A Thesis
Submitted to the Faculty
of
Xavier University
in Partial Fulfillment of the
Requirements for the Degree of
Master of Arts
by
Eric Bookmyer
May 21, 2015

Approved:
Karl W. Stukenberg, Ph.D.

Karl W. Stukenberg, Ph.D., ABPP
Chair, School of Psychology

Mark Nagy

Mark Nagy, Ph.D.
Thesis Advisor
Need for Cognition and its Effects on
Equity Theory Predictions
Thesis Committee

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair</td>
<td>Mark Nagy, Ph.D.</td>
<td>Associate Professor of Psychology</td>
</tr>
<tr>
<td>Member</td>
<td>Dalia Diab, Ph.D.</td>
<td>Assistant Professor of Psychology</td>
</tr>
<tr>
<td>Member</td>
<td>Morell Mullins, Ph.D.</td>
<td>Professor of Psychology</td>
</tr>
</tbody>
</table>
Acknowledgments

I would like to thank and acknowledge all of those who supported and provided me assistance throughout the process of my Master’s thesis. I would first like to thank my family, including my parents Bill and Judy and my brother Jeremy, who have supported me in everything I have done and provided me with the education and development to achieve this goal. They have given me encouragement and guidance throughout this process. I would also like to thank my girlfriend, Molly Jacobson, who has helped me deal with the stress of the thesis and encouraged me to finish and overcome the challenges that were presented, even during the toughest of times.

Importantly, I thank Dr. Mark Nagy, my thesis advisor, who served not only as an advisor, but as a mentor guiding me at every stage of the thesis process. Without his guidance, this thesis document would not have been possible. He took the time to ensure that I was creating the best document possible and challenged me at every step of the way. Dr. Nagy instilled in me the necessary knowledge to complete the thesis as well as project management skills that not only contributed to the thesis, but will help me further develop in the future. For that I am grateful.

I would also like to acknowledge my thesis committee members, Dr. Morrie Mullins and Dr. Dalia Diab who provided valuable insights throughout this process. I improved as a writer and learned to be a better researcher due to their inputs and advice. Not only did Dr. Mullins and Dr. Diab contribute to my thesis, but they provided me with a valuable education during my two years at Xavier, further contributing to my future in I-O psychology. All of the faculty in the I-O program were supportive and approachable which helped to make a stressful time rewarding and exciting.
Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgments</td>
<td>i</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>ii</td>
</tr>
<tr>
<td>List of Tables</td>
<td>iii</td>
</tr>
<tr>
<td>List of Figures</td>
<td>iv</td>
</tr>
<tr>
<td>List of Appendices</td>
<td>v</td>
</tr>
<tr>
<td>Abstract</td>
<td>vi</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>I. Review of the Literature</td>
<td>1</td>
</tr>
<tr>
<td>II. Rationale and Hypotheses</td>
<td>16</td>
</tr>
<tr>
<td>III. Method</td>
<td>20</td>
</tr>
<tr>
<td>IV. Results</td>
<td>28</td>
</tr>
<tr>
<td>V. Discussion</td>
<td>35</td>
</tr>
<tr>
<td>VI. Summary</td>
<td>47</td>
</tr>
<tr>
<td>References</td>
<td>59</td>
</tr>
<tr>
<td>Appendices</td>
<td>65</td>
</tr>
</tbody>
</table>
List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Summary of correlations between NC level, distributive justice, and pay satisfaction</td>
<td>31</td>
</tr>
</tbody>
</table>
List of Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hypothesized interaction between payment condition and NC on distributive justice</td>
<td>19</td>
</tr>
<tr>
<td>2. Results indicating the interaction between payment condition and NC level on distributive justice</td>
<td>30</td>
</tr>
<tr>
<td>3. Results of the supplemental analyses indicating the interaction between payment condition and NC level on pay satisfaction</td>
<td>33</td>
</tr>
</tbody>
</table>
# List of Appendices

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Payment Condition Scenarios</td>
<td>65</td>
</tr>
<tr>
<td>B. Need for Cognition Scale</td>
<td>77</td>
</tr>
<tr>
<td>C. Distributive Justice Scale</td>
<td>78</td>
</tr>
<tr>
<td>D. Demographic Questionnaire</td>
<td>79</td>
</tr>
<tr>
<td>E. IRB Approval Letter</td>
<td>80</td>
</tr>
<tr>
<td>F. Pilot Study Informed Consent Form</td>
<td>81</td>
</tr>
<tr>
<td>G. Pilot Study Debriefing Form</td>
<td>82</td>
</tr>
<tr>
<td>H. MTurk Informed Consent Form</td>
<td>83</td>
</tr>
<tr>
<td>I. MTurk Debriefing Form</td>
<td>84</td>
</tr>
</tbody>
</table>
Abstract

Despite the growing trend in workplace applications of need for cognition (NC) on decision making, a gap still exists in its applications to other areas of I-O psychology. Therefore, the purpose of this study was to examine the effects of the individual difference of NC on equity theory predictions. This study consisted of a sample of 225 Mechanical Turk participants who completed a 32-item survey measuring their NC level and perceptions of equity and satisfaction based on a hypothetical scenario. Results indicated no significant differences between NC level and the amount of information utilized in the equity comparison process, contrary to predictions. Additionally, there were no significant differences between NC level on perceptions of distributive justice. The present study did, however, further support equity theory predictions by indicating lowered distributive justice in the underpayment and overpayment conditions and higher distributive justice in the equitable payment condition. Supplemental analyses were also conducted into pay satisfaction, which found that those low in NC were more satisfied in an underpayment condition than those high in NC. This research has implications on the workplace suggesting that employers should strive to compensate employees equitably to achieve the highest distributive justice perceptions. Additionally, results suggest that employers may want to consider an employee’s NC level when focusing on pay satisfaction, and this is an area that future research should further examine.
Chapter I

Review of the Literature

Need for cognition is a construct that has been studied throughout the field of psychology since 1955. Cohen, Stotland, and Wolfe (1955) first coined the term and defined it as “a need to structure relevant situations in meaningful, integrated ways. It is a need to understand and make meaningful the experiential world” (Cohen et al., 1955, p. 291). Despite a growing trend in workplace applications of need for cognition in decision making amongst managers (Anderson, 2008; Carnevale, Inbar, & Lerner, 2011; Kuvaas & Kauffmann, 2004), a gap exists in applications to Industrial-Organizational psychology, as a majority of need for cognition research has been completed with a social focus on attitudes (Gallagher, 2012; Haugtvedt & Petty, 1992) and personality (Feist, 2012). The present study aims to address this gap by examining the effects of need for cognition on equity theory, a well-researched theory in I-O psychology, which states that employees make comparisons to similar others within the workplace in order to determine equity or inequity (Adams, 1965). Given the evaluation process used in equity theory, the implications of need for cognition on equity theory could provide insight for how job satisfaction and motivation, among others, are determined.

