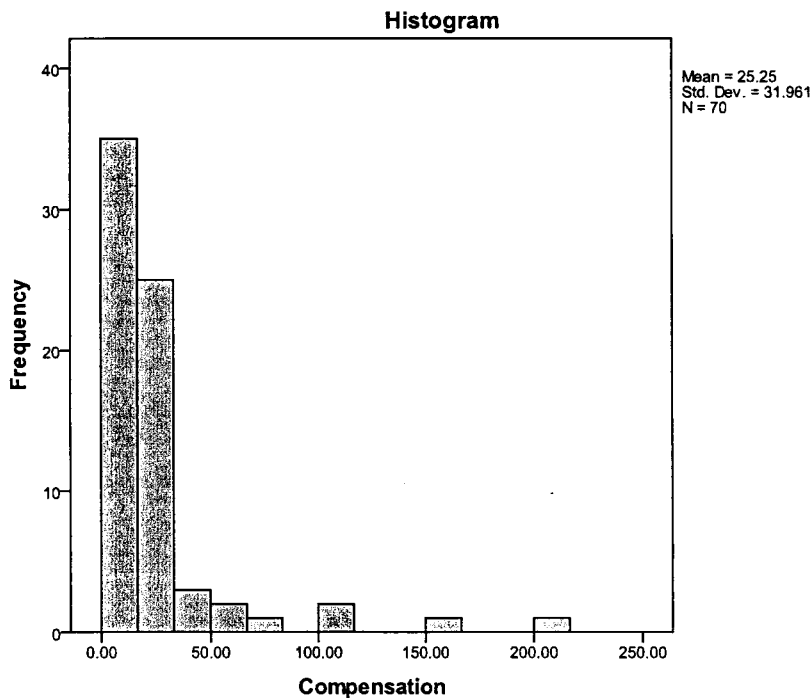
(61.4%) were female. I analyzed the results for outliers and upon inspecting the following histogram in Figure 2, four cases were excluded. As a result, the average compensation was \$18.45 ($N = 66$). This number was rounded to \$20 because a common practice is to compensate study participants in dollars.

Participants ($N = 71$) also indicated on a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree) the extent to which they valued certain items as a token of appreciation for participating in lieu of monetary compensation. Means for each token gesture were calculated: pen ($M = 3.25$), thank-you letter from the Dean ($M = 3.03$), keychain ($M = 3.30$), and pin ($M = 2.90$). The means for pens ($M = 3.25$, $SD = 1.90$) and key chains ($M = 3.30$, $SD = 1.78$) were compared using a paired samples t test and the difference was not statistically significant $t(70) = -.20$, $p = .84$). Because there was no significant difference between pens and key chains, pens were chosen as the token gesture because they could be acquired at a more affordable price.

A group of participants ($N = 24$) from a different fourth-year undergraduate class was asked if they would consider \$2 as unfair pay. Of the 31 students registered in the class, 24 participants returned completed questionnaires (77% response rate). Participants responded to the question provided in Part Two of Appendix B, “How fair and appropriate would \$2 be as compensation for spending 45 minutes on a study involving simple computer tasks and a questionnaire?” Participants selected among three options because this approach was used by Greenberg (1993) and asking for more nuanced answers (e.g.,

slightly underpaid) does not provide much benefit because the purpose was to determine appropriate compensation levels. Participants chose among the following response alternatives: underpayment, \$2 is not enough; fair payment, \$2 is appropriate; and overpayment, \$2 is too much. The average age of participants was 22 years old and half (50%) were female. The majority of participants (71%) responded that \$2 is not enough, which is consistent with Greenberg's (2002) results where most participants responded that \$2 was not enough.

Figure 2. Histogram of Fair Compensation Levels



Pilot Study 2

The purpose of the second round of pilot studies was to ensure that the experimental manipulation and deception were effective. Graduate students were

selected because they potentially have greater exposure to research and may be able to better detect potential problems with the study. Two waves of data were collected. The first wave of participants (N = 20) was recruited through a PhD listserv and announcements in first-year MBA classes. Out of 20 participants, 13 (65%) were male and 7 (35%) were female. The average age of participants was 25 years old. Recruitment scripts and the letter of consent are provided in Appendix C.

After receiving feedback about the procedures from the first wave of participants, modifications were made and tested on the second wave of participants (N = 10). This group of participants was recruited by asking graduate secretaries from various departments to forward information about the pilot study to their graduate students. No changes were made after the second wave of participants. Because the conditions were identical, these data were included in the results of the main experiment.

Based on the initial group of participants, I made modifications to the task, compensation, experimental manipulation, and the inclusion of additional questions. The original task was based on prior research that has used a sorting exercise of department store catalogues (e.g., Greenberg, 1993; Umphress et al., 2009). Participants in the first wave of data collection navigated an online flyer from a retail store and located the price of particular items (e.g., Extra Strength Ibuprofen). Feedback from these participants suggested that this task was too

easy, and as a result, the task was modified. The task is explained in detail in the section below (see the section on Procedures).

The compensation was also modified from \$25 to \$20 based on participant feedback that compensation was too high and that participants were suspicious that the compensation was linked to the purpose of the study. Participants had originally reported an average of \$25.25 to be suitable compensation for completing the task, which was used in the initial pilot test. After receiving feedback from the first wave of participants that the compensation was too high, I analyzed the results for outliers and found that four cases were numerically distant from the rest of the data. As noted above, the average compensation was \$18.45, which was then rounded to \$20. Consistent with prior research, participants were compensated in change (e.g., Greenberg, 2002). Nickels were excluded because some participants in the pilot study mistakenly thought that they were quarters.

I also modified the explanation for the experimental manipulation. Originally, participants were told that a large amount of compensation was given to the previous group of participants and there was not enough for them. Some participants found this explanation to be a bit curious as the researcher would indeed have a budget, so the explanation was slightly changed to indicate to participants that there was a typo in the advertisement for the study and that the researcher accidentally said \$20 instead of \$2.

During the debrief (see the debrief letters in Appendix C), some participants discussed the specific survey questions that dealt with fairness,

suggesting that they need to be disguised better to not alert participants to the true purpose of the study. An example item of a question that dealt with fairness is, “How fair is the amount of pay you will be given to perform this task?” I added an explanation as to why these questions are being asked so that the real purpose of asking the questions would not be as apparent. Participants were given a Participant Satisfaction Questionnaire that was ostensibly included to evaluate the effectiveness of the experimenter, the fairness of the compensation, and to ensure that the room locations were suitable. This questionnaire was based on the satisfaction questionnaire given to students about instructors. The full explanation given to participants is located in Part Two of Appendix E (Fairness Questions section). To disguise the questions about fairness, additional questions were included such as, “The experimenter used appropriate language in dealing with all participants” and “The temperature in the room was comfortable.”

Some participants also raised an issue about the timing of compensating participants and then almost immediately asking them the fairness questions indicated above. As a result, I added several general questions about one’s self-efficacy towards computers after participants were compensated (see Part Two of the Appendix E). Examples include, “I feel angry towards computers” and “I feel confident when it comes to working with computers” (Khorrani-Arani, 2001).

Summary

The feedback from undergraduate students enabled me to determine appropriate compensation levels for participating in the study, as well as the token

gesture to be provided. The procedures were pilot tested with graduate students and modifications were made to improve the task, compensation, manipulation, and the inclusion of additional questions.

Chapter IV

MAIN STUDY

Sample

A separate group of participants was recruited from the same undergraduate student population at McMaster University during the summer semester. Individuals who participated in the pilot studies did not participate in the main study. The study was advertised in many ways to collect the first wave of data. Class announcements were made in second-year classes, e-mails were sent through the listserv to first-year and second-year students, an announcement was posted on the main McMaster University website, advertisements were placed around campus, and e-mails were sent to undergraduate secretaries. The second wave of data was collected by e-mailing first year undergraduate students and placing advertisements around campus. Participants were compensated \$20 for participating in a 45 minute study. The participant pool was comprised of 187 individuals.

A portion of the cases (27) was excluded from the analysis. Of the cases excluded from the analysis, 22 participants (12%) were excluded because they expressed doubts about the purpose of the study and thought that there was some sort of trick to the study. Two participants had participated in the first pilot study to determine unfair compensation, so their results were excluded from the analysis. One former student who I had taught when I was an instructor ran into me just before the study, so that case was also excluded. Two other participants

informed me that they had taken compensation from each other's envelopes, so both cases were removed. The demographic variables of the participants in the excluded data set were consistent with those included in the main analyses. The total sample size was therefore 160 participants. The number of participants within each group was randomly distributed across the conditions in effect that 38 participants (23.8%) were in the \$2 no pen group, 35 participants (21.9%) were in the \$2 pen group, 43 participants (26.9%) were in the \$20 no pen group, and 44 participants (27.5%) were in the \$20 pen group. The groups were not identical in size because of uneven participant signup across the timeslots.

Procedure

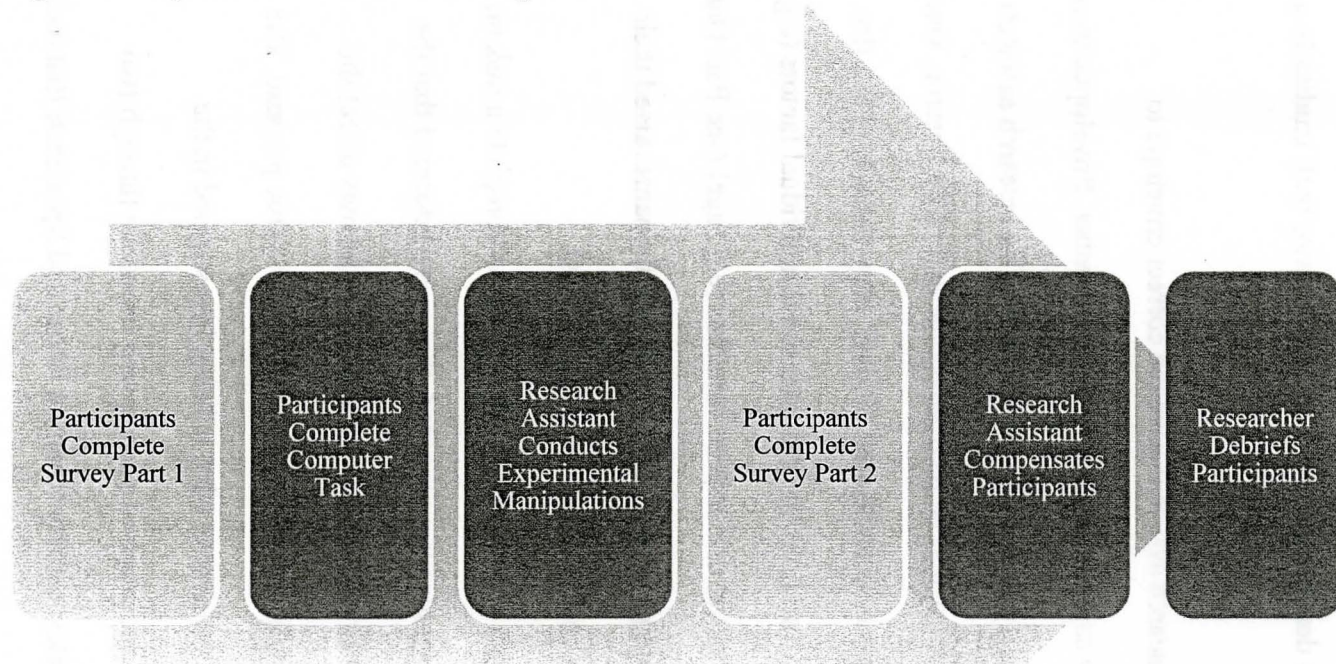
The purpose of the study was to directly test the potential mediating role of discrete emotions between distributive justice and theft, and the potential impact of trait, state, and situational moderators. A 2 x 2 between-subjects experimental design was used in which two conditions, the amount of compensation (underpaid or equitably paid) and the provision of a token gesture (token given or not given) were manipulated. The token used was based on the results of the pilot study. Participants were randomly assigned into one of four groups: underpaid/no token, underpaid/token, equitably paid/no token, equitably paid/token. There were privacy screens at each desk so that the participants could not see or interact with each other. Each desk also had a pair of headphones that participants wore so that they could not hear the reactions of other participants. The research assistant told

participants to wear their headphones so that they could not help other participants at any time during the exercise because the task was performance based.

Figure three outlines the sequence of events. Prior to the start of the experiment, participants were seated at individual computers and were asked to read through a letter of consent. A copy of the consent letter is provided in Appendix D. Participation was voluntary and responses were confidential. Participants received a copy of the consent form with their unique identification number.

To get started, the research assistant instructed participants to enter their unique identification number located on their consent form. This unique identification number corresponded with the number written on the inside side seam of each brown envelope that was used to compensate participants. The number was written very lightly in pencil on each (brown) envelope and in a place where participants would not see it. All of the envelopes were identical without any discernable identifying marks to make it appear that I will have no way of knowing how much each participant took. The small undetectable number corresponded to each participant's seat position and the time and date they participated in the study. The envelope method has been used by Umphress et al. (2009) and other researchers have successfully used similar procedures in prior studies (e.g., Colquitt et al., 2006; Greenberg, 1993; 2002).

Figure 3. Sequence of Events for the Experiment



Inside each envelope was a total of \$29.38: 16 \$1 coins, 40 quarters, 30 dimes, and 38 pennies. As noted above, nickels were excluded because some participants mistakenly thought that they were quarters in the pilot studies. Pennies have been used as a denomination of currency in prior theft studies (e.g., Greenberg, 2002).

To ensure that the research assistant gave the correct envelope to participants, envelopes were sorted numerically by seat number. Envelopes were stored out of sight where participants could not see them. The research assistant reminded participants that they would be paid \$20 at the end of the session. Once participants entered their unique identification number, they completed the first part of a two part web-based questionnaire that measured individual factors (e.g., personality, psychological capital) and control variables (e.g., age) (see Part One of Appendix E). After finishing part one of the survey, participants raised their hand to signal that they were ready to start the computer task.

Participants were given approximately 10 minutes to complete a task on their computer. When participants were recruited, they were informed that the purpose of the study was to investigate how personality traits may affect the performance of website users in order to disguise the study's true purpose. The actual computer task is not pertinent to what is being investigated in the dissertation. The computer task involved participants browsing through two different running shoe websites, namely Running Room and Sportchek that had different layout styles. There were common bits of information on the websites

(e.g., price of a particular running shoe, toll-free number customer service, when the company was founded) and their job is to locate these common features within each website as quickly as possible. There were 10 different features to locate in total for each website and participants had 10 minutes to complete the task.

Appendix F provides a detailed list of the common features used for the task.

The task was an important consideration because some studies have found that certain tasks may not be suitable for eliciting negative affect. For example, Bembenek (2006) selected a social dilemma task where participants chose how many chips they would contribute to a group project. The amount that each participant contributed was shared with the entire group. Results indicate low levels of negative affect as a result of defecting group members. That is to say, a group member who did not contribute equally did not elicit an emotional response from other group members. As noted above, the actual task was not pertinent to the purpose of the dissertation. This distinction is important because it was the payment manipulation of distributive justice that was intended to elicit emotions.