Need for Cognition

Need for cognition (NC) is an individual difference in “people’s tendency to engage in and enjoy effortful thinking” (Cacioppo & Petty, 1982, p. 130). This construct evolved from research into the underlying processes of cognition and how knowledge is acquired (Cacioppo &
Petty, 1982) as well as from personality research by theorists like Maslow and his Hierarchy of Needs (Maslow, 1943). Cohen et al. (1955) first researched NC and its effects on ambiguous and structured situations. The authors found that those high in NC preferred structured situations and were frustrated in ambiguous situations, whereas those low in NC experienced no frustration in ambiguous situations. As Cacioppo and Petty (1982) developed and validated the Need for Cognition Scale, research into the construct blossomed. Within their research, Cacioppo and Petty (1982) determined that NC was a stable trait, varying only slightly in levels over time. The authors also found NC to be a unidimensional, continuous construct, as people could vary from low to high on NC level. However, after measuring NC continuously, researchers have typically dichotomized NC and examined the two extremes, with those high in NC enjoying effortful thinking and preferring cognitive tasks, and those low in NC preferring simple tasks requiring little thought (Cacioppo & Petty, 1982).

Some of the first research examined effects of NC on persuasive message processing (Cacioppo, Petty, & Morris, 1983). Cacioppo et al. (1983) presented participants with one of two different persuasive messages, one containing a strong argument and the other containing a weak argument. The participants were randomly placed into conditions in which they would receive either a strong or a weak argument. The authors found that those high in NC rated messages with strong argument quality higher than those low in NC. In addition, those high in NC rated messages with weak argument quality lower than those low in NC. More recently, See, Petty, and Evans (2009) found that simply framing a message as simple or complex resulted in different motivations to process the message. Those high in NC were more motivated to process the message labeled as complex, whereas those low in NC were more motivated to process the message labeled as simple.
Throughout the NC literature, characteristics of those high in NC and those low in NC have come to light. People high in NC were originally known as “cognitive cognizers” (Cacioppo, Petty, Feinstein, & Jarvis, 1996, p. 197). The previous research by Cacioppo et al. (1983) showed that these people tend to prefer strong arguments that are supported by facts or statistics. Furthermore, other studies have shown that people high in NC tend to process information differently, and thus come to different decisions based on that information (Levin, Huneke, & Jasper, 2000). In their research, Levin et al. (2000) examined the process of decision making and measured information accessed by participants throughout the process. They concluded that those high in NC accessed an average of 30% more information than those low in NC in this decision-making process. Based on these results, people with a high NC willingly sought out information to aid in the decision-making processes. In opposition, people low in NC were known as “chronic cognitive misers” (Cacioppo et al., 1996, p. 197) who were less intrinsically motivated to analyze information. In the research conducted by Levin et al. (2000), those low in NC did not access the depth or breadth of information that those high in NC accessed. Hence, those low in NC still have a need to make sense of the world; however, they utilize less information and engage in less effort to analyze that information (Cacioppo et al., 1996; Levin et al., 2000).

Bailey (1997) conducted another study examining information use and found that those high in NC conducted a more thorough information search in decision making, even when a thorough search was not promoted in the condition. This meant that those high in NC ignored situational cues presented to them in favor of a more thorough search. Additionally, Cacioppo et al. (1996) commented that the less information processing that occurs, the more influence of salient information over judgments. Dickhauser, Reinhard, Diener, and Bertrams (2009) obtained
results supporting this claim, suggesting that salient information about achievement was utilized significantly more in those low in NC compared to those high in NC when determining performance expectancies.

Research has also suggested that NC has an effect on the specificity of information utilized. Dickhauser and Reinhard (2006) examined the specificity of self-concept, or the perception of one’s own ability, for those low in NC and those high in NC. The authors found that those low in NC relied upon a more general self-concept in determining expectancies, whereas those high in NC relied upon a more specific self-concept. This research provided further evidence that those high in NC expend more cognitive effort than those low in NC. Cacioppo et al. (1996) also pointed out that the Need for Cognition Scale correlates highly with subscales measuring intrinsic motivation in cognitive domains, such as *specific curiosity*, which is defined as the exploration of a few stimuli in depth, as opposed to seeking many experiences in general (Berlyne, 1960).

Decision making was also researched by Shestowsky, Wegener, and Fabrigar (1998) and Kuvaas and Kaufmann (2004) in relation to NC. Shestowsky et al. paired individuals into dyads, such that one person had a high NC and the other a low NC. Prior to any task being given to these dyads, opinions were assessed on the topic that was to be used in the experiment. These dyads of participants then had to come to a decision based on a prompt relating to the topic. The authors found that when a decision must be made by a group of two people, the outcome decision was more consistent with the high NC individual’s initial beliefs. Shestowsky et al. also demonstrated that people with a high NC tended to be more persuasive, generated a greater number of arguments, and had a greater number of effective arguments, than those with a low NC. These findings were consistent with those later found by Levin et al. (2000), who discovered
that those high in NC tend to gather more information in a decision-making process. In another
decision-making study, Kuvaas and Kaufmann examined the influence of NC, as well as other
factors such as information framing and mood, on recall and confidence in decision making.
Results indicated that when there was an incongruity between the mood of the participant and a
message presented to them, those high in NC recalled more information than those low in NC.
These results also showed that people high in NC recalled more information than people low in
NC, no matter their mood (Kuvass & Kaufmann, 2004).

Other NC research has focused on tasks and performance. Reinhard and Dickhauser
(2009) researched expectancies, task difficulty, and the role of NC and found that NC moderated
the relationship between task difficulty and performance expectancies, such that those low in NC
were less likely to engage in effortful information processing. The authors concluded that a
higher NC resulted in more closely related expectancies of future performance to task difficulty.
In contrast, those lower in NC did not take task difficulty into account when determining future
performance expectancies. This research again demonstrated the inclusion of more information
among high NC individuals when making predictions about future performance.

In a final example of NC research, Espejo, Day, and Scott (2005) examined how NC was
associated with training and evaluations. They had participants play a video game and then
assigned the participants to undergo either intermittent evaluations of their performance or an
evaluation at the end of the training. They concluded that intermittent evaluations enhanced skill-
based learning of trainees low in NC, but actually reduced learning in those high in NC. Espejo
et al. speculated that this finding was possibly due to a perceived undermining of control felt
from constant evaluations in those more intrinsically motivated, or as concluded by Cacioppo
and Petty (1982), those high in NC. Aside from the findings relating to intermittent evaluations
in learning of video games, the Espejo et al. study suggested that there may be differences in how people with different levels of NC may be impacted by an evaluation process, and these suggested differences in NC may play a role in the workplace.

**Need for cognition in the workplace.** Past research has shown that NC potentially takes on an important role in the workplace, particularly with the involvement of framing. Smith and Levin (1996) found results showing that those high in NC were less vulnerable to framing effects in decision making when compared to those low in NC. In similar research conducted by Carnevale, Inbar, and Lerner (2011), the authors examined high NC leaders and low NC leaders through measurements of resistance to framing and sunk costs. The results indicated that leaders performed significantly better on tests of framing effects and were less likely to honor sunk costs when they were rated higher in NC, indicating that high NC leaders were less swayed by statements framed in either a negative or a positive connotation. In addition, Carnevale et al. found that the high NC leaders were not basing their future decisions on the past, but were only taking into account the information at hand.

An additional workplace application of NC examined information gathering among managers. Specifically, Anderson (2008) researched information gathering among managers in relation to their social networks. It has been understood that social networks provide information benefits that can be acted upon by managers (Adler & Kwon, 2002), such as information about customers and possible new clients. Anderson found that network size was predictive for time spent searching for information, but only among high NC managers. Also, Anderson concluded that network size predicted the amount of relevant information found, but only among the high NC managers. These studies into workplace applications of NC are important in determining the
individual differences among employees and within everyday work tasks, such as information recall and gathering. One potential application of NC in the workplace is through equity theory.

**Equity Theory**

Equity theory has been a staple in I-O psychology since being introduced by Adams in 1963. Equity theory is based entirely on social comparisons, specifically within the workplace (Adams, 1965). The idea behind the theory involves an evaluation of an employee’s own outcomes to inputs ratio to a similar other’s outcomes to inputs ratio. Inputs can consist of many different things, including education, effort, training, experience, and age whereas outcomes can consist of salary, promotion, job level, and feedback (Adams, 1965; Carrell & Dittrich, 1978; Cropanzano & Folger 1989; Hofmans, 2012). This comparison may result in one of three possible scenarios. In the first possible scenario, the employee’s ratio of outcomes to inputs is equal to that of the comparison other, hence the employee would experience equity, or distributive justice (Adams, 1965). Distributive justice, in the context of equity theory, refers to the equitable payment between the employee and the comparison other (Adams, 1965). The second possible scenario is that the employee’s ratio of outcomes to inputs is less than that of the comparison other. In this scenario, Adams (1965) stated that the employee would experience feelings of inequity due to underpayment. The third possible scenario is that the outcomes to inputs ratio of the employee is greater than that of the other’s, again resulting in feelings of inequity but due to overpayment (Adams, 1965). In these last two scenarios, an employee also experiences a feeling of injustice. Additionally, when an employee feels inequity within the comparison, cognitive dissonance is experienced (Adams, 1965). Cognitive dissonance is the discomfort felt when an individual experiences conflicting information from one’s own beliefs (Festinger, 1957). The perceptions of inequity and this subsequent dissonance are ultimately the
driving forces behind feelings of dissatisfaction within the employee (Adams, 1965). In addition to dissatisfaction, the resulting feelings of inequity were shown to relate to higher turnover intentions and lower effort (Carrell & Dittrich, 1978).

Festinger’s (1957) introduction of cognitive dissonance theory stated that when discomfort was felt, the individual was motivated to reduce that discomfort. Within the context of equity theory, Adams (1965) proposed that the presence of inequity caused tension within the employee, thus that employee was motivated to either eliminate or reduce the tension and achieve equity. Therefore, in both the underpayment and overpayment conditions, there is a desire to achieve equity, whereas in the equitable condition, there is no desire to achieve equity because it is already experienced. The amount of effort that an employee will invest into reducing inequity is viewed as being directly proportional to the tension that is present in the employee (Adams, 1965). There are multiple ways in which an employee can achieve equity. Adams stated that an employee can alter his/her inputs, alter his/her outcomes, cognitively distort outcomes and inputs, leave the field through quitting or absenteeism, act on the comparison other to change his/her outcomes or inputs, and/or change the object of his/her comparison. In the case of altering inputs, an employee in the underpayment condition will decrease inputs and an employee in the overpayment condition will increase inputs in order to achieve equity. For example, an employee in the underpayment condition may reduce productivity on the job and an employee in the overpayment condition may increase productivity or quality of work (Adams, 1965). An employee may also alter his/her outcomes. An employee in the underpayment condition can increase outcomes and an employee in the overpayment condition can decrease outcomes, although less likely, in order to achieve equity (Adams, 1965). Ultimately, an
employee perceiving inequity will reduce that inequity and may choose any of the previously mentioned methods in order to do so.

Adams (1965) also predicted that this desire to achieve equity within an employee also results in changes in work motivation. Changes in work motivation were predicted to occur within both the underpayment and overpayment conditions. In an underpayment condition, an employee may decrease his/her inputs, resulting in a decreased work motivation (and a return to an equitable condition). In an overpayment condition, an employee may increase his/her inputs, resulting in an increased work motivation (and a return to an equitable condition; Adams, 1965). However, in an equitable payment condition, there is no change in work motivation as equity is already perceived. In Adams’s (1963) research into equity theory, various studies were used to support these predictions. In one example, Clark (1958; as cited in Adams, 1963) examined supermarket employees who worked in teams and found that those employees who worked under the direction of another employee with lower inputs than their own reduced their work speed. In other words, these employees had a decrease in work motivation due to underpayment. This finding provided evidence for at least some of the predictions of equity theory as a theory of work motivation in addition to a theory of job satisfaction. Although work motivation is outside of the scope of the proposed study, it should be considered in future studies.

Much of the research into equity theory has been confined to issues with pay, including overall pay satisfaction (Sweeney, 1990). The most significant factor in an examination of pay satisfaction was found to be perceptions of equity (Berkowitz, Fraser, Treasure, & Cochran, 1987). Berkowitz et al. (1987) found equity perceptions to be more predictive of pay satisfaction than factors like age, past education, and past employment. A similar study and finding was originally presented by Klein (1973) where equity was the highest predictor in pay satisfaction of
blue collar employees, above both expectancy and reinforcement influences. Finally, Martin and Peterson (1987) examined equity theory and its applications to a two-tier wage structure. The authors concluded that those employees in the high tier perceived more equitable pay than those employees in the low tier. The authors originally hypothesized this by stating that employees in lower pay tiers are more frustrated in general than employees in higher pay tiers; therefore, more perceptions of inequity are bound to occur. The research by Martin and Peterson provided evidence for a difference in equity perceptions among employees with different salaries. Although equity theory’s predictions have largely been supported throughout the literature, there have been some criticisms of the theory, particularly in terms of the overpayment condition.