Following the computer task, the research assistant administered the amount of compensation given and the provision of token gestures. Participants were randomly assigned to treatment and control groups. All participants within a particular session were in the same group. Participants were randomly placed into one of two groups: the equitably paid control group and the underpaid treatment group. The underpaid group was told that they would only be paid \$2 for their

time because of an accidental typo. Participants within each group received the same message. The research assistant informed participants of the following:

I just heard from the researcher that there was a typo in the advertisement for the study. The researcher accidentally said \$20 instead of \$2. I was also under the impression that you would be paid \$20 but it seems like there has been a mistake. The mistake wasn't realized until now. We paid the previous participants \$20 but we can only pay you \$2. I'm sorry there is nothing I can do about it.

Participants were also randomly placed into a group given a token gesture for participating in the research or a group where no token was given. Participants given a pen as a token gesture were told that the pen was a token of appreciation for participating in the study. After the experimental manipulation took place, participants were then instructed to put their headphones back on, complete the second part of the questionnaire, and raise their hand and they will be compensated.

The second part of the questionnaire included measures of participants' responses to the task. Questions related to the computer task were a necessary part of the study in order to disguise its true purpose. Sample questions included "I felt lost when navigating the website" (see Part Two of Appendix E for more details). This part of the questionnaire also measured participants' current emotional state (e.g., envy), perceived justice, and the manipulation check item.

After participants raised their hand to notify the research assistant that they had completed the second part of the questionnaire, the assistant compensated

participants by handing each participant an envelope containing change and telling participants:

There is money in the envelope, but we are understaffed today. I don't have the time to count it out for you because I have to get ready for the next session. I'm not sure how much is there but it should be more than enough to compensate you. Just take the \$20 (\$2) you are supposed to be paid and leave the rest in the envelope. After you take your compensation you may leave through this door.

The research assistant went out of sight while participants calculate their compensation, to convince them that he would not know how much money they took. Participants left the remaining change in their envelopes at their desks in the testing room. The envelopes left in the testing room contained the unique identification numbers and were later matched up with the questionnaires.

As participants left the room, they were intercepted by a second research assistant who told them that the researcher needed to debrief them and pointed to where I was sitting on a bench around the corner. It was not possible for participants to leave without being debriefed because the research assistant was at the exit. The participants were then debriefed about the true purpose of the study and of the need to use deception. The debrief letter given to participants is provided in Appendix D. Participants were informed that the study was more complicated than explained at the beginning. I first asked participants to put their change in a box on the opposite side of the bench so that I would not know how much compensation they took, and handed each participant a \$20 bill in an envelope. Only the change left in the testing room was used to match with the

surveys. Participants then signed a sheet indicating that they had received \$20 in compensation for participating in a thesis. While participants were signing the sheet, I informed them:

The true purpose of the study is to examine how people feel and respond when they are underpaid. One group was paid fairly, they were given \$20 in compensation, but another group was told that there was a typo in the advertisement and that they would only receive \$2 for participating in the study. I am interested in the emotions that people may feel such as anger “I’m really pissed off at the researcher” or disappointment “I’m really bummed out that I didn’t get the \$2.” I am also interested in the behaviours that may occur when people are not paid fairly. Here I am interested in whether or not people would take more compensation than they are supposed to. How it works is that there is a small number on the envelopes given to participants that corresponds with the number that they inputted into the survey at the start of the study. This unique number corresponds with each participant’s seat number and the time and date that they participated in the study. Because I am using a unique number, no names are attached to the responses, so the responses are confidential because I don’t know how an individual answered the survey or how much an individual left in the envelope. I’m really sorry to have deceived you. If I told you the true purpose of the study beforehand, the results would be invalid. If you have friends that are still participating in the study, please keep the true purpose of the study secret until after they have participated. Thank you very much for helping me with my research. Here is a debrief letter that goes into more specific detail about my study. My name is Christa and I am the student investigator. After reading the letter, if you have any questions, please do not hesitate to contact me. Do you have any questions for me right now?

No participants followed up with me with more questions about the study.

All participants responded positively to the debrief process and were extremely interested to know the real purpose of the study. Five participants expressed interest in knowing the results of the study. I took particular care with two

participants in the \$2 condition who were visibly upset and asked to speak with me upon completion of the experiment. Care was taken by emphasizing that I was really sorry to have deceived them and the potential contributions of the research.

Measures

Items used to construct each scale are located in Appendix E.

Independent variable. Distributive justice was measured with a slightly modified version of Greenberg's (1993) measure on a scale from 1 (not at all) to 7 (extremely). Participants were asked three questions: (a) how fair is the amount of pay you were given to perform this task? (b) to what extent was the amount of the payment you received appropriate for the task performed? and (c) to what extent was your pay in keeping with appropriate pay standards? Internal reliability of the three-item measure was acceptable ($\alpha = .96$), which is consistent with prior findings ($\alpha = .93$; Greenberg, 1993). This particular measure was chosen because it is most relevant to this particular study and it is consistent with established measures (e.g., Greenberg, 1993; Leventhal).

Other types of justice were measured but not controlled for in the dissertation because they may confound the effect of distributive justice. Only distributive justice was manipulated, and as such, there is no variation in the procedures or treatment. As a result, the organizational justice variables were highly related because participants have little basis to properly gauge procedural and interactional justice. In other words, because participants were not given information about the procedures used to determine their pay and the level of

interactional justice was consistent across the conditions, participants did not have adequate information to judge these types of justice. Indeed, a correlation analysis shows that distributive justice was highly related to procedural justice ($r = .87$) and interactional justice ($r = .48$).

Mediators. Participants responded to a question asking “Below are words that describe how you may feel right now after the task.” A questionnaire of twenty-six discrete emotions based on the work of Shaver et al. (1987) and developed by Weiss et al. (1999) was chosen to measure discrete emotions because it has been used in a number of studies and is a valid measure. Sample discrete emotions include feeling anger, disappointment, guilty, happy, sad, regretful, irritated, afraid, and nervous (Krehbiel & Cropanzano, 2000). Three emotions in particular were investigated in this dissertation, namely envy, anger, and disappointment; however, all of the discrete emotions were measured to disguise the particular emotions being studied. Envy was measured using the one-item scale from Weiss et al. (1999). Spencer and Rupp (2009) further developed Weiss et al.’s (1999) one-item measure of anger and this multi-item scale has been used in various studies (e.g., Barclay et al., 2005; Rupp & Spencer, 2006; Spencer & Rupp, 2009). Spencer and Rupp’s (2009) scale is a valid and reliable measure with high internal consistency (e.g., .91 in Rupp & Spencer, 2006; .95 in Spencer & Rupp, 2009). The internal reliability of the scale was acceptable ($\alpha = .95$). Sample items that measure anger include: pissed, irritated, angry, mad, and resentful. Higher scores indicate higher levels of anger. Shaver et al. (1987)

proposed that disappointment is comprised of three items: disappointment, dismayed, and displeased. The last item (displeased) is also included in Spencer and Rupp's (2009) scale; however, Shaver et al. (1987) suggests that displeasure is actually associated with disappointment and feelings of sadness rather than anger. The internal reliability of the scale was acceptable ($\alpha = .85$). A correlation analysis shows that anger and disappointment were highly related ($r = .73$), and as a result, multi-collinearity was a concern. Collinearity diagnostics suggest that the two variables are highly related but distinct constructs because the condition index is less than 30 ($CI = 3.63$).

Individual moderators. Participants completed questions about their individual factors, specifically relating to their psychological capital and honesty-humility. PsyCap was measured using the 24 item questionnaire (Luthans et al., 2007b). Example items include “I feel confident helping to set targets/goals in my work area” (efficacy), “If I should find myself in a jam at work, I could think of many ways to get out of it” (hope), “When I have a setback at work, I have trouble recovering from it, moving on (reverse coded)” (resilience), and “I always look on the bright side of things regarding my job” (optimism). Items were measured on a six-point scale. The internal reliability of the scale was acceptable ($\alpha = .87$).

The honesty-humility dimension was measured using the 60 item HEXACO-PI-R scale (Ashton & Lee, 2009). The scale measures six personality traits which include honesty-humility, agreeableness, conscientiousness,

extraversion, emotionality, and openness to experience. The following are sample items of honesty-humility: “If I knew that I could never get caught, I would be willing to steal a million dollars (reverse coded)” and “Having a lot of money is not especially important to me.” Items were measured on a five-point scale. The internal reliability of the scale was acceptable ($\alpha = .87$).

The potential moderating effects of other HEXACO items such as conscientiousness were also examined because the HEXACO scale has not been used in this particular context and it incorporates important personality traits such as Machiavellianism that are not as connected to other personality measures (e.g., Big Five model; Lee et al., 2005b). Sample items for conscientiousness include, “I make decisions based on the feeling of the moment rather than on careful thought (reverse coded)” and “I often push myself very hard when trying to achieve a goal.” The internal reliability of the conscientiousness scale was acceptable ($\alpha = .73$).

Situational moderator. Providing a token gesture (i.e., a pen) was investigated as a situational factor that may reduce the extent to which participants experience anger (measured 0 = not provided or 1 = provided). Two supplementary questions were asked to assess whether the item had positive valence “To what extent do you value the pen?” and the extent to which participants feel compensatory justice, “To what extent do you feel adequately compensated for the work done today.” I designed both items because I could not find measures that already existed.

Control variables. Because some prior studies have found that certain factors may influence how individuals perceive and respond to distributive justice, participants provided information about their gender (coded as 0 = male and 1 = female) and age (i.e., what year they were born). The average age of participants of 22 years old is consistent with the pilot studies. Out of 160 participants, 69 (43%) were male and 90 (57%) were female. Negative affectivity was controlled using items from the Positive and Negative Affect Schedule (PANAS), which has been shown to be a reliable and valid measure (e.g., Watson & Clark, 1992; Watson, Clark, & Tellegen, 1988). The internal reliability of the scale was acceptable ($\alpha = .94$).

Dependent variables. Theft was measured by first calculating the remaining amount of money in each envelope and then calculating the magnitude of theft. Because there is a chance that participants miscounted their compensation, I measured the magnitude of theft by dividing the amount of compensation taken by the amount that participants were instructed to take. For example, if a participant in the \$2 condition took \$5, their theft magnitude is 2.5 ($\$5/\2), whereas if a participant took \$2, their theft magnitude is 1.0 ($\$2/\2). The magnitude of theft also applied to participants who took less than they were supposed to. For example, if a participant took \$19.75, their theft magnitude is 0.99 ($\$19.75/\20). This measure of theft is similar to previous studies that measured theft by subtracting the difference between what participants took and what they were supposed to take (e.g., Greenberg, 2002, Umphress et al., 2009);

however, the measure differs because it takes into account how much participants were instructed to take. This distinction is important because some prior studies paid all participants the same amount. Greenberg (2002) underpaid all participants by informing them that they would be paid \$2. All participants were paid \$5 in the study by Umphress et al. (2009) but the explanation for the payment was manipulated to give participants the impression that they had been underpaid or paid fairly. Because the payment condition was manipulated in this dissertation, the amount that participants take needs to be interpreted in light of how much they were instructed to take.

A proxy for voice was measured as an alternative dependent variable, just in case there was little variation in the theft measure (i.e., few people stole). Participants were given the option of providing additional comments or suggestions at the end of the survey, which were coded as 0 = did not relate to the payment manipulation or 1 = related to the payment manipulation. A total of 56 participants left comments. The majority of comments (64%) were about the study did not relate to the payment manipulation. Examples of these comments include, “This survey is quite interesting, although it takes a little bit longer to finish. Overall it's okay,” “The headphones were uncomfortable!” and “I like the pen. It's always nice to have something with the McMaster emblem.” The remaining comments (36%) were remarks about the compensation. Examples include: “In any research you MUST pay what you said you will. It's unfair that people that did it before get more than those who did it later. will not work with

you again,” “State rules and any updated information should be given before the survey begins because time is a very valuable factor,” “[We are being paid] apparently 2 [dollars] you cheap bastards,” and “The headphones were uncomfortable, good room temperature, liked the pen too, but unfortunately none of these things will help me pay for tonight’s date :(.”

Manipulation check. The validity of the payment manipulation was assessed with one item from Greenberg’s (1993) study. Participants responded to the following item: “How much money will you be paid at the end of the session?” To assess the validity of the token gesture manipulation, participants answered an item “yes or “no” that asked, “Did the research assistant give you a pen as a token of appreciation?” The manipulation check further confirms that all participants indicated the correct amount when asked how much money they would be paid at the end of the session.

Analyses

One-way analysis of variance (ANOVA) was chosen to assess whether there were significant main effects of the payment (i.e., underpaid or equitably paid) and token gesture manipulations (i.e., token provided or no token provided). ANOVA was selected because it allows for the comparison that four different conditions may have on continuous dependent variables (e.g., theft, discrete emotions). Post-hoc analyses were done using the Bonferroni procedure because it is a commonly used

method and it is a moderately conservative approach to finding statistical differences across means (Meyers, Gamst, & Guarino, 2006).

Direct Effects. Structural Equation Modeling (SEM) using AMOS 16.0 software was chosen because it accounts for possible measurement error, and it allows for a comparison to be made between different models (Meyers, Gamst, & Guarino, 2006).

Moderators. Multiple regression was used to test if there were individual factors or situational factors that affect how individuals respond to unfair pay. Regression was the preferred approach over SEM because the moderator variable is continuous making regression a more straightforward approach.

Mediators. Structural Equation Modeling (SEM) using AMOS 16.0 software was chosen to test for mediation because the fit of competing mediated models may be compared (Maruyama & McGarvey, 1980). Structural equation modelling and a bootstrapping method suggested by Cheung and Lau (2008) were used to test if envy mediated the relationship between distributive justice and theft. This method is preferred over hierarchical regression models because regression does not account for possible measurement errors; significance tests (e.g., Sobel test) also assume that the mediation effect is normally distributed, which may not be the case (Cheung and Lau, 2008). SEM was also selected over testing a direct effects moderation model using Edwards & Lambert's (2007) technique because it is a more straightforward approach when the moderator is a

continuous variable. Another benefit of using SEM is that it can improve the power and validity of the model and deal with measurement error by combining latent variables with multiple indicators (Preacher & Hayes, 2008).

Chapter V

RESULTS

Descriptive statistics, internal reliabilities, and correlation coefficients are reported in Table 1. Bivariate correlations were in the expected direction.

Distributive justice was negatively related to theft ($r = -.26, p < .01$) and the discrete emotions being investigated, particularly anger ($r = -.30, p < .01$), disappointment ($r = -.23, p < .01$), and envy ($r = -.21, p < .05$). Theft and the discrete emotions were positively related such that individuals who were very angry ($r = .21, p < .01$), disappointed ($r = .20, p < .05$), and envious ($r = .30, p < .01$) had a higher magnitude of theft. Honesty-humility was positively associated with conscientiousness ($r = .29, p < .01$) and agreeableness ($r = .27, p < .01$), and negatively related to trait negative affect ($r = -.19, p < .05$). Psychological capital was related to personality in that individuals high in psychological capital were high in honesty-humility ($r = .17, p < .05$), conscientiousness ($r = .25, p < .01$), extroversion ($r = .46, p < .01$), and low on trait negative affect ($r = -.44, p < .01$).

Table 1
Means, Standard Deviations, Correlations, and Reliability Estimates for Study Variables

Variable	<i>N</i>	Mean	s.d.	1	2	3	4	5	6	7	8
1. DJ	155	4.32	1.97	(.96)							
2. PJ	146	4.20	1.87	.87**	(.94)						
3. IJ	155	5.50	1.37	.48**	.54**	(.89)					
4. Anger	155	1.82	1.09	-.30**	-.32**	-.32**	(.95)				
5. Disap	156	2.03	1.27	-.23**	-.23**	-.27**	.73**	(.85)			
6. Envy	158	1.37	1.01	-.21*	-.17*	-.35**	.63**	.53**	—		
7. Honest	154	3.32	.69	-.02	-.04	.04	-.10	-.01	-.02	(.87)	
8. Open	155	3.45	.67	.03	.05	-.07	-.07	-.03	.03	.08	(.77)
9. Con	155	3.55	.58	.04	-.07	.06	.01	.07	-.03	.29**	.06
10. Agree	154	3.11	.65	-.01	-.02	-.04	-.11	.00	.00	.27**	.04
11. Extra	154	3.34	.60	-.03	-.06	-.02	.05	-.02	.03	.01	.09
12. Emo	155	3.21	.62	-.01	-.02	-.03	-.00	-.09	.12	.13	-.07
13. NA	144	1.85	.67	-.05	-.06	-.10	.15	.09	.11	-.19*	-.09
14. Age	159	1988	4.11	-.04	.06	.01	.09	.03	.02	.09	.09
15. Gender	159	.57	.50	-.14	-.14	.01	-.08	-.04	.02	.15	-.04
16. Condition	160	.54	.50	.83**	.74**	.40**	-.27**	-.16*	-.23**	-.12	-.02
17. Token	152	.70	.62	.00	.01	.01	.08	.12	.00	.15	.08
18. Value	81	3.42	1.71	.32**	.41**	.31**	-.15	.10	-.17	.05	.07
19. PsyCap	146	4.39	.57	-.06	-.05	.02	.01	.02	-.08	.17*	.14
20. Theft	160	1.23	.92	-.26**	-.26**	-.24**	.21**	.20*	.30**	.01	-.02

9	10	11	12	13	14	15	16	17	18	19
(.73)										
-.08	(.79)									
.18*	.12	(.77)								
.13	.00	-.01	(.72)							
-.15	-.37**	-.43**	.15	(.94)						
.15	-.10	-.01	.04	.22**	—					
.07	-.06	-.13	.45**	-.01	.05	—				
-.06	-.01	-.01	-.11	-.05	-.08	-.20*	—			
.14	-.05	-.04	.08	.08	.19*	.06	-.02	—		
-.13	.09	.18	-.18	-.03	.03	-.17	.33**	. ^a	—	
.25**	.09	.46**	-.15	-.44**	-.12	-.10	-.07	-.01	.07	(.87)
.09	-.05	.04	-.06	-.02	.01	-.04	-.26**	-.03	-.13	.12

Note. Gender is coded as 0 = male, 1 = female. Age was measured by asking participants for their year of birth. Condition was coded as 0 = underpaid (\$2) or 1 = equitably paid (\$20). Theft was measured by dividing the amount of compensation taken by the amount that participants were instructed to take. DJ = distributive justice; PJ = procedural justice; IJ = interactional justice; disap = disappointment; honesty = honesty-humility; open = openness to experience; con = conscientiousness; agree = agreeableness; extra = extraversion; emo = emotionality; NA = trait negative affect; PsyCap = psychological capital. a. Cannot be computed because at least one of the variables is constant. Alpha reliabilities appear along the diagonal where applicable.

*** $p < .001$ ** $p < .01$ * $p < .05$

Analysis of variance (ANOVA) using pairwise deletion assessed whether there were significant main effects of the payment and token gesture manipulations. Table 2 shows that participants in the \$2 no pen condition stole at higher magnitudes than participants who were paid fairly. They also felt more envy than participants in the \$20 no pen condition. Both participants in the \$2 no pen and \$2 pen conditions felt angrier than participants in the \$20 pen condition. Even though participants felt more disappointment in the \$2 condition, the effects were not statistically significant. Participants in the \$2 condition experienced more distributive injustice than those in the \$20 condition. The findings show significant main effects of the payment condition but no effects of token gestures within particular payment conditions.

Table 2
Pairwise ANOVA comparisons for Study Variables

Variable	Condition			
	\$2 No pen	\$2 Pen	\$20 No pen	\$20 Pen
Theft	1.53 _{ab}	1.44	1.03 _a	1.00 _b
Envy	1.66 _a	1.57	1.07 _a	1.25
Anger	2.22 _a	2.05 _b	1.68	1.45 _{ab}
Disappointment	2.31	2.19	1.84	1.86
Distributive Justice	2.62 _{ab}	2.53 _{cd}	5.84 _{ac}	5.84 _{bd}
<i>N</i>	36-38	35	39-43	44

Note. Means with the same subscripts in the same row are significantly different at $p < .05$, one tailed.

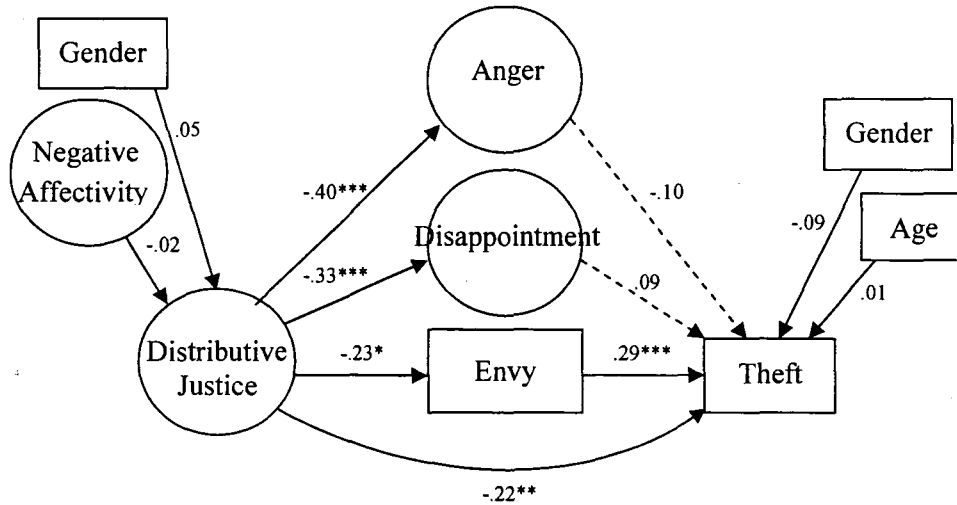
To further test a significant main effect of the payment, the type of payment condition (\$2 or \$20) was inputted into SEM as a predictor of

distributive justice. Results suggest that the type of payment predicts distributive justice ($\beta = .83, p < .001$) in that participants in the \$20 condition experienced higher levels of outcome fairness than those participants in the \$2 condition. Thus, the experimental payment manipulation was successful.

The first four hypotheses were tested using structural equation modelling. As noted above, I chose SEM and a bootstrapping method which requires that no data are missing. Because some data were missing, I first had to delete cases that had missing data because the Full Information Maximum Likelihood (FIML) cannot be used in conjunction with the bootstrapping method. As a result, the remaining sample size was 137. The number of bootstrap samples was set to 500 based on Cheung and Lau (2008).

Hypothesis one predicted that individuals who perceived distributive justice would engage in a lower magnitude of theft. Consistent with this, the results in Figure 4 suggest a negative relationship between distributive justice and theft ($\beta = -.22, p < .01$). When participants were paid fairly, the magnitude of money they stole was lower. An independent samples *t*-test further shows a significant difference of theft for underpaid ($M = 1.48, SD = 1.31$) and equitably paid ($M = 1.01, SD = 0.20$) conditions; $t(158) = 3.31, p < .01$.

Figure 4. Standardized Parameter Estimates for the Whole Mediation Model



Note. *** $p < .001$ ** $p < .01$ * $p < .05$

Hypothesis two proposed that individuals who perceived distributive justice would experience less envy, disappointment, and anger. Figure 4 shows that distributive justice was negatively related to anger, disappointment, and envy. Participants who received fair pay were less angry ($\beta = -.40, p < .001$), disappointed ($\beta = -.33, p < .001$), and envious ($\beta = -.23, p < .05$), thus providing support for the second hypotheses.

Hypothesis three proposed that individuals who experienced envy would engage in a higher magnitude of theft. Therefore, only envy, and not anger or disappointment, would increase theft. As shown in Figure 4, the standardized regression coefficients for anger ($\beta = -.10, n.s.$) and disappointment ($\beta = .09, n.s.$) were not significant. The standardized regression coefficient for envy and theft ($\beta = .29, p < .001$) was significant and in the hypothesized direction. Participants

with high levels of envy stole at higher magnitudes. The results therefore support hypothesis three.

Prior inconsistent findings on distributive justice and theft may suggest the presence of mediators. Hypothesis four proposed that only envy would partially mediate the relationship between distributive justice and theft such that individuals who perceived distributive justice would experience less envy and engage in a lower magnitude of theft. To test this hypothesis, mediating paths were first drawn for all three discrete emotions as shown by the full model in Figure 4. Fit indices testing the hypothesized and alternative models are shown in Table 3. The whole mediation model does not provide good fit $\chi^2(146, N = 137) = 587.45, p < .001$; RMSEA = .15; GFI = .70; NFI = .73. As indicated in Table 3, the full mediation model for envy provides good fit $\chi^2(19, N = 137) = 22.96, n.s.$; RMSEA = .04; GFI = .96; NFI = .95, but the partial mediation model for envy provides better fit $\chi^2(18, N = 137) = 16.22, n.s.$; RMSEA = .00; GFI = .97; NFI = .96. The RMSEA for both models is less than .05, which indicates good absolute fit. The comparative fit indices (e.g., NFI, CFI) are above .90 for both models, which is considered good fit. Because the alternative model is nested within the hypothesized model, the models can be compared by calculating the differences in χ^2 . The Chi-Square distribution table was used to determine if the difference between the models was statistically significant. Indeed, the hypothesized partial mediation model provided a statistically significant difference in $\chi^2(df 19 - 18 = 1) = 22.96 - 16.22 = 6.74, p < .01$. The improved fit indices and significant

different in χ^2 provide support for the hypothesized model. The standardized regression estimates are depicted in Figure 5. All of the estimates are statistically significant except for the control variables.

An alternative model with anger and disappointment as the mediating discrete emotions was also tested. As indicated by Table 3, the model with anger partially mediating the relationship between distributive justice and theft did not provide acceptable absolute and comparative fit $\chi^2(74, N = 137) = 211.14, p < .001$; RMSEA = .12; GFI = .83; NFI = .85. The RMSEA was above the accepted .10 level and the comparative fit indices were .90 or under. Upon inspection of the standardized parameter estimates, the relationship between anger and theft was approaching statistical significance ($p = .06$) but not statistically significant ($\beta = .17, n.s.$). The model specifying disappointment as the partial mediator had a slightly better fit $\chi^2(32, N = 137) = 46.69, p < .05$; RMSEA = .06; GFI = .94; NFI = .93. The RMSEA indicates acceptable but not good fit and the comparative fit indices are generally considered good except for AGFI which is less than .90. Even though the disappointment model provides acceptable fit, comparing the fit indices with the envy model suggests that envy is still a better fitting model. The results suggest that envy partially mediates the relationship between distributive justice and theft, which provides support for the fourth hypothesis.

I also tested an additional model with distributive justice mediating the relationship between envy and theft. Affect may serve as a diagnostic function and signal to individuals that an outcome is unfair (De Cremer, 2007). This

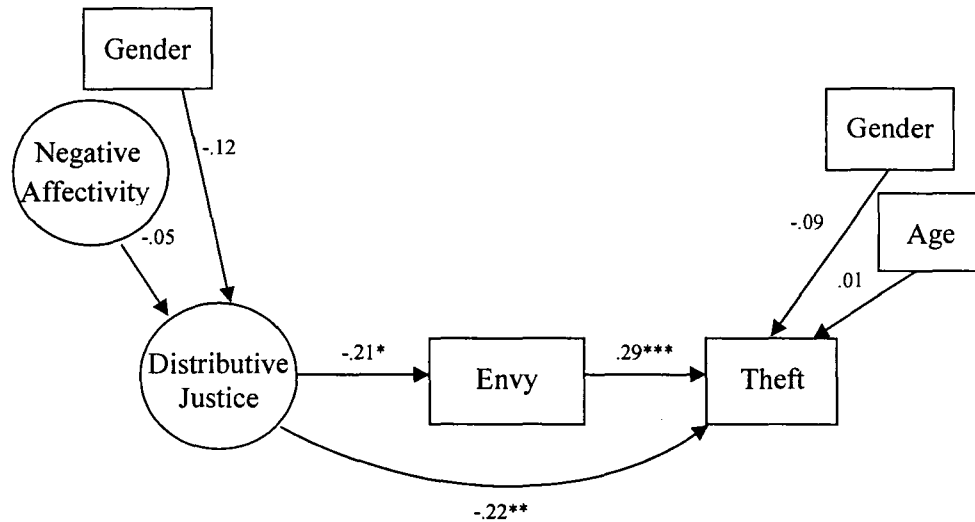
argument reasons that justice is not calculated; instead, individuals experience emotions that relate to justice and then make judgments about justice (Chebat & Slusarczyk, 2005; Schaubroeck & Lam, 2004). Following this argument, the payment condition (\$2 or \$20) would therefore elicit feelings of envy; individuals would then attribute their envy to low levels of distributive justice, and engage in theft as a response. Table 3 indicates that the model with distributive justice as a mediator did not provide acceptable fit $\chi^2(26, N = 137) = 181.09, p < .001$; RMSEA = .21; GFI = .84; NFI = .71. Inspection of the standardized parameter estimates shows that all of the relationships were statistically significant, except for the control variables. As a result, the data do not fit the alternative theory that distributive justice mediates the relationship between envy and theft.

Table 3
Fit Indices for Mediation Tests

Model	χ^2	<i>df</i>	GFI	RMSEA	NFI	CFI
Hypothesized Envy (Partial)	16.22	18	.97	.00	.96	1.00
Envy (Full)	22.96	19	.96	.04	.95	.99
Whole (Three Emotions)	587.45	146	.70	.15	.73	.78
Anger (Partial)	211.14***	74	.83	.12	.85	.90
Disappointment (Partial)	46.69*	32	.94	.06	.93	.98
Distributive Justice	181.09***	26	.84	.21	.71	.73

Note. χ^2 = Chi-Square; *df* = degrees of freedom; GFI = Goodness of Fit Index; RMSEA = Root Mean Squared Error of Approximation; NFI = Normed Fit Index; CFI = Comparative Fit Index.
*** $p < .001$ ** $p < .01$ * $p < .05$

Figure 5. Standardized Parameter Estimates for Hypothesized Mediation Model



Note. *** $p < .001$ ** $p < .01$ * $p < .05$

Prior inconsistent findings on distributive justice and theft also suggest that moderators may be present. Individual factors such as personality may affect how individuals respond to unfair pay. Hypothesis five proposed that honesty-humility would moderate the relationship between distributive justice and theft such that individuals high in honesty-humility would engage in a lower magnitude

of theft. Table 4 shows the results of the hierarchical regression. The first step consisted of entering the control variables of age, gender, and trait negative affect. The main effects of distributive justice and honesty-humility were entered in the second step. The interaction effect was entered in the third step. The findings suggest that the trait of honesty-humility did not moderate the effect of distributive justice on theft ($\beta = .21$, n.s.). Participants with high levels of honesty-humility were not less likely to steal when they were paid unfairly. Thus, hypothesis five is not supported

Table 4

Hierarchical Regression Results for Honesty-Humility Moderation Test

Variable	Theft		
	Step 1	Step 2	Step 3
Age	.04 (.02)	.03 (.02)	.03 (.02)
Gender	-.03 (.16)	-.05 (.16)	-.05 (.16)
NA	-.10 (.12)	-.11 (.12)	-.11 (.12)
Distributive Justice (DJ)		-.30** (.04)	-.49 (.20)
Honesty-Humility (HH)		-.02 (.12)	-.11 (.29)
DJ x HH			.21 (.06)
Total R^2	.01	.10	.10
Adjusted R^2	-.01	.06	.06
ΔR^2	.01	.09**	.00
F	.46	2.84*	2.39*
N	137	137	137

Note. Standardized regression coefficients are presented. Standard errors are in parentheses. Gender is measured as 0 = male and 1 = female. NA = Trait Negative Affect.