**Critique of equity theory.** Throughout the equity theory literature, there has been one major point of contention with the theory: feelings of inequity resulting from overpayment. Although research has continuously supported the underpayment and equitable conditions of equity theory (Carrell & Dittrich, 1978; Hofmans, 2012), research supporting the overpayment condition has been mixed (Sweeney, 1990; Vecchio, 1984). When first introduced, feelings of inequity from overpayment were expected to be due to guilt on the part of the employee from either receiving more outcomes from the same amount of inputs, or receiving the same amount of outcomes from less inputs (Adams, 1963). Due to the hypothesized inequity in both underpayment and overpayment conditions and equity within the equitable condition, equity theory can be viewed in terms of a curvilinear relationship between payment condition (x-axis) and job satisfaction (y-axis), such that an inverted-U shape is formed. In this relationship, those underpaid and overpaid perceive inequity, hence lower job satisfaction, and those equitably paid perceive equity, hence higher job satisfaction (Vecchio, 1984). Vecchio (1984) conducted one of the first studies to test Adams’s (1963) claim of overpayment resulting in inequity. In this study,
Vecchio (1984) examined overall satisfaction levels as well as perceptions of justice among graduate students and found a trend toward a curvilinear relationship, but did not find significant results. In particular, Vecchio (1984) found evidence for lower job satisfaction in the underpayment condition and higher job satisfaction in the equitable condition, but did not find significant evidence for lower job satisfaction in the overpayment condition.

Sweeney (1990) followed up this research with a field test to further examine the inverted-U relationship. Sweeney utilized surveys of actual employees about the pay they received and came to the same conclusion that Vecchio (1984) did years prior, in that satisfaction was significantly lower in the underpayment condition, but the scores between the overpayment condition and equitable condition were not significantly different. The studies conducted by Sweeney and Vecchio demonstrate that the overpayment aspect of equity theory is harder to obtain in both laboratory and field studies and is the weakest part of the theory. In more recent literature, Landy and Conte (2010) attempted to explain why participants were not experiencing inequity in overpayment. These authors went back to the original equity theory research by Adams (1963, 1965), who stated that tension and dissonance resulted from inequity, and proposed that less stress occurred from overpayment than from underpayment. Landy and Conte speculated that this lack of stress provided less of a motivation to compare outcome and input information, resulting in less perceptions of inequity. Based on these findings, the overpayment aspect of equity theory is still in need of further examination. More testing needs to be conducted on the overpayment condition with a focus on other constructs, such as NC, that could potentially have an impact on equity findings.

**Individual differences in equity theory.** In 1987, Huseman, Hatfield, and Miles proposed an extension to the traditional findings of equity theory with their development of the
NEED FOR COGNITION AND EFFECTS ON EQUITY THEORY

equity sensitivity construct. These authors proposed equity sensitivity as an individual personality difference within the context of equity theory. They proposed three individual differences that affected reactions to equity and inequity. The first individual difference was the *benevolent* type. This type of person was one who enjoyed giving more than receiving, thus a preference was given to underpayment among these individuals. The second was the *equity sensitive* type, who fell into the traditional equity model. These people preferred the equity condition and strived for equality of one’s own outcomes to inputs ratio to another’s outcomes to inputs ratio. The final group was deemed the *entitled* type. These were the people who preferred overpayment and receiving more than giving.

Overall, follow-up research into the equity sensitivity construct has been supportive. In their review of motivation and equity theory literature, Ambrose and Kulik (1999) state that evidence was found for differences in values placed on outcomes among the three groups, as demonstrated by King, Miles, and Day (1993). King et al. examined equity sensitivity among students and found that benevolents tended to value intrinsic outcomes such as sense of accomplishment, whereas entitleds preferred extrinsic outcomes like pay and salary increases. In other research into the construct, results suggested that equity sensitivity served as a moderating role in the relationship between self-efficacy and job satisfaction, such that there was a stronger relationship between self-efficacy and job satisfaction among benevolent individuals than among entitled individuals (O’Neill & Mone, 1998).

Additional evidence for personality differences in equity theory is found with Greenberg’s (1979) examination of the Protestant Work Ethic. The Protestant Work Ethic (PE) is a personality trait, which involves certain individuals endorsing hard work and individualism, and that hard work produces equitable outcomes among different individuals (Greenberg, 1979).
Within Greenberg’s research, results showed that those high in PE and those low in PE differed in what information they used in determining fairness and equity. Those higher in PE valued rewards based on individual effort, whereas those lower in PE valued rewards based on group effort. As such, people with lower PE were more likely to capitalize on rewards that were not directly gained by the self (Greenberg, 1979). Greenberg’s conclusions demonstrated that an individual difference of PE could affect equity theory’s predictions, such that individuals differing on PE value different information and rewards when determining equity.

In a final example, Hofmans (2012) examined individual differences within equity models in an experiment. The author gave participants information about the performance of two employees and participants were asked to distribute pay based on this performance information. Results indicated that participants utilized a similar model to that proposed by Adams (1965). In this model, participants first compared the relative share of outcomes to inputs for each employee. In other words, these participants first only examined the outcomes to inputs ratio of each individual employee without taking into account that of the comparison other. The participants then compared interpersonal ratios, which was the comparison of one employee’s outcome to input ratio to that of the other employee’s outcome to input ratio. In addition to this model, Hofmans also found support for a link between individual differences within equity theory and individual differences in the equity sensitivity construct, such that those who were higher in equity sensitivity did not take performance information into account when distributing pay, yet those rated as entitleds or benevolents were found to take performance information into account during the study. The results from Huseman et al. (1987), Greenberg (1979), and Hofmans demonstrated support for the equity sensitivity construct and provided evidence for
possible influences of other individual differences within equity theory, such as need for cognition.