*** $p < .001$ ** $p < .01$ * $p < .05$

Hypothesis six predicted that psychological capital would moderate the relationship between distributive justice and theft such that individuals high in psychological capital would engage in a lower magnitude of theft. Two

hierarchical regressions were run using a different treatment of missing data, specifically listwise and pairwise deletion (see Table 5). Listwise deletion “deletes an entire case whenever *any* of the data points within that case are missing,” whereas pairwise deletion deletes a case “only when the missing data point is needed for a particular analysis” (Switzer & Roth, 2002, 312-313). A deletion technique was selected over an imputation technique because it is a more conservative approach to handling missing data. A post-hoc power analysis using the G*Power software suggests that there is inadequate power of .65 using the listwise deletion technique, which was calculated with the alpha level ($\alpha = .01$), effect size ($\beta = -.44$), and number of participants ($N = 128$) (Faul, Erdfelder, Buchner, & Lang, 2009). The power is inadequate because it falls below the conventional standard of .80 (Murphy, 2002). The power, however, increases to .87 when pairwise deletion is used. Thus, I am less likely to make a Type II error by failing to reject the null hypothesis when it is untrue by using the pairwise deletion technique (Murphy, 2002).

The control variables were entered in the first step of the hierarchical regression, followed by the main effects of distributive justice and psychological capital, and then the interaction effect was entered as the third step. When a regression was run using listwise deletion, the effect was not statistically significant ($\beta = -.44$, n.s.); however, there was a significant effect when pairwise deletion was chosen ($\beta = -1.93$, $p < .01$). Inspecting the magnitude of theft ($M = 1.23$) and the means across each treatment (provided in Table 5) shows that the

results were generally consistent. The pairwise findings therefore support the sixth hypothesis. Figure 6 plots the simple slopes of the interaction effect of psychological capital. Separate plots were drawn for scores one standard deviation above and below the mean. Individuals with high psychological capital stole at lower magnitudes compared to those with low psychological capital.

Inconsistent findings in the extant literature on distributive justice and theft may also be due to situational factors. Hypothesis 7 predicted that token gestures (i.e., pens) would moderate the relationship between distributive justice and the discrete emotions of envy, anger, and disappointment such that individuals would be less likely to experience these discrete emotions as a response to distributive justice. The first step of the hierarchical regression was to enter the control variables of age, gender, and trait negative affect, followed by the main effects of distributive justice and psychological capital, and then finally the interaction effect was entered as the third step. Table 6 illustrates that offering a pen as a token gesture did not affect the impact of distributive justice on anger ($\beta = -.05$, n.s.), disappointment ($\beta = .02$, n.s.), or envy ($\beta = -.14$, n.s.). Offering a pen as a token gesture did not help ameliorate some of the negative effects of low levels of distributive justice. As a result, there is no support for hypothesis seven

Table 5
Hierarchical Regression Results for Psychological Capital Moderation Test

Variable	Theft (Listwise)				Theft (Pairwise)			
	Mean	Step 1	Step 2	Step 3	Mean	Step 1	Step 2	Step 3
Age	1988	.04 (.02)	.03 (.02)	.02 (.02)	1988	.02 (.02)	.01 (.02)	.01 (.02)
Gender	.57	-.03 (.17)	-.06 (.17)	-.05 (.17)	.57	-.05 (.17)	-.07 (.16)	-.04 (.16)
NA	1.84	-.09 (.13)	-.05 (.14)	-.05 (.14)	1.85	-.02 (.13)	.02 (.14)	.05 (.13)
Distributive Justice (DJ)	4.32		-.30** (.04)	.13 (.31)	4.32		-.26** (.04)	1.63* (.31)
Psychological Capital (P)	4.35		.10 (.16)	.22 (.35)	4.39		.11 (.16)	.68** (.36)
DJ x P	18.72			-.44 (.07)	18.76			-1.93** (.07)
Total R ²		.01	.11	.11		.00	.08	.14
Adjusted R ²		-.02	.07	.07		-.02	.05	.10
ΔR ²		.01	.10*	.00		.00	.08**	.06**
F		.35	2.97*	2.53*		.10	2.20	3.26**
N		128	128	128		144	144	142

Note. Standardized regression coefficients are presented. Standard errors are in parentheses. Gender is measured as 0 = male and 1 = female. NA = Trait Negative Affect.

*** $p < .001$ ** $p < .01$ * $p < .05$

Figure 6. Graphed Results for Psychological Capital Moderation Test

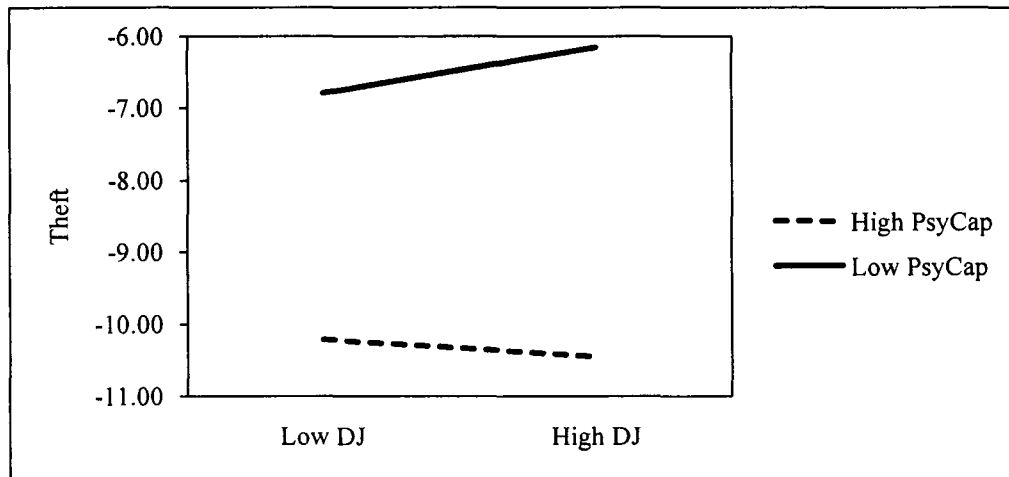


Table 6
Hierarchical Regression Results for Token Gestures Moderation Test

Variable	Anger			Disappointment			Envy		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Age	.08 (.02)	.06 (.02)	.06 (.02)	.04 (.03)	.02 (.03)	.02 (.03)	-.01 (.02)	-.03 (.02)	-.03 (.02)
Gender	-.05 (.19)	-.09 (.18)	-.09 (.18)	-.04 (.22)	-.07 (.22)	-.07 (.22)	.07 (.18)	.05 (.18)	.05 (.18)
NA	.14 (.14)	.12 (.13)	.12 (.14)	.09 (.17)	.08 (.16)	.08 (.17)	.11 (.13)	.10 (.13)	.09 (.13)
Distributive Justice (DJ)		-.35*** (.05)	-.33** (.07)		-.26** (.06)	-.26* (.08)		-.20* (.04)	-.14* (.06)
Token Gesture (T)		-.08 (.18)	-.03 (.43)		-.03 (.22)	-.04 (.53)		.05 (.17)	.16 (.42)
DJ x T			-.05 (.09)			.02 (.11)			-.14 (.09)
Total R^2	.03	.16	.16	.01	.08	.08	.02	.06	.06
Adjusted R^2	.01	.13	.12	-.01	.04	.04	-.01	.02	.02
ΔR^2	.03	.13***	.00	.01	.07*	.00	.02	.04	.00
F	1.49	4.92***	4.08**	.60	2.25	1.86	.73	1.58	1.37
N	136	136	136	138	138	138	139	139	139

Note. Standardized regression coefficients are presented. Standard errors are in parentheses. Gender is measured as 0 = male and 1 = female. NA = Trait Negative Affect. Token Gesture is measured as 0 = not provided and 1 = provided. *** $p < .01$ ** $p < .01$ * $p < .0$

Another interesting finding is worth noting. It was predicted that personality in the form of honesty-humility would moderate the impact of distributive justice on theft. Upon further inspection of personality, it is actually the trait of conscientiousness that is important. Table 7 shows that participants characterized as highly conscientious or very reliable and dependable, stole less on average as a result of distributive injustice ($\beta = -1.19, p < .05$). Figure 7 plots the simple slopes of the interaction effect of conscientiousness. Separate plots were drawn for scores one standard deviation above and below the mean. Individuals with high conscientiousness stole at lower magnitudes compared to those with low conscientiousness. See Table 8 for a summary of the results.

Table 7

Hierarchical Regression Results for Conscientiousness Moderation Test

Variable	Theft		
	Step 1	Step 2	Step 3
Age	.02 (.02)	-.01 (.02)	.00 (.02)
Gender	-.06 (.17)	-.10 (.17)	-.10 (.17)
NA	-.02 (.13)	.00 (.13)	-.01 (.13)
Distributive Justice (DJ)		-.29** (.04)	.80 (.26)
Conscientiousness (C)		.13 (.15)	.50* (.32)
DJ x C			-1.19* (.07)
Total R^2	.00	.10	.13
Adjusted R^2	-.02	.07	.09
ΔR^2	.00	.10**	.03*
F	.17	2.90*	3.23**
N	137	137	137

Note. Standardized regression coefficients are presented. Standard errors are in parentheses. NA = Trait Negative Affect. Gender is measured as 0 = male and 1 = female.

*** $p < .001$ ** $p < .01$ * $p < .05$

Figure 7. Graphed Results for Conscientiousness Moderation Test

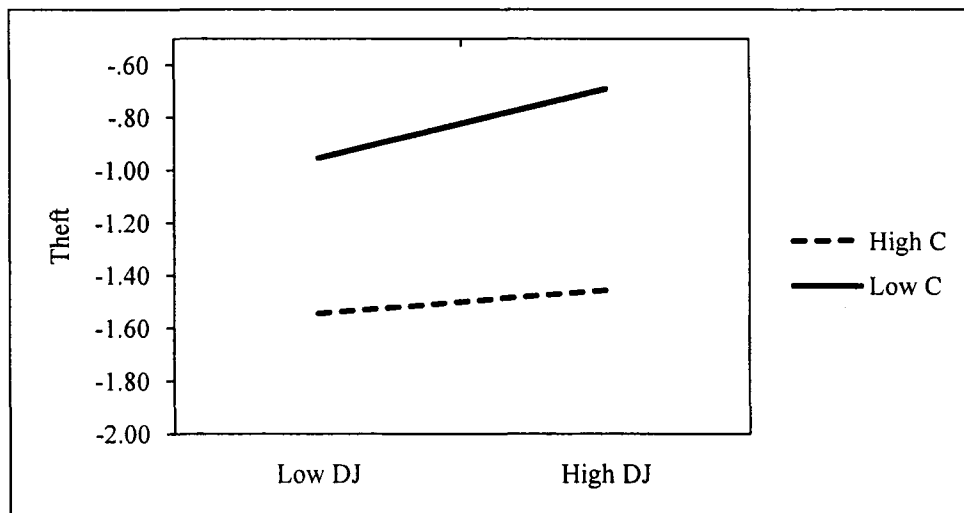


Table 8
Summary of Results

Hypothesis	Support
H ₁ : Individuals who perceive distributive justice will engage in a lower magnitude of theft.	Yes
H _{2a} : Individuals who perceive distributive justice will experience less envy.	Yes
H _{2b} : Individuals who perceive distributive justice will experience less disappointment.	Yes
H _{2c} : Individuals who perceive distributive justice will experience less anger.	Yes
H ₃ : Individuals who experience envy will engage in a higher magnitude of theft.	Yes
H ₄ : Envy will partially mediate the relationship between distributive justice and theft such that individuals who perceive distributive justice will experience less envy and engage in a lower magnitude of theft.	Yes
H ₅ : Honesty-humility will moderate the relationship between distributive justice and theft such that individuals high in honesty-humility will engage in a lower magnitude of theft.	No
H ₆ : Psychological capital will moderate the relationship between distributive justice and theft such that individuals high in psychological capital will engage in a lower magnitude of theft.	Yes
H ₇ : Token gestures will moderate the relationship between distributive justice and the discrete emotions of envy, anger, and disappointment such that individuals will be less likely to experience these discrete emotions as a response to distributive justice.	No

Chapter VI

DISCUSSION, CONCLUSIONS, AND FUTURE RESEARCH DIRECTIONS

Dissertation Summary

Unfair pay can have painful, enduring, and significant consequences for employees (Barclay & Skarlicki, 2009). These consequences include engaging in counterproductive workplace behaviours such as theft to offset inadequate compensation (Greenberg, 1990). Because studies show that unfair pay or low levels of distributive justice do not consistently predict deviant behaviours such as theft, these mixed findings may be explained by the mediators and moderators investigated in this dissertation (Colquitt et al., 2001; Greenberg & Alge, 1998). Researchers have requested more research on how discrete emotions such as envy, rather than broad measures of affective states, influence behaviour (e.g., Cohen-Charash & Byrne, 2008; Lazarus & Cohen-Charash, 2001; Weiss et al., 1999). Calls for research have also been made to examine the individual and situational factors that influence how individuals respond to justice violations (e.g., Barclay et al., 2009; Stouten et al., 2007). Thus the purpose of the dissertation was to clarify mixed findings by using (1) affective events theory to examine the role of envy in mediating the relationship between distributive justice and theft, and (2) and self-verification theory to study the individual and situational factors that affect how individuals respond to distributive justice.

The model was tested using a 2 (underpaid or equitably paid) x 2 (token provided or no token provided) experimental design. An experiment was selected

because many prior studies use cross-sectional data, questionnaire methodologies, and single sources to measure independent and dependent variables (Cohen-Charash & Byrne 2008; Spector & Fox, 2002). As a result, many studies were not able to draw causal conclusions and may suffer from artifactual covariance.

Requests for research have been made to examine causal relationships between unfairness, envy, and counterproductive workplace behaviours (Cohen-Charash & Mueller, 2007). Ascertaining causal effects also provides an important theoretical contribution of testing affective events theory. An additional strength of an experiment is that actual as opposed to self-reported behaviour may be measured (Colquitt, 2008). Measuring actual theft is important because the measure reduces the social desirability bias associated with reporting theft. In short, the reliability and validity of the dissertation are strengthened by using an experimental design, different sources to measure the independent and dependent variables, and measuring the variables at different times.

The results indicate that individuals who are paid fairly experience lower levels of particular negative emotional states (e.g., envy, anger) and engage in a lower magnitude of theft. Envy was shown to partially mediate the relationship between distributive justice and theft. Moderators were also present such that individuals with high psychological capital and conscientiousness stole at lower magnitudes. However, the hypothesized moderators of honesty-humility and token gestures were not supported. The findings enrich our understanding of the

process by which individuals respond to distributive justice. Important implications are outlined in the following sections.

Distributive Justice

The finding that a low level of distributive justice is associated with high levels of theft has important implications for the justice literature. The statistically significant relationship is consistent with prior studies that have used objective measures of theft (e.g., Colquitt et al., 2006; Greenberg, 1990; Greenberg, 1993; Umphress et al., 2009). The empirical work on justice and theft has been somewhat mixed; that is, distributive justice has not always been a robust predictor of theft. These mixed findings may be explained by how theft was measured. Studies that found no relationship between distributive justice and theft used subjective measures of theft such as self- and peer-reports. While self-report measures may be a more valid assessment of theft than peer reports because deviant behaviours tend to be performed in private (Jones, 2009), there is a social desirability bias associated with reporting theft. Employees may also fear reprimand for self-reporting deviant behaviours (Murphy, 1993). Accordingly, there may be less variability in the findings due to the underreporting of theft. As such, the current investigation helps to clarify previous inconsistent findings by showing that distributive justice is related to theft.

The reason that distributive justice predicts theft is based on social exchange theory, which characterizes relationships as reciprocal exchanges of tangible or intangible resources (Blau, 1964). An unfair situation violates these

norms of reciprocity. Employees who receive fewer resources (e.g., compensation) than they desire or feel they deserve may restore fairness by engaging in theft. The results are therefore consistent with the social exchange perspective because they show that employees tend to reciprocate unfair pay by engaging in higher magnitudes of theft.

Unfair pay was also associated with high levels of discrete emotions such as envy, anger, and disappointment. Previous studies show that distributive justice is related to these discrete emotions, but prior studies often use vignettes where participants evaluate the emotions that fictional characters in the scenario may experience after an unfair outcome (e.g., Feather and Sherman, 2004; Lieblich, 1971; Scher, 1997). Research was needed to assess the actual emotions that individuals experience when they encounter unfair pay. A laboratory study was also needed to determine the causal impact of unfair pay on discrete emotions because it has been suggested that discrete emotions such as envy cause perceptions of unfair pay (Schaubroeck & Lam, 2004). As indicated by the findings and explained in more detail below, individuals who are paid unfairly are more likely to experience high levels of anger, disappointment, and envy. This finding highlights the importance of not only looking at the behavioural reactions of unfair outcomes, but also the emotional component as well.

Theft

The current investigation suggests that envy predicts theft even when controlling for other discrete emotions such as anger and disappointment. Because

envy is a very unpleasant emotion to experience, envious individuals seek to reduce their gap with their envied referent other (Heider, 1958). In this particular context, the goal of individuals who are paid unfairly would be to equalize outcomes with individuals who receive fair pay. One way to do so is to engage in harming behaviours such as theft. This finding is important to the literature on theft because the present research is the first to test the impact of envy and disappointment on theft. Although discrete emotions are not always necessary to evoke deviant behaviours (Bembenek et al, 2007), the current investigation shows that envy is an important antecedent of theft.

Discrete Emotions

As hypothesized, envy was shown to partially mediate the relationship between distributive justice and theft. This finding has important implications for the literature on discrete emotions. Because envy partially mediates the relationship between distributive justice and theft, envy is not the sole driver of theft; part of participants' behaviour was based on the unfairness of their pay and not on the envious feelings they held of individuals who were compensated fairly. Essentially, the findings suggest that discrete emotions were an important but not always necessary mediator between unfair outcomes and theft. In short, discrete emotions are not always necessary to elicit deviant behaviours.

The mediating role of emotions largely supports affective events theory, which proposes that emotions mediate the relationship between work events and behaviours. Although affective events theory is useful to depict the mediating role

of emotions (De Cremer, 2007), it has not been empirically tested in this particular context. Affective events theory was tested by virtue of the experimental design. Measuring the independent and dependent variables at different times enabled me to draw causal conclusions of how distributive justice influenced how individuals felt and behaved. In particular, justice was shown to influence the discrete emotion of envy, which predicted the magnitude of theft. The current investigation does not support the assertion that individuals experience emotions that relate to justice and then make judgments about justice (e.g., Chebat & Slusarczyk, 2005; Schaubroeck & Lam, 2004). Because envy partially mediated the relationship, we now have a more nuanced understanding of the process by which justice affects theft.

Psychological Capital

The impact of justice on theft is also affected by individual factors. The current investigation is the first to show that individuals with high psychological capital stole at lower magnitudes as a result of distributive justice. Self-verification theory explained why psychological capital affects how individuals react to unfair pay. According to self-verification theory, individuals interpret information that is consistent with how they view themselves (Swann, 1983). Individuals with high psychological capital have a positive self-view (e.g., hopeful, optimistic) and tend to interpret information in a positive manner that is consistent with their self-view. On the other hand, information is interpreted in a negative manner by individuals with low psychological capital or a negative self-

view (e.g., discouraged, pessimistic). Because high psychological capital individuals have a greater capacity to bounce back from adversity, they tend to see unfair pay less negatively and as a result, engage in a lower magnitude of theft. Individuals with low psychological capital are inclined to engage in a higher magnitude of theft because they tend to interpret unfair outcomes more negatively because it is consistent with their self-view. Thus, the findings build on self-verification theory and enrich our understanding of the influence of psychological capital.

The findings are also consistent with previous literature on the validity of psychological capital (e.g., Luthans et al., 2007b). In keeping with this literature, psychological capital did not relate to the personality factors of agreeableness and openness to experience, or the demographic variable of age. Psychological capital was related to other personality factors such as conscientiousness and emotionality. The current investigation adds to the domain of psychological capital where the trait of honesty-humility has not yet been examined. In particular, the findings contribute to the literature by being the first study to examine the relationship between honesty-humility and psychological capital. Individuals with high levels of psychological capital are inclined to be more modest, sincere, fair, and avoid greed.

Conscientiousness

Although it was not hypothesized, conscientiousness was shown to moderate the impact of distributive justice on theft. In particular, individuals with

high levels of conscientiousness engaged in lower magnitudes of theft in response to low levels of distributive justice. Prior studies have found that the personality trait of conscientiousness did not affect the relationship between distributive justice and deviant behaviours. For example, Flaherty and Moss (2007) asked Australian public service employees about the fairness of their compensation and reported counterproductive behaviours. The authors found that only the trait of agreeableness affected a combined measure of interpersonal and organizational CWBs. Other studies have not found agreeableness to moderate the relationship between unfair outcomes and organizational retaliatory behaviours (e.g., Skarlicki et al., 1999). Similarly, Colquitt et al. (2006) found that none of the Big-Five traits including conscientiousness affected how many pens students stole in a laboratory experiment.

A plausible explanation for these findings may be due to the context in which the studies were conducted. Context is often responsible for variation from study to study because situations vary in how they affect behaviour (Johns, 2006). Individual factors such as personality traits are less important in strong situations where behaviour is largely determined by incentives and guidance (Dirks & Ferrin, 2001). On the other hand, individuals in weak situations are free to act as they really are and as a result, their individual factors are more likely to influence their behaviours (Locke & Latham, 2004). A strong situation may be present in studies of one particular organization because of factors such as organizational policies and common practices. This assertion could explain the inconsistent finding

between Skarlicki et al. (1999) and Flaherty and Moss (2007). The former studied only first-line employees from a particular manufacturing plant, whereas public servants across a variety of service sectors such as housing, mental health, and disability services were analyzed in the latter study. Thus, there may have been a stronger situation in the study of employees from one manufacturing plant where behaviour may have been more influenced by incentives and guidance.

Contextual factors may also be important to understand why Colquitt et al. (2006) found no effects of personality in their laboratory experiment. The instructions given to participants guided them on proper behaviour and gave them incentives not to steal: “I know I read from the script earlier that you could keep the pen, but we’re running some more sessions and it looks like we’re getting a little low. So, if you would not keep the pen I’d appreciate it.” Participants were specifically told not to keep the pen and were given the incentive of having the experimenter’s appreciation. Participants were also given the impression that the pens were really needed. Consequently, individuals may not have been free to act as they typically would. On the other hand, the instructions given to participants in this dissertation may have created a weaker situation whereby individual factors were more likely to influence their behaviour: “There is money in the envelope, but we are understaffed today. I don’t have the time to count it out for you because I have to get ready for the next session. I’m not sure how much is there but it should be more than enough to compensate you. Just take the \$20 (\$2) you are supposed to be paid and leave the rest in the envelope.” In this set of

instructions, participants were not told that the experimenter needed the money for the future session. The way in which the instructions were framed was also different. The instructions focused on what participants were supposed to take (e.g., \$2) rather than what they were supposed to leave (\$18). These differences may have created a weaker situation where individuals perceived greater agency to behave in their usual manner.

Practical Implications

Unfair pay is harmful to organizations because envious individuals tended to engage in higher magnitudes of theft in order to make up for inadequate rewards. Theft is a serious problem because it can reduce corporate profits, increase prices for customers, and may even bankrupt organizations (Greenberg & Barling, 1996). Organizations incur savings by reducing employee compensation but suffer losses when employees engage in theft. The findings suggest that the amount of theft may be affected by reducing feelings of envy. Individuals who experience low levels of envy are less likely to engage in theft. One of the best strategies to reduce feelings of envy is to refrain from decreasing employee compensation. Some organizations choose to reduce employees' salaries and bonus as an alternative to laying them off during periods of economic uncertainty (Kennedy, 2003). While the possibility of reducing employee compensation ought to be considered during these economic times, organizations must also weigh the possible financial consequences associated with altering employee compensation. Harmful behaviours may result when employees do not feel that they are paid

fairly. Although acquiring tangible assets without authorization (i.e., property deviance) was studied as the dependent variable in the dissertation, employees may also “steal time” by engaging in production deviance such as taking longer breaks, coming in late to work, and leaving work early (Hollinger & Clark, 1982). These counterproductive behaviours need to be considered when making the decision to reduce employee compensation because they adversely affect organizations.

Another way to reduce feelings of envy is to distribute unfair outcomes evenly across employees in an organization. Envy occurs when there is a desire to eliminate one’s inequality compared to others (Ben-Ze’ev, 1992). If unfair outcomes are uniformly spread out in organizations, the lots between individuals are more even; thus, there is less inequality among employees. If organizations need to temporarily reduce employee compensation, all employees should incur some type of loss. The strategy needs to be applied consistently and proportionately to all groups including managers and unionized employees because the unequal treatment of groups further promotes feelings of envy.

Managers may also help employees cope with feelings of envy because they deal with their emotions on a daily basis (Muchinsky, 2000). Coping is important because employees who cannot cope with their emotions at work often feel alienated and experience burnout, which can spill over to their personal lives (Lazarus & Cohen-Charash, 2001). There are several ways in which envious individuals may cope with their envy (Lazarus & Lazarus, 1994). One way to

cope with envy is to make positive social comparisons that favour one's situation. In this regard, envious individuals may see that they are better off than others with worse lots. Another potential way to cope with envy is to focus on the potential misfortunes of the envied other or what is known in the German language as "Schadenfreude." Other ways to cope include taking a different perspective by trying to make the best of what one has or by coming to the belief that the things one desires will not bring true happiness (Lazarus & Lazarus, 1994).

One of the most important ways managers can help employees cope is by demonstrating that they value their contributions and care about their well-being (Lazarus & Lazarus, 1994). Oftentimes envious individuals do not feel valued or accepted by others (Lazarus & Lazarus, 1994). Employees who perceive support from their organization experience a greater sense of acceptance and regard (Eisenberger, Huntington, Hutchison, & Sowa, 1986). Managers can support employees by allowing them to safely express their emotions in a supportive environment that has clear organizational policies about unacceptable and acceptable behaviours (Lazarus & Cohen-Charash, 2001).

Managing envy in the workplace is important to reduce theft, but theft may also be reduced through pre-employment screening for personality traits such as conscientiousness. The findings suggest that individuals with high conscientiousness stole at lower magnitudes as a result of low levels of distributive justice. Selecting employees with respect to their conscientiousness is especially important for occupations that are not highly defined or scripted, in

effect where personality traits are more likely to emerge. Pre-employment screening for conscientiousness is consistent with the literature on compound personality scales such as integrity tests, which are used to predict counterproductive workplace behaviours such as theft. Although there is a debate surrounding the social desirability of responses and validity of personality tests (e.g., Morgeson, Campion, Dipboye, Hollenbeck, Murphy, & Schmitt, 2007; Ones, Dilchert, Viswesvaran, & Judge, 2007; Tett & Christiansen, 2007), organizations need to consider selecting for conscientiousness when screening applicants.

Another way in which organizations may reduce theft is to offer employee training to increase their psychological capital. Organizations may invest little monetary cost in their employees by increasing their psychological capital (Luthans et al., 2004). Because psychological capital is a learned state and is not fixed, employees may develop it further through training programs (Luthans et al., 2006). Implementing training for employees to develop their self-efficacy, optimism, hope, and resiliency is important because the results show that employees with high psychological capital tend to engage in lower magnitudes of theft. There are several approaches for employees to build their psychological capital such as using vicarious experiences or modeling, identifying self-defeating beliefs, and setting specific and challenging organizational goals (Luthans et al., 2004).

Potential Limitations

One potential limitation of the current investigation is generalizing the results from a student sample to employees. Even though prior research on theft has also used students for their samples (e.g., Greenberg, 1993, Kennedy et al., 2004, Umphress et al., 2009), issues with external validity merit consideration and are especially salient if there are theoretical reasons to believe that the groups are different. Pertaining to the case of emotion, there are some theoretical reasons to suggest that the emotional mechanisms of students may differ from employees. It is worth noting that some empirical findings do suggest that as individuals age, they are better equipped to understand why they are angry and cognitively control how their anger is expressed (Geen & Donnerstein, 1998; Rotenberg, 1985). Thus, as individuals age, they tend to be more aware of why they feel a certain way and control how they express their emotions, but the findings do not suggest that individuals differ in how they experience emotions.

The ability to control how individuals express their emotions may explain some prior findings that younger employees are more likely to engage in theft (e.g., Hollinger & Clark, 1983). Even though it is possible that students are more likely on average than employees to engage in theft because they tend to be younger, workplace theft is still a common and costly occurrence (Greenberg & Barling, 1996). Estimates of theft vary from 28% to 62% depending on the industry (Hollinger & Clark, 1983). As noted above, theft is costly for organizations because it can reduce profits, increase prices, and even bankrupt

organizations (Greenberg & Barling, 1996; Greenberg & Scott, 1996; Weber et al., 2003). Thus, the possibility that theft may be a more common occurrence among younger individuals does not diminish the reality that theft is widespread and costly for organizations.

The artificial nature of laboratory experiments may also limit the extent to which findings are generalizable to a field setting (Reeve, Highhouse, & Brooks, 2006); however, the experimental design was actually a strength of the dissertation based on previous calls for more experimental research on the causal role of emotions (e.g., Yang & Diefendorff, 2009). The particular design was necessary in order to draw causal conclusions (Cohen-Charash & Mueller, 2007). The findings are further strengthened by measuring participants' actual behaviour, rather than their intended response. Using objective measures of theft reduced the social desirability bias associated with reporting theft. I also created a perception of anonymity by making it appear to participants that I would not know how much compensation they took. In establishing these anonymous conditions, the responses from participants were likely more realistic and less prone to social desirability (Burton et al., 2005).

Another potential limitation is that embedded within the script given to the underpaid participants is an explanation for the underpayment, as well as an apology. It is possible that informing participants that there had been a typo and telling participants, "I'm sorry there is nothing I can do about it" may have reduced the degree of theft. Prior studies find that the level of theft is attenuated

when participants are given valid information for why outcomes were distributed in a certain way (e.g., Greenberg, 1993). Because the script included information on why participants were underpaid, the dissertation is a more conservative test of the impact of distributive justice on theft, and the observed results may actually be slightly weaker because it may have attenuated the level of theft.