**Need for Cognition and Equity Theory**

A primary component of equity theory involves the notion that once an employee finds a comparison other, that employee will willingly seek out outcome and input information about themselves and about that comparison other. In addition, there is an evaluative component to equity theory, in which the person determines if they are in an underpayment, equitable, or overpayment condition (Adams, 1965). As seen from the previous discussion into the information gathering processes among those high and low in NC, those with high NC accessed, utilized, and recalled more information than did those low in NC (Adler & Kwon, 2002; Anderson, 2008; Kuvaas & Kaufmann, 2004; Levin et al., 2000). Also, differences were found in specificity of self-concept in determining expectancies depending on level of NC (Dickhauser & Rienhard, 2006), such that those low in NC relied upon a more general self-concept, whereas those high in NC relied upon a more specific self-concept. Cacioppo et al. (1983) demonstrated that NC was involved in the process of evaluation as well, in that those high in NC and those low in NC evaluated persuasive messages differently. Specifically, those high in NC rated messages with strong argument quality higher than did those low in NC, and those high in NC also rated messages with weak argument quality lower than did those low in NC (Cacioppo et al., 1983). Additionally, Levin et al. (2000) demonstrated that those high in NC evaluated significantly more information in a decision-making process than those low in NC. However, to date, no research has been conducted examining the relationship between the NC individual difference and equity theory. Yet, given that equity theory involves an evaluation of the ratios of outcomes to inputs, and that those high in NC often consider more information than those low in NC when
making evaluations, it becomes apparent that there may be a relationship between NC and equity theory. Hence, the purpose of the present study was to examine the potential relationship between the individual difference of need for cognition and the predictions of equity theory.
Chapter II

Rationale and Hypotheses

Previous research has shown that personality traits and individual differences had direct effects on equity theory (Greenberg, 1979; Huseman et al., 1987). As mentioned previously, Huseman et al. (1987) expanded on equity theory by introducing the equity sensitivity construct, recognizing that individual differences played a role in employees perceiving feelings of inequity. In addition, Greenberg (1979) concluded that differing levels of the Protestant Work Ethic (PE) resulted in different information used in determining equity. Evidence of the equity sensitivity construct (Huseman et al., 1987) and the influences of PE when determining equity (Greenberg, 1979) supports individual differences in the predictions of equity theory. Moreover, Levin et al. (2000) examined NC and found that those high in NC accessed 30% more information throughout a decision-making process than did those low in NC. Furthermore, the authors concluded that the information accessed and utilized was more in depth for those high in NC compared to those low in NC. Additionally, Bailey (1997) concluded that those high in NC conducted a more thorough information search than those low in NC when participating in a decision-making task. Hence, the individual difference of NC may have an effect on the amount of information used in an equity comparison. Therefore, the following is hypothesized:

H1: Participants high in NC will utilize a greater amount of information in an equity comparison process than participants low in NC.
Previously discussed in this review was the critique of the overpayment condition within equity theory. Adams (1963) introduced feelings of inequity and injustice from overpayment in his conceptualization of equity theory, stating that the threshold was higher for inequity in the overpayment condition than for the underpayment condition. Vecchio (1984) and Sweeney (1990) found a general trend that gave support for the idea that employees may perceive inequity when overpaid, but these results were not significant. This conflicting research demonstrates the weakness of equity theory, with literature speculating as to why inequity in overpayment is not consistently found (Landy & Conte, 2010). Since those who are high in NC have a greater intrinsic motivation to analyze information (Cacioppo et al., 1996) and tend to seek out a greater amount of information in the evaluation process (Levin et al., 2000), those high in NC may be more likely to experience inequity in an overpayment condition. It is possible then, that NC may help explain this weakness of equity theory, such that those high in NC exceed the necessary threshold to perceive inequity and injustice in an overpayment condition, whereas those low in NC may not. Thus, the following hypotheses are proposed:

H2: Distributive justice scores between the underpayment and equitable payment conditions will be significantly different, such that distributive justice in the underpayment condition will be lower than distributive justice in the equitable payment condition.

H3: NC will moderate the relationship between payment condition and distributive justice in the overpayment condition, such that for participants low in NC, distributive justice scores between the equitable payment and overpayment conditions will not be significantly different. However, for participants high in NC, distributive justice scores between the equitable payment and overpayment conditions will be significantly
different, such that distributive justice for the overpayment condition will be lower than
distributive justice for the equitable payment condition (see Figure 1).

Adams (1965) proposed that perceptions of inequity lead to greater dissatisfaction. The
previous hypothesis (H3) proposed that those high in NC will be more likely to perceive inequity
in an overpayment condition compared to those low in NC. Therefore, it follows that those high
in NC may experience dissatisfaction in the overpayment condition significantly more than those
low in NC. Additionally, much of the equity theory research has examined the outcomes of
equity theory in terms of pay satisfaction (Berkowitz et al., 1987; Klein, 1973; Martin &
Peterson, 1987; Sweeney, 1990), and the present study followed that trend. The present study
hypothesizes the following:

H4: Participants high in NC will be more likely to experience dissatisfaction with pay in
an overpayment condition than participants low in NC.
Figure 1. Hypothesized interaction between payment condition and NC on distributive justice.
Chapter III

Method

Participants

The present study involved the use of online participants specifically recruited through Amazon Mechanical Turk (MTurk). MTurk allows for quick data collection while maintaining a diverse and well-representative sample of the general population (Buhrmester, Kwang, & Gosling, 2011; Goodman, Cryder, & Cheema, 2013). In comparison to a traditional sample of undergraduate students, the use of MTurk provides a more diverse sample of participants and covers a wider range of geography (Buhrmester et al., 2011). Of utmost importance to the present study, Goodman et al. (2013) found that cognitive effort and ability in an MTurk sample did not significantly differ from a traditional community sample. This further validated the use of MTurk in the present study as participants with differing cognitive abilities needed to be sampled in order to represent both high and low NC. This study included all participants over the age of 18 in the United States and the only way a participant was screened out was by not meeting these two requirements. Each participant was paid $0.50 for taking part in this study.

The present study included 317 participants, 225 of which were included in the analyses due to the dichotomization of NC level. Of these 225, 63.1% were male and 36% were female, whereas 0.9% preferred not to respond. Participants ranged in age from 18 to 63 ($M = 30.83, SD = 9.05$), and all but 2.2% had some years of work experience. Participants had a wide range of employment statuses with the majority being employed (64%), some self-employed (12.9%), out
of work (10.7%), or a student (10.2%), and very few unable to work (1.3%), or retired (0.9%). The sample consisted primarily of those with a Bachelor’s degree (39.6%) or at least some college (28.9%), whereas others completed an advanced degree (16%), high school/GED (8%), an Associate’s degree (7.1%), or some high school (0.4%). Finally, this sample consisted largely of White/Caucasians (74.7%), with some identifying as Asian/Asian American (9.8%), Black/African American (6.3%), Hispanic/Latino (4.9%), Native American/Alaskan Native (1.3%), other (0.9%), Hawaiian/Pacific Islander (0.4%), and 1.8% preferred not to respond.

**Design.** The present study consisted of a 3x2 between-subjects factorial design in order to test Hypotheses 2 and 3, with an under, over, and equitable payment condition, and high and low NC. This resulted in six different conditions being examined. Due to the dichotomization of NC, those participants scoring in the approximate middle one-third of the Need for Cognition Scale were removed from the analysis. This will be discussed further in the following section.