Questions may also arise as to the generalizability of reducing compensation to the workplace. Changing employee compensation through various cost-cutting approaches frequently occurs in organizations during periods of economic uncertainty (Kennedy, 2003). These approaches consist of salary cuts, smaller salary increases, greater time between salary increases, and reductions in variable pay such as bonuses. Indeed, some empirical work has examined several manufacturing plants that underwent temporary wage cuts of 15% as opposed to layoffs. Plants that had temporarily cut wages experienced higher theft rates than plants that left wages constant. Many employees therefore experience something to what was studied in the current investigation and as a result, the results are likely generalizable to the workplace.

Although theft was objectively measured by calculating the magnitude of theft, personality traits and emotions were measured using self-reported measures. There is debate as to the extent that personality measures are susceptible to faking (e.g., Morgeson et al., 2007; Tett & Christiansen, 2007); however, because participants were informed that the research was designed to explore possible relationships between personality characteristics and computer tasks, and because

there were no personal benefits to faking (e.g., obtaining employment), there are no valid reasons to suggest that participants provided false answers about their personalities.

Self-reported measures of emotion were also appropriate in this research design because these types of questionnaires provide useful insight into how individuals feel (Spector, 1994). Because some discrete emotions (e.g., envy) do not have specific facial expressions associated with them, individuals who experience these emotions would provide the most valid report on how they feel (Cohen-Charash & Mueller, 2007). In other words, self reports are the most accurate indicator of envy as opposed to facial expressions. To strengthen the findings, potential common method bias was reduced by measuring self-reports of personality and discrete emotions at different points in time (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

Even though multi-item measures were used to assess anger and disappointment, a potential limitation is that envy was measured using a one-item scale. A one-item scale was chosen because the measure has been used in other published studies, although other studies included envy only as a disguise for other targeted discrete emotions such as anger (e.g., Krehbiel & Cropanzano, 2000; Shaver et al., 1987; Weiss et al., 1999). Envy in this particular investigation was shown to be a valid measure because it was effective at predicting theft ($r = .30, p < .01$) and it was related to other negative emotional states such as disappointment ($r = .53, p < .01$) and anger ($r = .63, p < .01$), but unrelated to

individual factors such as personality traits or psychological capital. A new multi-item measure of episodic envy is available from Cohen-Charash (2009).

Participants rate items on the extent that they describe their emotions toward referent others. Example items include, “I lack some of the things X has” and “I want to have what X has.” Because the measure is in its early stage of research, further research is needed to validate the measure.

Another potential limitation is that the levels of the discrete emotions in the current investigation were low. ANOVA results indicate that participants experienced no to very slight levels of envy, anger, and disappointment. Some authors suggest that these results are typical because participants who view it “only as an experiment” will report low levels of discrete emotions (e.g., Page & Scheidt, 1971). This potential limitation is especially problematic in studies that give participants scenarios and measure the emotions that they may experience. Because the dissertation assessed actual discrete emotions that individuals experience when they encounter unfair outcomes, this potential limitation is less of a concern.

Future Research

The experimental design enabled me to draw causal conclusions about the role of discrete emotions, but future research should attempt to replicate the study in a field setting. A cross-sectional design may be problematic because previous studies suggest that individuals perceive a sense of distributive justice *because* they engaged in CWBs (e.g., Bechtoldt et al., 2007). Engaging in theft may also

elicit emotions such as pleasure and guilt, which are likely outcomes of theft and not predictors (Tunstall et al., 2006). It is important for future field research to measure independent and dependent variables over time. A longitudinal design using a pre- and post-test may more fully capture how employees respond to low levels of distributive justice.

Theft is a serious problem in human resource management but there are other organizational counterproductive behaviours that may be investigated in future research as they relate to underpayment. Taking sick days when not ill (i.e., sick leave abuse) or telling outsiders that an organization is a lousy place to work are just a few examples. Other types of production deviance (e.g., stealing time) may also be examined such as taking longer breaks, arriving late to work, or leaving work early (Hollinger & Clark, 1982). Because envy involves a comparison with others, interpersonal deviance should also be examined. Examples include hiding information, providing misleading information, being nasty to fellow coworkers, or verbally abusing coworkers.

Future studies should also strive to incorporate measures of discrete emotions when predicting specific behaviours. There have been several calls for research to study discrete emotions because they tend to have different predictors and consequences (e.g., Cohen-Charash & Byrne, 2008; Lazarus & Cohen-Charash, 2001; Weiss et al., 1999). Grouping emotions into affective states (e.g., negative emotions) ignores the particular consequences that may occur as a result of specific emotions (e.g., envy). The results support these calls for research by

showing that only the discrete emotion of envy predicted theft. Envy appears to be a particularly promising discrete emotion that has not been given as much attention in the literature compared to other discrete emotions such as anger. Future research on justice and counterproductive workplace behaviours will benefit by incorporating measures of discrete emotions such as envy into their studies.

Measuring discrete emotions is particularly important because the type of manipulation may engender different emotions. It could be argued that the experimental manipulation in the dissertation created conditions for the emotion of envy to emerge. More specifically, underpaid participants were told that the previous participants were given \$20 because the typo had not been realized until then. Not only did participants receive less compensation than they were promised but they also received less compensation in comparison to other participants. This finding is not surprising because inherent in the definition of envy is the desire to eliminate one's inequality compared to others (Ben-Ze'ev, 1992). It may be that other discrete emotions emerge when a comparison other is not offered. Although equity theory would suggest that individuals would compare their outcomes with a referent other, future research is needed to further examine how various types of manipulations may engender different discrete emotions.

Because there is inconsistency in the research on the impact of distributive justice on theft, other moderators may also be investigated in future research. Studying the impact that transformational leadership may have on the ethical

behaviour of groups when they experience low levels of distributive justice is a fruitful avenue for future work. Transformational leadership may moderate the relationship between distributive justice and theft by encouraging group members to go beyond their own self-interests. Social identity theory may explain why leaders influence how group members respond to unfair pay because of perceptions of how group members would react. Studying the potential impact of leaders on the ethical behaviours of groups is important because it may illustrate further ways in which we can reduce the amount of theft associated with distributive justice.

The results suggest that the trait of honesty-humility does not moderate the relationship between distributive justice and theft. A possible explanation for the null result may be that some individuals justify engaging in theft as an appropriate response to injustice – thus, still maintaining their positive self view while engaging in theft. As noted above, some employees may feel entitled to organizational property for receiving unfair outcomes, and may not consider it as theft. It may be that this particular personality trait is not as important as how individuals justify their response to unfair outcomes. Future research is needed to examine the justifications that individuals use in legitimatizing theft as an appropriate response to distributive injustice.

Conclusion

This dissertation enriches our understanding of the process by which distributive justice affects theft and speaks to the importance of measuring

discrete emotions when predicting specific behaviours. It clarifies mixed findings by showing that distributive justice is related to actual theft in a controlled experiment. It is the first study to test the impact of certain discrete emotions on theft and show that envy partially mediates the relationship between distributive justice and theft. This contribution is particularly important because some prior studies suggest that discrete emotions elicit perceptions of distributive justice.

This dissertation is also the first study to show that psychological capital affected how individuals responded to distributive justice. Taken together, the results help us understand the particular consequences of unfair pay and ways in which we can reduce theft in the workplace.

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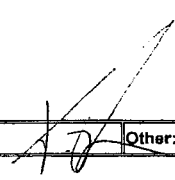
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APPENDIX A
MREB APPROVAL CERTIFICATE

MREB Approval Certificate

Page 1 of 1

		McMaster University Research Ethics Board (MREB) c/o Office of Research Services, MREB Secretariat, GH-305/H, e-mail: ethicsoffice@mcmaster.ca	
CERTIFICATE OF ETHICS CLEARANCE TO INVOLVE HUMAN PARTICIPANTS IN RESEARCH			
Application Status: New <input type="checkbox"/> Addendum <input type="checkbox"/> Project Number: 2010 058			
TITLE OF RESEARCH PROJECT: That's Not Fair! Reducing the Damaging Effects of Underpayment			
Faculty Investigator (s)/ Supervisor(s)	Dept./Address	Phone	E-Mail
C. Connelly	Business	23954	connell@mcmaster.ca
Student Investigator(s)	Dept./Address	Phone	E-Mail
C. Austin	Business	26356	austinCL@mcmaster.ca
The application in support of the above research project has been reviewed by the MREB to ensure compliance with the Tri-Council Policy Statement and the McMaster University Policies and Guidelines for Research Involving Human Participants. The following ethics certification is provided by the MREB:			
<input type="checkbox"/> The application protocol is approved as presented without questions or requests for modification.			
<input checked="" type="checkbox"/> The application protocol is approved as revised without questions or requests for modification.			
<input type="checkbox"/> The application protocol is approved subject to clarification and/or modification as appended or identified below:			
COMMENTS AND CONDITIONS: Ongoing approval is contingent on completing the annual completed/status report. A "Change Request" or amendment must be made and approved before any alterations are made to the research.			
Reporting Frequency:	Annual: May-27-2011		
Date: May-27-2010 Co-Chairs, Dr. D. Maurer, Dr. D. Pawluch: Acting Vice-Chair, Dr. R. Storey: <i>Amendment June 1, 2010</i>			

APPENDIX B
PILOT STUDY 1 RECRUITMENT SCRIPT

RECRUITMENT SCRIPT TO INSTRUCTOR

My name is Christa Austin and I am a third year PhD student here at the DeGroot School of Business. I am currently working on my doctoral thesis research and I am interested in pilot testing some aspects of my study. I was wondering if you would be interested in allowing me to come to your classroom to invite students to participate in my pilot study during class time. In order to ensure the voluntariness of the participation, I would appreciate a few minutes at the end of class, after all instructors and TAs have left the classroom. Attached is the testing instrument that will be used for my pilot test. If you have questions that pertain to the particulars of my testing instrument or thesis research, please do not hesitate to contact me.

RECRUITMENT SCRIPT TO STUDENTS

My name is Christa Austin and I am a third year PhD student here at the DeGroot School of Business. I am currently working on my doctoral thesis research and I am interested in pilot testing some aspects of my study. I would like to invite you to participate in my pilot study by filling out the following questionnaire during class. The questionnaire will take a few minutes to complete. Your participation is entirely voluntary. I will place a box by the door and you can deposit either a completed or uncompleted questionnaire directly into the box.

APPENDIX B
PILOT STUDY 1 LETTER OF CONSENT

DATE: June 2010

LETTER OF CONSENT
A Pilot Study about Fair Compensation

Investigators:

Student Investigator:

Christa Austin, PhD Candidate
Department of Human Resources & Management
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Faculty Supervisor:

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Purpose of the Study

You are invited to take part in a pilot study to determine the amount of fair compensation for participating in a study. I am doing this research for my doctoral thesis.

What will happen during the study?

You will be asked to indicate the amount of payment that you believe would constitute fair compensation for completing a 45 minute study involving a computer task and questionnaire. You will also be asked about the extent to which you value particular objects as a token of appreciation for participating. I will also ask you for some demographic information such as your age and gender. The study will take approximately a few minutes to complete.

Are there any risks to doing study?

There are no risks involved in participating in the pilot study.

Are there any benefits to doing this study?

The research will not benefit you directly. I hope that what is learned as a result of the pilot study will help determine fair compensation levels for my main study.

Payment

You will not be compensated for your participation in the study.

Confidentiality

You are participating in this study confidentially. I will not use your name or any information that would allow you to be identified. Your information will be secured in a locked office. Once the study is complete, an archive of the data, without any identifying information, will be stored.

What if I change my mind about being in the study?

Your participation in this study is voluntary. It is your choice to be part of the study or not. If you decide to be a part of the study, you can decide to stop (withdraw), at any time. If you decide to withdraw, there will be no consequences to you. In cases of withdrawal, any data you have provided will be destroyed unless you indicate otherwise. If you do not want to answer some of the questions you do not have to, but you can still be in the study.

How do I find out what was learned in this study?

I expect to have the main study completed by the summer of 2011. If you are interested in the results of my study, you can get in touch with me after the expected date of completion.

Questions about the study

If you have questions or require more information about the study itself, please contact me or my supervisor.

This study has been reviewed by the McMaster University Research Ethics Board and received ethics clearance. If you have concerns or questions about your rights as a participant or about the way the study is conducted, please contact:

McMaster Research Ethics Secretariat
Telephone: (905) 525-9140 ext. 23142
c/o Office of Research Services
E-mail: ethicsoffice@mcmaster.ca

CONSENT

I am treating the completion of the questionnaire as your implied consent and invite you to keep this Letter of Consent for your records.

APPENDIX B

PILOT STUDY QUESTIONNAIRE (PART ONE)

1. Please indicate the amount of payment that you believe would constitute fair compensation for completing a 45 minute study involving a computer task and questionnaire.

\$ ____.

Please indicate the extent to which you agree or disagree with the following:

2. I would value a **a pen with the McMaster logo** as a token of appreciation for participating in the study mentioned above instead of monetary compensation

Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

3. I would value a **thank you letter from the Dean** as a token of appreciation for participating in the study mentioned above instead of monetary compensation

Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

4. I would value a **key chain with the McMaster logo** as a token of appreciation for participating in the study mentioned above instead of monetary compensation

Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

5. I would value a **pin with the McMaster logo** as a token of appreciation for participating in the study mentioned above instead of monetary compensation

Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

6. What year were you born? 19__

7. What is your gender? Male Female

PILOT STUDY QUESTIONNAIRE (PART TWO)

1. Please indicate how **fair and appropriate \$2 compensation** would be for participating in a 45 minute study involving a computer task and a questionnaire:

Underpayment
\$2 is not enough

Fair payment
\$2 is appropriate

Overpayment
\$2 is too much

2. What year were you born? 19__

3. What is your gender? Male Female

APPENDIX C
PILOT STUDY 2 RECRUITMENT SCRIPT

RECRUITMENT SCRIPT TO INSTRUCTOR

My name is Christa Austin and I am a third year PhD student here at the DeGroote School of Business. I am currently working on my doctoral thesis research and I am interested in pilot testing some aspects of my study. I was wondering if you would be interested in allowing me to come to your classroom to invite students to participate in my pilot study. In order to ensure the voluntariness of the participation, I would appreciate a few minutes at the end of class, after all instructors and TAs have left the classroom. Attached is a summary of my dissertation research. If you have questions that pertain to the particulars of my testing instrument or thesis research, please do not hesitate to contact me.

RECRUITMENT SCRIPT TO STUDENTS

My name is Christa Austin and I am a third year PhD student here at the DeGroote School of Business. I am currently working on my doctoral thesis research and I am interested in pilot testing some aspects of my study. I would like to invite you to participate in my pilot study. I am hoping to learn about whether certain personality traits affect how people respond to digital store flyers. You will be shown an online flyer and your job will be to find the price for as many items as possible within 10 minutes from the flyer. You will complete the task individually but there may be other participants present who will also be participating in the study. I will be asking you questions about your personality. Sample questions include “I sometimes feel that I am a worthless person” and “When it comes to physical danger, I am very fearful.” There will be a series of questions about your potential emotional state (e.g., happy, lonely, frightened, compassionate, disgusted). I will also ask you for some demographic information like your age and gender. The study will take approximately 45 minutes to complete.

You may feel uncomfortable with the task. You do not need to answer questions that you do not want to answer or that make you feel uncomfortable. The personality-related questions may raise issues that you are sensitive about. If the personality-related questions raise personal issues that they would like to talk to someone about, I will provide you with information about where you can obtain counselling. You can withdraw (stop taking part) at any time. The research will not benefit you directly. The benefits of your participation include laying the groundwork for the main study and improving the quality of the results.

You will be compensated \$20 for your participation in this study.

I will be distributing cards with my contact information so that you can reach me if you are interested in participating.

APPENDIX C
PILOT STUDY 2 LETTER OF CONSENT

DATE: July, 2010

LETTER OF CONSENT
A Study about Personality and Performance on Computer Tasks

Investigators:

Student Investigator:

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Faculty Supervisor:

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McMaster University
Hamilton, Ontario, Canada
(905) 525-9140 ext. 23954
Connell@McMaster.ca

Purpose of the Study

You are invited to take part in this study on the possible link between personality characteristics and computer tasks. I am hoping to learn about whether certain personality traits affect how people respond to navigating websites. I am doing this research for a doctoral thesis.

What will happen during the study?

In this task, you are given two different websites with very different layout styles. There are common features to the websites and your job is to locate these common features within each website as quickly as possible. There are 10 different features to locate in total for each website. You will complete the task individually but there may be other participants present who will also be participating in the study. I will be asking you questions about your personality. Sample questions include “I sometimes feel that I am a worthless person” and “When it comes to physical danger, I am very fearful.” There will be a series of questions about your potential emotional state (e.g., happy, lonely, frightened, compassionate, disgusted). I will also ask you for some demographic information like your age and gender. The study will take approximately 45 minutes to complete. The testing will occur at DSB B106.

Are there any risks to doing study?

You may feel uncomfortable with the task. You do not need to answer questions that you do not want to answer or that make you feel uncomfortable. The personality-related questions may raise issues that you are sensitive about. If the personality-related questions raise personal issues that they would like to talk to someone about, below is information about where you can obtain counselling. You can withdraw (stop taking part) at any time. The steps I am taking to protect your privacy are discussed below.

Are there any benefits to doing this study?

The research will not benefit you directly. The benefits of your participation include laying the groundwork for the main study and improving the quality of the results.

Payment

You will be compensated \$20 for your participation in this study.

Confidentiality

You are participating in this study confidentially. I will not use your name or any information that would allow you to be identified. You will be assigned a unique identification number so that your answers will be confidential. Your information will be secured in a locked office on a password protected computer. Once the study is complete, an archive of the data, without any identifying information, will be stored.

What if I change my mind about being in the study?

Your participation in this study is voluntary. It is your choice to be part of the study or not. If you decide to be part of the study, you can decide to stop (withdraw), at any time, even after signing the consent form or part-way through the study. If you decide to withdraw, there will be no consequences to you. In cases of withdrawal, any data you have provided will be destroyed unless you indicate otherwise. If you do not want to answer some of the questions you do not have to, but you can still be in the study. Participants who choose to withdraw after the experiment commences will still be eligible for compensation.

How do I find out what was learned in this study?

I expect to have this study completed by the summer of 2011. If you are interested in the results of my study, you can get in touch with me after the expected date of completion.”

Questions about the study

If you have questions or require more information about the study itself, please contact me or my supervisor.

This study has been reviewed by the McMaster University Research Ethics Board and received ethics clearance. If you have concerns or questions about your rights as a participant or about the way the study is conducted, please contact:

McMaster Research Ethics Secretariat
Telephone: (905) 525-9140 ext. 23142
c/o Office of Research Services
E-mail: ethicsoffice@mcmaster.ca

CONSENT

I have read the consent form being conducted by Christa Austin of McMaster University. I have had the opportunity to ask questions about my involvement in this study, and to receive any additional details I wanted to know about the study. I understand that I may withdraw from the study at any time, if I choose to do so, and I agree to participate in this study. I have been given a copy of this form. By signing below, I consent to participate in this research.

Signature: _____

Name of Participant (Printed) _____

Here is information about where you can obtain counselling: Please contact the Centre for Student Development at (905) 525-9140 ext. 24711, or in the basement of the Student Centre (MUSC Room B107).

APPENDIX C
PILOT STUDY 2 DEBRIEF

As participants leave, Christa will hand them a debrief letter and dehoax them.

“Hi my name is Christa and I am the researcher. Here is a letter that explains more details about my study. When you first began the study, you were told that the purpose was to pilot test the possible impact of personality on the performance of computer tasks, but the study was more complicated than explained at the beginning. Have a seat over here and read the letter.”

Read through the main points again

Deception

“Now that you know the true purpose of the study, was there anything in the study that lead you to believe that the study wasn’t really about personality and computer tasks?”

Ask participants to sign money sheet

“Please put the envelope of change into this box. Here is an envelope with \$20 compensation in it. Please sign this sheet saying that you received \$20 in compensation.”

APPENDIX D MAIN STUDY RECRUITMENT SCRIPT

RECRUITMENT SCRIPT TO INSTRUCTOR

My name is Christa Austin and I am a third year PhD student here at the DeGroot School of Business. I am currently working on my doctoral thesis research. I was wondering if you would be interested in allowing me to come to your classroom to invite students to participate in my study. In order to ensure the voluntariness of the participation, I would appreciate a few minutes at the end of class, after all instructors and TAs have left the classroom. Attached is a summary of my dissertation research. If you have questions that pertain to the particulars of my testing instrument or thesis research, please do not hesitate to contact me.

RECRUITMENT SCRIPT TO STUDENTS

My name is Christa Austin and I am a third year PhD student here at the DeGroot School of Business. I am currently working on my doctoral thesis research. I would like to invite you to participate in my study. I am hoping to learn about whether certain personality traits affect how people respond to digital store flyers. You will be shown an online flyer and your job will be to find the price for as many items as possible within 10 minutes from the flyer. Your job will be to navigate this website and answer task-related questions. You will complete the task individually but there may be other participants present who will also be participating in the study. I will be asking you questions about your personality. Sample questions include “I sometimes feel that I am a worthless person” and “When it comes to physical danger, I am very fearful.” There will be a series of questions about your potential emotional state (e.g., happy, lonely, frightened, compassionate, disgusted). I will also ask you for some demographic information like your age and gender. The study will take approximately 45 minutes to complete.

You may feel uncomfortable with the task. You do not need to answer questions that you do not want to answer or that make you feel uncomfortable. You can withdraw (stop taking part) at any time. The personality-related questions may raise issues that you are sensitive about. If the personality-related questions raise personal issues that they would like to talk to someone about, I will provide you with information about where you can obtain counselling. The research will not benefit you directly. I hope that what is learned as a result of this study will help us to better understand how personality traits may affect the performance of website users. This could help improve the design of websites and possibly reduce the frustration associated with getting lost in the web of links and pages. This study should encourage future academic work in this area.

You will be compensated \$20 for your participation in this study. I will be distributing cards with my contact information so that you can reach me if you are interested in participating.

APPENDIX D
MAIN STUDY LETTER OF CONSENT

DATE: September 2010

LETTER OF CONSENT
A Study about Personality and Performance on Computer Tasks

Investigators:

Student Investigator: C. L. Austin, PhD Candidate
McMaster University
Hamilton, Ontario, Canada
(905) 525-9140 ext. 26356
AustinCL@McMaster.ca

Faculty Supervisor: Dr. C.E. Connelly
McMaster University
Hamilton, Ontario, Canada
(905) 525-9140 ext. 23954
Connell@McMaster.ca

Purpose of the Study

You are invited to take part in this study on the possible link between personality characteristics and computer tasks. I am hoping to learn about the impact that personality traits may have on the performance of website users, and more specifically, whether certain personality traits affect how people respond to websites. I am doing this research for a doctoral thesis.

What will happen during the study?

In this task, you are given two different websites with very different layout styles. There are common features to the websites and your job is to locate these common features within each website as quickly as possible. There are 10 different features to locate in total for each website. You will complete the task individually but there may be other participants present who will also be participating in the study. I will be asking you questions about your personality. Sample questions include “I sometimes feel that I am a worthless person” and “When it comes to physical danger, I am very fearful.” There will be a series of questions about your potential emotional state (e.g., happy, lonely, frightened, compassionate, disgusted). I will also ask you for some demographic information like your age and gender. The study will take approximately 45 minutes to complete. The testing will occur at DSB B106.

Are there any risks to doing study?

You may feel uncomfortable with the task. You do not need to answer questions that you do not want to answer or that make you feel uncomfortable. The personality-related questions may raise issues that you are sensitive about. If the personality-related questions raise personal issues that they would like to talk to someone about, below is information about where you can obtain counselling. You can withdraw (stop taking part) at any time. The steps I am taking to protect your privacy are discussed below.

Are there any benefits to doing this study?

The research will not benefit you directly. I hope that what is learned as a result of this study will help us to better understand how personality traits may affect the performance of computer users. This study should encourage future academic work in this area.

Payment

You will be compensated \$20 for your participation in this study.

Confidentiality

You are participating in this study confidentially. I will not use your name or any information that would allow you to be identified. You will be assigned a unique identification number so that your answers will be confidential. Your information will be secured in a locked office on a password protected computer. Once the study is complete, an archive of the data, without any identifying information, will be stored.

What if I change my mind about being in the study?

Your participation in this study is voluntary. It is your choice to be part of the study or not. If you decide to be part of the study, you can decide to stop (withdraw), at any time, even after signing the consent form or part-way through the study. If you decide to withdraw, there will be no consequences to you. In cases of withdrawal, any data you have provided will be destroyed unless you indicate otherwise. If you do not want to answer some of the questions you do not have to, but you can still be in the study. Participants who choose to withdraw after the experiment commences will still be eligible for compensation.

How do I find out what was learned in this study?

I expect to have this study completed by the summer of 2011. If you are interested in the results of my study, you can get in touch with me after the expected date of completion.”

Questions about the study

If you have questions or require more information about the study itself, please contact me or my supervisor.

This study has been reviewed by the McMaster University Research Ethics Board and received ethics clearance. If you have concerns or questions about your rights as a participant or about the way the study is conducted, please contact:

McMaster Research Ethics Secretariat
Telephone: (905) 525-9140 ext. 23142
c/o Office of Research Services
E-mail: ethicsoffice@mcmaster.ca

CONSENT

I have read the consent form being conducted by C. L. Austin of McMaster University. I have had the opportunity to ask questions about my involvement in this study, and to receive any additional details I wanted to know about the study. I understand that I may withdraw from the study at any time, if I choose to do so, and I agree to participate in this study. I have been given a copy of this form. By checking off the box below, I consent to participate in this research.

Signature: _____

Name of Participant (Printed) _____

Here is information about where you can obtain counselling: Please contact the Centre for Student Development at (905) 525-9140 ext. 24711, or in the basement of the Student Centre (MUSC Room B107).

APPENDIX D
DEBRIEFING LETTER

Study Title: That's Not Fair! Reducing the Damaging Effects of Underpayment

Student Investigator: Christa Austin, HR, Ext. 26356, AustinCL@McMaster.ca

Faculty Supervisor: Dr. Catherine Connolly, HR, Ext. 23954, Connell@McMaster.ca

Thank you for spending the time to help me with my research! I greatly appreciate your participation in my study and your time is greatly valued. When you first began the study, you were told that the purpose of the study was to examine the possible impact of personality on the performance of computer tasks. However, the study was more complicated than I explained at the beginning. The purpose of the study was actually to test how underpaying people may make them feel and behave.

Previous research suggests that people may feel certain emotions such as anger or disappointment, and may engage in certain behaviours such as taking more compensation than they were supposed to. Individual factors such as personality and a positive outlook may influence how people respond to underpayment. Situational factors such as providing a pen may also affect participants' responses to underpayment. There are different ways to think about the situation you were put in and about the responses of those who took extra compensation. One interpretation is that the original agreement with participants was breached and participants were therefore entitled to take a greater amount. Another interpretation is that taking more than participants were instructed to take, they were stealing. I am not interested in characterizing the decision to take the extra money in one way or another, as justifiable or not justifiable, but in the conditions under which people think about it in one way rather than another and in the personality characteristics of those who opt to respond in one way rather than another.

In this study, half of the participants were deliberately underpaid to investigate how this would affect their feelings and behaviours. Also, a token gesture was given to half of the participants to test whether it affects how people feel after being underpaid. Whether or not you were underpaid or given a token gesture was randomized. You were in the **underpaid/token condition**. This means you were underpaid and given a pen. If you were underpaid, you will be given the remaining difference to supplement your compensation.

As the researcher, I will not be in a position to know how particular participants responded to the situation because I have arranged for a third party to collect the money left on the table, if any, after all participants have left the room. Even though it seemed that I did not know how much change I gave you, I knew the exact amount of change in the envelope. Your unique identification number, which corresponds to your seat number, will link your responses to the questionnaire with the amount of change left in the envelope. Because I am using a unique identification number, and not any identifying information such as your name, the findings are confidential.

I could not give participants complete information about the study at the beginning because it may have influenced how participants behaved during the study in a way that would make investigations of the research question invalid. I apologize for omitting details and for providing you with fictional information about the purpose of my study. I hope that you understand the need for deception now that the purpose of the study has been more fully explained to you. I would also like to assure you that most business research does not involve the use of deception.

The study is important because it may lead to a better understanding of how people feel when faced with unfair outcomes and this is especially helpful for human resource managers who deal with employees' emotions on a daily basis. Organizations may also reduce the impact of underpayment through screening, training, and compensation mechanisms. The results may have broad social implications associated with creating conditions that may help people feel less inclined to take more compensation than permitted.

Because the study involves some aspects that you were not told about before starting, **it is very important** that you not discuss your experiences with any other students who potentially could be in this study in the upcoming weeks. If people come into the study knowing about our specific predictions, as you can imagine, it would influence their results, and the data I collect would be not be useable. Also, because you will be given a copy of this feedback letter to take home with you, please do not make this available to other students. Thank you for your help with this.

I hope you understand the need for deception in this study. There are no adverse consequences for withdrawing from the process. Although I really hope that you allow me to use the data that you have contributed, you may want to withdraw from the study. If this is the case, I will respect your right to do so. Should you choose to withdraw the data, then it will be destroyed. You will still be eligible for compensation. Should you allow your data to me used in my study, then the data will be stored with all potentially identifying information removed. Electronic data will be stored indefinitely on a password protected computer in DSB A210.

If you have questions or require more information about the study itself, please contact me at AustinCL@McMaster.ca or my supervisor at Connell@McMaster.ca. This study has been reviewed by the McMaster University Research Ethics Board and received ethics approval. If you have concerns or questions about your rights as a participant or about the way the study was conducted, please contact:

McMaster Research Ethics Secretariat, Telephone: (905) 525-9140 ext. 23142, c/o Office of Research Services, E-mail: ethicsoffice@mcmaster.ca

I would just like to re-iterate a few things:

1. The purpose of this study was to test how underpaying individuals may make them feel and behave (e.g., taking more compensation than they were supposed to)
2. The results are confidential. I do not know how you responded to the questionnaire or how much compensation you took.
3. Deception was necessary because knowing the true purpose of the study would have seriously undermined the validity of the results and make the research question invalid
4. The research is important because it may suggest ways to help people feel less inclined to take more compensation than permitted.

I really appreciate your participation and hope that this has been an interesting experience for you. Thank you again for participating!

DEBRIEFING LETTER

Study Title: That's Not Fair! Reducing the Damaging Effects of Underpayment

Student Investigator: Christa Austin, HR, Ext. 26356, AustinCL@McMaster.ca

Faculty Supervisor: Dr. Catherine Connelly, HR, Ext. 23954, Connell@McMaster.ca

Thank you for spending the time to help me with my research! I greatly appreciate your participation in my study and your time is greatly valued. When you first began the study, you were told that the purpose of the study was a test of the possible impact of personality on the performance of computer tasks. However, the study was more complicated than I explained at the beginning. The purpose of the study was actually to test how underpaying people may make them feel and behave.