**Materials and Measures**

**Payment scenarios.** Participants in this study were presented with one of three different payment scenarios, representing the equity payment conditions, which they read through and then responded to follow-up questions (see Appendix A). In each scenario, the participant was given a fictitious role in a company with each employee playing the role of a customer service representative in a retail store. Various input and outcome information was listed in this scenario including the amount of education, experience, salary, benefits, promotion, and age for both the participant and a comparison other within the company. The first scenario was the equitable payment condition with the inputs and outcomes for the participant and the comparison other being relatively equal. The second and third scenarios were exactly the same as the first, with the exception that outcome information varied in order to create an underpayment condition and an
overpayment condition. In the underpayment condition, the inputs were the same but the outcomes of the participant were less than those of the comparison other. In the overpayment condition, the inputs again stayed the same but the outcomes were greater than those of the comparison other. Following the scenario, participants indicated whether they felt that they were being paid more, less, or the same amount as the comparison other.

**Need for cognition (NC).** In order to assess NC and its effects on equity theory, this study utilized the short form of the Need for Cognition Scale (NCS) developed by Cacioppo, Petty, and Kao (1984; see Appendix B). This short form is only 18 items instead of the original 34 and has demonstrated analogous psychometrics to the original long form (Cacioppo et al., 1984). When compared to the long form, the short form correlated highly ($r = .95$) and had a similar Cronbach’s alpha (.90) to the original. The Cronbach’s alpha for the present study was also high at .96. Through a factor analysis, the short form was found to have one dominant factor, just like the original. This short form has the added benefit of being a quicker and more concise measure while maintaining the reliability and validity of the long form. The NCS is measured on a 5-point response format (Cacioppo et al., 1984). Each of the individuals being assessed responded to simple statements, such as “I would prefer complex to simple statements,” by marking a number from 1 (*extremely uncharacteristic*) to 5 (*extremely characteristic*). Higher scores indicate a higher NC level with the exception of the items that are reverse scored, in which a lower score indicates a higher NC level. Half of the items in the scale are reverse scored, so they were recoded such that a higher NC score reflected a higher NC level. In following the method of Cacioppo et al. (1983), and more recently, Dickhauser and Reinhard (2006), NC was measured dichotomously, such that participants who scored in the middle third of the overall
sample were not included in the analysis. Participants who scored in the top (bottom) one-third were considered high (low) in NC.

**Pay satisfaction.** In order to measure pay satisfaction among the participants, the present study used a single-item measure. Wanous, Reichers, and Hudy (1997) examined multiple single-item measures of job satisfaction and found acceptable convergent validity between the single-item measures and multiple-item measures. Similarly, Nagy (2002) found a high correlation (.72) between a single-item measure of pay and a facet measure of pay from the JDI. This single-item measure was “Overall, how satisfied are you with your pay in this scenario?” and was scored on a 5-point scale ranging from 1 (very unsatisfied) to 5 (very satisfied).

**Distributive justice.** The Distributive Justice Scale was designed to measure outcome fairness in the workplace (Tyler & Blader, 2002). For the purposes of the present study, and similar to the method of Sweeney (1990), an adjusted version of this scale was used in determining the perceived pay equity in comparisons (see Appendix C). This scale is composed of three items in question or statement form and participants are asked to rate their level of agreement with each of the statements on a 7-point response format. However, to be consistent with the other measures in this study, the response format was adjusted such that ratings were based on a 5-point scale ranging from 1 (not at all fair or strongly disagree) to 5 (very fair or strongly agree). In the original scale, a lower score reflects higher distributive justice; however, in the present study, items were reverse scored such that a higher score reflected higher distributive justice. Additionally, item wording was adjusted to reflect the method of the study. For example, one of the items included in this scale, “How fairly are resources allocated amongst employees where you work?” was changed to “How fairly were resources allocated amongst the employees in the scenario?” Another item that asks “Overall, how fair is the salary you receive at
work?” was changed to “Overall, how fair is the salary you received in the scenario?” Tyler and Blader (2002) found the coefficient alpha to be .83, demonstrating high reliability for the original scale. In the present study, the Cronbach’s alpha was still rather high for the adjusted scale at .74.

Amount of information. In order to determine the amount of information sought in the equity comparison, a count of self-reported information used in the comparison reflected the amount of information used. Each participant in the MTurk study was randomly assigned to one of the three payment conditions and presented with the scenario corresponding to that condition. In these scenarios, participants were presented with input and outcome information. The scenarios were all approximately one page long and consistent across conditions, with the exception of the amount outcomes. Within these scenarios, participants had the option to click on links in order to access a greater amount of information as well as information that provided more detail on the inputs and outcomes. The links were placed throughout the scenario and labelled with a number, for example “LINK 1” and they presented more detailed information in a pop-up window about the previous input or outcome that was described. If a participant read through the additional links, then they had a greater understanding of the scenario. In the instructions before the scenario, it was stated that the following links were completely voluntary in order to advance, but that reviewing them would provide a more detailed account of the information presented in the scenario. After having read through the scenario, participants were asked to identify if they clicked any links for additional information and which links they clicked. Each link was counted as one piece of information and the links clicked were summed to arrive at an overall number.

Demographics. In order to obtain exploratory information about each participant, six demographic questions were included (see Appendix D). These questions consisted of age,
gender, race, education level, employment status, and work experience. Age, education level, employment status, and work experience were required fields, with gender and race having the option of “prefer not to respond.” Additionally, responses to all questions, with the exception of age, were selected from a list.

**Procedure**

For the present study, Institutional Review Board (IRB) approval at Xavier University was sought with exempt status. In the study, all participants remained anonymous and there was no reasonable harm expected to the involved participants. Once IRB approval was obtained (see Appendix E), a pilot study was given to a sample of Xavier University undergraduate students. The students were asked to complete a short study for the development of a future experiment. This pilot study was conducted as a paper-and-pencil study. Participants were first presented with an informed consent form (see Appendix F), and once obtained, one of the three different scenarios previously discussed was presented to the participants. The scenarios in the pilot study did not include the links discussed in the amount of information subsection. The participants then answered if they were paid more, less, or the same amount as the comparison other in the scenario. Participants were then debriefed (see Appendix G), thanked, and received course credit upon their completion. This pilot study was designed to take approximately 10 minutes and responses from approximately 22 participants were collected. Since participants indicated that each condition portrayed what it was designed to (95% answering correctly), the payment scenarios were used in this study.

Once verifying that each of the three payment scenarios portrayed what it was designed to, a study was posted on MTurk asking for individuals to participate in an experiment relating to job compensation. The MTurk posting provided a link to the actual study on Qualtrics. Upon
agreeing to an informed consent and understanding that all information would remain anonymous (see Appendix H), the 18-item short form Need for Cognition Scale was then presented followed by the scenarios. The scenarios in this study included the use of links, as previously discussed, relating to amount of information. This order of presenting the NCS at the beginning followed past research designs, including that of Cacioppo et al. (1983).

After participants read through the hypothetical scenario, they were presented with three sets of questions. Participants were first asked to indicate if they clicked on any additional links, and which ones, to access information. Participants then answered the three modified items in the Distributive Justice Scale in order to assess their perceptions of equity from the scenario. Next, a single question was presented in order to assess their overall pay satisfaction from the scenario. The final step was for participants to answer a set of six demographic questions and to enter their MTurk identification number for them to be compensated.

Within the study, there was one manipulation check and two quality checks, with the manipulation check being presented immediately after the distributive justice and satisfaction items and the quality checks presented randomly. The manipulation check assessed whether the participants read the scenario by asking if they were underpaid, equitably paid, or overpaid within the scenario. This question was presented as “Please fill in the blank. In the previous scenario, I was paid ______ the other employee” and participants could fill in the blank with one of the three items (less than, the same as, more than). The quality checks ensured that participants were engaged by asking participants to “Answer this question by selecting the response ‘Extremely characteristic of me’” for one of the questions and “Answer this question by selecting response number 2” for the other. Including these manipulation and quality checks, there were 32 questions in total and it was designed to take no more than 30 minutes to complete.
Upon completion of the study, participants were debriefed (see Appendix I), thanked for their participation, and compensated in the amount of $0.50. The directions for the study indicated that all required questions must be answered and all manipulation and quality checks must be passed in order to receive compensation. In this study, 12 participants failed the manipulation check and 18 participants failed at least one of the quality check questions, therefore their data was not included in the analyses. The researchers’ contact information was also presented in the case that a participant had any future questions or concerns.
Chapter IV

Results

Results of the pilot test indicated that 21 out of 22 (95%) participants correctly answered the question pertaining to the payment condition, thus providing support for the payment manipulation. Specifically, this question asked “Based on the previously read scenario, I was paid ___ compared to the other employee (Pat).” and participants were required to correctly identify if they were paid less than, the same as, or more than the other employee, dependent upon the condition.

The first hypothesis, proposing that participants high in NC would utilize a greater amount of information (based on self-report of links clicked) in an equity comparison process than participants low in NC, was analyzed using an independent samples t-test. Results showed that there was no significant difference in the amount of information utilized for participants high in NC ($M = 2.20, SD = 2.93, Mo = 0$) and participants low in NC ($M = 2.33, SD = 2.84, Mo = 0$), $t(223) = 0.33, p = .74$. Hence, Hypothesis 1 was not supported.

The second hypothesis, proposing that distributive justice scores for the underpayment condition would be significantly lower than distributive justice scores for the equitable payment condition, was analyzed through a one-way between-subjects Analysis of Variance (ANOVA). Results revealed that there was a significant difference in distributive justice scores among payment conditions, $F(2, 222) = 58.26, p < .001$. A post-hoc Tukey HSD test indicated significant differences as participants in the underpayment condition reported lower distributive
justice ($M = 2.05, SD = 0.85$) compared to participants in the equitable payment condition ($M = 3.51, SD = 0.91$), thus providing support for Hypothesis 2. In addition to Hypothesis 2, the post-hoc Tukey HSD test for the other comparisons indicated significant differences in distributive justice between the equitable payment ($M = 3.51, SD = 0.91$) and overpayment conditions ($M = 2.54, SD = 0.78$), and between the underpayment ($M = 2.05, SD = 0.85$) and overpayment conditions ($M = 2.54, SD = 0.78$; see Figure 2).

The third hypothesis proposed that there would be an interaction between NC and payment condition on distributive justice in the overpayment condition and was analyzed through a two-way between-subjects ANOVA. It was hypothesized that for participants low in NC, distributive justice scores between the equitable payment condition and the overpayment condition would not be significantly different. However, for participants high in NC, distributive justice scores would be significantly lower in the overpayment condition than the distributive justice scores in the equitable payment condition. Results indicated that there was no significant interaction, $F(2, 219) = 0.80, p = .45$, hence Hypothesis 3 was not supported. In addition to the main effects reported in Hypothesis 2, there were significant main effects for the NC factor, $F(1, 219) = 6.24, p = .01$. Results showed those low in NC reported significantly higher distributive justice ($M = 2.82, SD = 1.04$) than those high in NC ($M = 2.57, SD = 1.03$). Correlations were conducted for all participants, including those in the middle one-third who were previously removed due to NC level. There was no significant correlation between distributive justice and NC level, (see Table 1).

The fourth hypothesis proposed that participants high in NC would be more likely to experience dissatisfaction with pay in an overpayment condition than participants low in NC and was analyzed using an independent samples $t$-test. Results revealed that there was no significant
Figure 2. Results indicating the interaction between payment condition and NC level on distributive justice.
Table 1

*Summary of correlations between NC level, distributive justice, and pay satisfaction*

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. NCS</td>
<td>(.96)</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2. DJS</td>
<td>-.07</td>
<td>(.74)</td>
<td>--</td>
</tr>
<tr>
<td>3. PS</td>
<td>-.01</td>
<td>.42**</td>
<td>--</td>
</tr>
</tbody>
</table>

*Note:* For all scales, higher scores indicate more extreme responding in the direction assessed. NCS = Need for Cognition Scale, DJS = Distributive Justice Scale, PS = Pay Satisfaction. Coefficient alphas are listed along the diagonal and in parentheses with the exception of the pay satisfaction (PS) measure which is a single-item measure. **p < .01
difference in pay satisfaction in the overpayment condition for participants who were high in NC
\((M = 2.86, SD = 1.41)\) compared to those who were low in NC \((M = 3.03, SD = 1.35)\), \(t(223) = 0.90, p = .37\). Thus, Hypothesis 4 was not supported.