Previous research suggests that people may feel certain emotions such as anger or disappointment, and may engage in certain behaviours such as taking more compensation than they were supposed to. Individual factors such as personality and a positive outlook may influence how people respond to underpayment. Situational factors such as providing a pen may also affect participants' responses to underpayment. There are different ways to think about the situation you were put in and about the responses of those who took extra compensation. One interpretation is that the original agreement with participants was breached and participants were therefore entitled to take a greater amount. Another interpretation is that taking more than participants were instructed to take, they were stealing. I am not interested in characterizing the decision to take the extra money in one way or another, as justifiable or not justifiable, but in the conditions under which people think about it in one way rather than another and in the personality characteristics of those who opt to respond in one way rather than another.

In this study, half of the participants were deliberately underpaid to investigate how this would affect their feelings and behaviours. Also, a token gesture was given to half of the participants to test whether it affects how people feel after being underpaid. Whether or not you were underpaid or given a token gesture was randomized. You were in the **underpaid/no token** condition. This means you were underpaid and not given a pen. If you were underpaid, you will be given the remaining difference to supplement your compensation.

As the researcher, I will not be in a position to know how particular participants responded to the situation because I have arranged for a third party to collect the money left on the table, if any, after all participants have left the room. Even though it seemed that I did not know how much change I gave you, I knew the exact amount of change in the envelope. Your unique identification number, which corresponds to your seat number, will link your responses to the questionnaire with the amount of change left in the envelope. Because I am using a unique identification number, and not any identifying information such as your name, the findings are confidential.

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The study is important because it may lead to a better understanding of how people feel when faced with unfair outcomes and this is especially helpful for human resource managers who deal with employees' emotions on a daily basis. Organizations may also reduce the impact of

underpayment through screening, training, and compensation mechanisms. The results may have broad social implications associated with creating conditions that may help people feel less inclined to take more compensation than permitted.

Because the study involves some aspects that you were not told about before starting, **it is very important** that you not discuss your experiences with any other students who potentially could be in this study in the upcoming weeks. If people come into the study knowing about our specific predictions, as you can imagine, it would influence their results, and the data I collect would be not be useable. Also, because you will be given a copy of this feedback letter to take home with you, please do not make this available to other students. Thank you for your help with this.

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If you have questions or require more information about the study itself, please contact me at AustinCL@McMaster.ca or my supervisor at Connell@McMaster.ca. This study has been reviewed by the McMaster University Research Ethics Board and received ethics approval. If you have concerns or questions about your rights as a participant or about the way the study was conducted, please contact:

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4. The research is important because it may suggest ways to help people feel less inclined to take more compensation than permitted.

I really appreciate your participation and hope that this has been an interesting experience for you. Thank you again for participating!

DEBRIEFING LETTER

Study Title: That's Not Fair! Reducing the Damaging Effects of Underpayment

Student Investigator: Christa Austin, HR, Ext. 26356, AustinCL@McMaster.ca

Faculty Supervisor: Dr. Catherine Connelly, HR, Ext. 23954, Connell@McMaster.ca

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Previous research suggests that people may feel certain emotions such as anger or disappointment, and may engage in certain behaviours such as taking more compensation than they were supposed to. Individual factors such as personality and a positive outlook may influence how people respond to underpayment. Situational factors such as providing a pen may also affect participants' responses to underpayment. There are different ways to think about the situation you were put in and about the responses of those who took extra compensation. One interpretation is that the original agreement with participants was breached and participants were therefore entitled to take a greater amount. Another interpretation is that taking more than participants were instructed to take, they were stealing. I am not interested in characterizing the decision to take the extra money in one way or another, as justifiable or not justifiable, but in the conditions under which people think about it in one way rather than another and in the personality characteristics of those who opt to respond in one way rather than another.

In this study, half of the participants were deliberately underpaid to investigate how this would affect their feelings and behaviours. Also, a token gesture was given to half of the participants to test whether it affects how people feel after being underpaid. Whether or not you were underpaid or given a token gesture was randomized. You were in the **equitably paid/token** condition. This means you were paid equitably and given a pen.

As the researcher, I will not be in a position to know how particular participants responded to the situation because I have arranged for a third party to collect the money left on the table, if any, after all participants have left the room. Even though it seemed that I did not know how much change I gave you, I knew the exact amount of change in the envelope. Your unique identification number, which corresponds to your seat number, will link your responses to the questionnaire with the amount of change left in the envelope. Because I am using a unique identification number, and not any identifying information such as your name, the findings are confidential.

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broad social implications associated with creating conditions that may help people feel less inclined to take more compensation than permitted.

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4. The research is important because it may suggest ways to help people feel less inclined to take more compensation than permitted.

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DEBRIEFING LETTER

Study Title: That's Not Fair! Reducing the Damaging Effects of Underpayment

Student Investigator: Christa Austin, HR, Ext. 26356, AustinCL@McMaster.ca

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I would just like to re-iterate a few things:

1. The purpose of this study was to test how underpaying individuals may make them feel and behave (e.g., taking more compensation than they were supposed to)
2. The results are confidential. I do not know how you responded to the questionnaire or how much compensation you took.
3. Deception was necessary because knowing the true purpose of the study would have seriously undermined the validity of the results and make the research question invalid
4. The research is important because it may suggest ways to help people feel less inclined to take more compensation than permitted.

I really appreciate your participation and hope that this has been an interesting experience for you. Thank you again for participating!

APPENDIX E
MAIN STUDY QUESTIONNAIRE

Part One: Completed Before Task

Psychological Capital (Luthans et al., 2007)

Below are statements that describe how you may think about yourself **right now**. Use the following scales to indicate your level of agreement or disagreement with each statement.

1 (*strongly disagree*) to 6 (*strongly agree*)

I feel confident analyzing a long-term problem to find a solution

I feel confident in representing my work area in meetings with management.

I feel confident contributing to discussion about the company's strategy.

I feel confident helping to set targets/goals in my work area.

I feel confident contacting people outside the company (e.g., suppliers, customers) to discuss problems.

I feel confident presenting information to a group of colleagues.

If I should find myself in a jam at work, I could think of many ways to get out of it.

At the present time, I am energetically pursuing my work goals.

There are lots of ways around any problem.

Right now I see myself as being pretty successful at work.

I can think of many ways to reach my current work goals.

At this time, I am meeting the work goals that I have set for myself.

When I have a setback at work, I have trouble recovering from it, moving on (R).

I usually manage difficulties one way or another at work.

I can be "on my own" so to speak, at work if I have to.

I usually take stressful things at work in stride.

I can get through difficult times at work because I've experienced difficulty before.

I feel I can handle many things at a time at this job.

When things are uncertain for me at work, I usually expect the best.

If something can go wrong for me work-wise, it will (R).

I always look on the bright side of things regarding my job.

I'm optimistic about what will happen to me in the future as it pertains to work.

In this job, things never work out the way I want them to (R).

I approach this job as if "every cloud has a silver lining."

Humility-Honesty (Ashton & Lee, 2009)

On the following pages you will find a series of statements about you. Please read each statement and decide how much you agree or disagree with that statement.

1 (*strongly disagree*) to 5 (*strongly agree*)

Sincerity

I wouldn't use flattery to get a raise or promotion at work, even if I thought it would succeed.

If I want something from someone, I will laugh at that person's worst jokes (R).

I wouldn't pretend to like someone just to get that person to do favours for me.

Fairness

If I knew that I could never get caught, I would be willing to steal a million dollars (R).

I would never accept a bribe, even if it were very large.

I'd be tempted to use counterfeit money, if I were sure I could get away with it (R).

Greed-Avoidance

Having a lot of money is not especially important to me.

I would get a lot of pleasure from owning expensive luxury goods (R).

Modesty

I think that I am entitled to more respect than the average person is (R).

I want people to know that I am an important person of high status (R).

Emotionality

Fearfulness

I would feel afraid if I had to travel in bad weather conditions.

When it comes to physical danger, I am very fearful.

Even in an emergency I wouldn't feel like panicking (R).

Anxiety

I sometimes can't help worrying about little things.

I worry a lot less than most people do (R).

Dependence

When I suffer from a painful experience, I need someone to make me feel comfortable.

I can handle difficult situations without needing emotional support from anyone else (R).

Sentimentality

I feel like crying when I see other people crying.

I feel strong emotions when someone close to me is going away for a long time.

I remain unemotional even in situations where most people get very sentimental (R).

Extraversion

Social Self-Esteem

I feel reasonably satisfied with myself overall.

I feel that I am an unpopular person (R).

I sometimes feel that I am a worthless person (R).

Social Boldness

I rarely express my opinions in group meetings (R).

In social situations, I'm usually the one who makes the first move.

When I'm in a group of people, I'm often the one who speaks on behalf of the group.

Sociability

I prefer jobs that involve active social interaction to those that involve working alone.

The first thing that I always do in a new place is to make friends.

Liveliness

On most days, I feel cheerful and optimistic.

Most people are more upbeat and dynamic than I generally am (R).

Agreeableness

Forgiveness

I rarely hold a grudge, even against people who have badly wronged me.

My attitude toward people who have treated me badly is "forgive and forget".

Gentleness

People sometimes tell me that I am too critical of others (R).

I tend to be lenient in judging other people.

Even when people make a lot of mistakes, I rarely say anything negative.

Flexibility

People sometimes tell me that I'm too stubborn (R).

I am usually quite flexible in my opinions when people disagree with me.

When people tell me that I'm wrong, my first reaction is to argue with them (R).

Patience

People think of me as someone who has a quick temper (R).

Most people tend to get angry more quickly than I do.

Conscientiousness

Organization

I plan ahead and organize things, to avoid scrambling at the last minute.

When working, I sometimes have difficulties due to being disorganized (R).

Diligence

I often push myself very hard when trying to achieve a goal.

I do only the minimum amount of work needed to get by (R).

Perfectionism

When working on something, I don't pay much attention to small details (R).

I always try to be accurate in my work, even at the expense of time.

People often call me a perfectionist.

Prudence

I make decisions based on the feeling of the moment rather than on careful thought (R).

I make a lot of mistakes because I don't think before I act (R).

I prefer to do whatever comes to mind, rather than stick to a plan (R).

Openness to Experience

Aesthetic Appreciation

I would be quite bored by a visit to an art gallery (R).

If I had the opportunity, I would like to attend a classical music concert.

Inquisitiveness

I'm interested in learning about the history and politics of other countries.

I've never really enjoyed looking through an encyclopedia (R).

Creativity

I would enjoy creating a work of art, such as a novel, a song, or a painting.

People have often told me that I have a good imagination.

I don't think of myself as the artistic or creative type (R).

Unconventionality

I think that paying attention to radical ideas is a waste of time (R).

I like people who have unconventional views.

I find it boring to discuss philosophy (R).

Age What year were you born? 19__

Gender Male Female

Trait negative affect (Watson & Clark, 1992)

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel this way, that is, how you feel on the average. Use the following scale to record your answers.

1 (*very slightly or not at all*) to 5 (*very much*)

Negative Affectivity

Fear: afraid, scared, frightened, nervous, jittery, and shaky

Sadness: sad, blue, downhearted, alone, and lonely

Guilt: guilty, ashamed, blameworthy, dissatisfied with self, angry at self, and disgusted with self

Hostility: angry, irritable, hostile, scornful, disgusted, and loathing

Part Two: Completed after Computer Task

Task-related questions

While I was browsing the RUNNING ROOM website:

1 (*never*) to 7 (*always*)

1. I felt lost when navigating the website.
2. I felt like I was going around in circles
3. It was difficult to locate the features on the website.
4. Navigating between pages was a problem
5. I didn't know how to get to my desired location
6. I felt disoriented when searching the website.
7. After browsing the website for a while, I had no idea where to go.

While I was browsing the SPORTCHEK website

1 (*never*) to 7 (*always*)

1. I felt lost when navigating the website.
2. I felt like I was going around in circles
3. It was difficult to locate the features on the website.
4. Navigating between pages was a problem
5. I didn't know how to get to my desired location
6. I felt disoriented when searching the website.
7. After browsing the website for a while, I had no idea where to go.

Discrete Emotions

Below are words that describe how you may feel right now after the task.

1 (*not at all*) to 7 (*extremely*).

Anger (Spencer & Rupp, 2009)

Pissed, Irritated, Angry, Mad, Resentful, Bitter, Furious, Annoyed (displeased is excluded from the scale)

Disappointment (Shaver et al., 1987)

Disappointed, dismayed, displeased

Other discrete emotions (Krehbiel & Cropanzano, 2000)

Guilty, happy, proud, frustrated, joyous, anxious, relieved, contented, sad, regretful, gloomy, remorseful, irritated, shameful, afraid, nervous, love, affection, compassion, lust, disgusted, distressed, envious, embarrassed.

Computer Self-Efficacy

1 (*strongly disagree*) to 5 (*strongly agree*)

Below are questions that have to do with how you feel towards computers in general.

I feel angry towards computers.

I feel confident when it comes to working with computers.

I do not like problems with computers.

I think working with computers would be fun.

I would quit trying to solve a computer problem.

I think about computer problems when they are left unsolved.

Fairness Questions

1 (*not at all*) to 7 (*extremely*)

The DeGroote School of Business regularly asks experimenters to include a participant satisfaction questionnaire, much like the questionnaires given to students to evaluate teacher effectiveness. This questionnaire is designed to evaluate the effectiveness of the experimenter, the fairness of the compensation, and to ensure that the room locations are suitable. Please answer the following questions about the experiment.

The research assistant used appropriate language in dealing with all participants.

The research assistant was effective in conducting the experiment.

The research assistant was well organized in the experiment.

Interactional Justice (Greenberg, 1993)

How fair was the research assistant in considering your needs and well-being?

To what degree did the research assistant give fair consideration to your personal feelings?

To what extent is the research assistant concerned about your fair treatment during the study?

Distributive Justice (Greenberg, 1993)

To what extent is the amount of the payment you will be given appropriate for the task performed?

How fair is the amount of pay you will be given to perform this task?

To what extent is your pay in keeping with appropriate pay standards?

Procedural Justice (Greenberg, 1993)

To what extent were proper rules and procedures used to determine your pay?

How fair is the method used to determine your pay?

How consistent and unbiased is the method used for establishing your pay?

Compensatory Justice

To what extent do you feel adequately compensated for the work done today?

The temperature in the room was comfortable.

The room location was easy to find.

If you would like, provide additional comments and suggestions here.

Manipulation check items

Payment Manipulation (Greenberg, 1993)

How much money will you be paid at the end of the session? _____

Token Gesture Manipulation

Did the research assistant give you a pen as a token of appreciation? (YES)
(NO)

To what extent do you value the pen?

1 (*not at all*) to 7 (*very much*)

APPENDIX F
COMMON FEATURES USED FOR COMPARING THE WEBSITES

1. What is the address of the Hamilton store location?
2. What is the price of this pair of men's shoes: New Balance 1064?
3. What charity or charities does this company give to?
4. What is the minimum amount that you can buy in gift cards?
5. When was the company founded?
6. What is one tip listed on the website for buying the right shoes?
7. Does this company offer a rewards program?
8. What is this company's price adjustment policy?
9. What is the job opening for the Hamilton location?
10. What is the toll-free phone number to reach customer service to find out about retail locations?