**Supplemental Analyses**

Additional analyses were conducted to investigate the effects of NC and payment condition on pay satisfaction scores, similar to the analyses conducted for Hypotheses 2 and 3. In order to analyze the effects of NC and payment condition on pay satisfaction, a two-way between-subjects ANOVA was conducted. Results indicated that there was a significant interaction between NC and payment condition on pay satisfaction, \(F(2, 219) = 3.87, p = .02\) (see Figure 3). Follow-up independent-samples \(t\)-tests were conducted to evaluate the nature of the interaction. Results indicated significant differences between low NC \((M = 2.03, SD = 1.14)\) and high NC \((M = 1.46, SD = 0.56)\) in the underpayment condition, \(t(77) = 2.78, p = .01; d = 0.63\), non-significant differences between low NC \((M = 3.11, SD = 1.16)\) and high NC \((M = 2.85, SD = 1.07)\) in the equitable payment condition, \(t(72) = 1.04, p = .30; d = 0.23\), and non-significant differences between low NC \((M = 4.09, SD = 0.82)\) and high NC \((M = 4.35, SD = 0.59)\) in the overpayment condition, \(t(70) = -1.59, p = .12; d = -0.36\).

Additionally, results showed that there was a significant main effect of payment condition on pay satisfaction, \(F(2, 219) = 135.56, p < .001\), and a non-significant main effect for NC level on pay satisfaction, \(F(1, 219) = 2.35, p = .13\). A post-hoc Tukey HSD test indicated significant pay satisfaction differences between the underpayment \((M = 1.75, SD = 0.94)\) and equitable payment conditions \((M = 2.97, SD = 1.11)\), between the equitable payment \((M = 2.97, SD = 1.11)\) and overpayment conditions \((M = 4.22, SD = 0.72)\), and between the underpayment \((M = 1.75, SD = 0.94)\) and overpayment conditions \((M = 4.22, SD = 0.72)\), (see Figure 3). When
Figure 3. Results of the supplemental analyses indicating the interaction between payment condition and NC level on pay satisfaction.
NEED FOR COGNITION AND EFFECTS ON EQUITY THEORY

compared to the results from distributive justice, these results demonstrate a linear trend rather than the curvilinear trend with distributive justice. Correlations were also conducted between pay satisfaction and NC level, similar to that of distributive justice, with no significant results, except for a significant correlation between pay satisfaction and distributive justice (see Table 1).
Chapter V
Discussion

The purpose of this study was to examine the relationship between NC and equity theory predictions, particularly focusing on whether NC level has an effect on the overpayment condition of equity theory. The first hypothesis proposed that those high in NC would utilize a greater amount of information when in an equity comparison process. Contrary to this hypothesis, those high in NC did not report accessing more information than those low in NC. This finding is in opposition to that of Levin et al. (2000), who concluded that those high in NC accessed 30% more information than those low in NC in a decision-making process. Although this finding was unexpected, there are various potential reasons for it. The first is that the participants in this study were not informed prior to reading the scenario that they were to compare themselves to the other employee, whereas the participants in Levin et al. (2000) knew that they were to make a decision in buying a laptop computer for a friend. Thus, it is possible that having the awareness of the task prior to making the comparison could lead to those high in NC seeking more information with the goal of making an accurate comparison. Regarding the decision-making process used by Levin et al., it is possible that the evaluative component of equity theory, in which one compares the self to others, is inherently different in a decision-making task. Differences could arise when attempting to make a decision that affects another person versus strictly making an evaluation about the environment. For example, when in a decision-making task that has direct implications on another, one may be more apt to seek out information to ensure it is the best choice. However, when people are simply evaluating their
own situation, there are no implications for others around them, thus they may be less motivated to seek out information.

Additionally, according to the original findings of Cohen et al. (1955), it is expected that those high in NC access more information to reduce ambiguity from the situation. It is possible that the scenarios for the present study were not ambiguous enough to warrant those high in NC to seek out additional information. In these hypothetical scenarios, information like salary was directly presented to each participant, therefore participants may have seen it as unnecessary to seek more information. Ambiguity is more likely to arise in a workplace setting where information is not directly given to the employee, thus leading to the potential of high NC employees seeking out more information. The use of hypothetical scenarios and lowered ambiguity lowers the external validity of the findings and their generalization to workplace settings.

A final potential reason for the lack of support for Hypothesis 1 is the sample of participants, who were recruited online through MTurk in an unproctored setting. Goodman et al. (2013) concluded that MTurk participants did not differ in effort or ability from a traditional sample, but many in this study completed the task in a relatively short amount of time (an average of 6 minutes 36 seconds), and the overall average links accessed was only about two out of seven. Manipulation and quality checks were included to ensure quality data, but it was voluntary as to whether the links were clicked to access further information. This study involved the use of hypothetical scenarios, therefore it is possible that in an applied setting, participants would have been more willing to read through the various links, although in this case, results could have been skewed in the other direction, with more links clicked among all participants.
Nonetheless, it would be expected that those high in NC access more information based on their need to make sense of the world, which was not supported in this study.

Hypothesis 2 proposed that distributive justice scores in the underpayment condition would be significantly lower than those in the equitable payment condition. This hypothesis did not include the potential relationship with NC level; it simply tested the propositions of equity theory in general. Results indicated that distributive justice was indeed lower for those in the underpayment condition and higher for those in the equitable payment condition. This finding supports Adams’ (1963, 1965) initial equity theory research and is in accordance with subsequent research demonstrating lower equity perceptions in an underpayment condition (Carrell & Dittrich, 1978; Hofmans, 2012). Thus, this study further reinforces the underpayment and equitable payment conditions of equity theory.

Hypothesis 3 examined the relationship between NC level and equity theory, proposing that for those low in NC, distributive justice would not be lower in the overpayment condition when compared to the equitable payment condition, yet those high in NC would perceive significantly less justice in the overpayment condition when compared to the equitable payment condition. Findings indicated that there was no interaction between payment condition and NC level, but there were significant main effects. In terms of NC, those low in NC perceived more distributive justice overall than those high in NC. This finding could be due to those high in NC thinking more depth about the scenario, even if they did not explicitly illustrate that they did by accessing links. The other main effect showed differences in distributive justice perceptions among payment conditions that are in line with equity theory predictions. Participants in the equitable payment condition perceived greater distributive justice than those in either the underpayment or overpayment conditions, indicating the inverted-U relationship proposed by
Adams (1963, 1965). These results reinforce, yet again, equity theory predictions, with particular importance on the overpayment condition. The main weakness of equity theory is the lack of consistent support for the overpayment condition (Sweeney, 1990; Vecchio, 1984), yet the results of this study demonstrate that there are indeed lowered perceptions of distributive justice in the overpayment condition.

In following up the previous hypotheses, Hypothesis 4 proposed that those high in NC would be less satisfied with their pay amount in the overpayment condition than those low in NC due to the fact that they perceived more inequity. The results of this study did not indicate any significant differences between the two NC levels. This result is to be expected with the finding of Hypothesis 3, which showed no interaction between NC and payment condition in distributive justice. Therefore, no expected differences should arise in NC when examining pay satisfaction.

Supplemental analyses were conducted to further explore the effects of NC on equity theory with a focus on pay satisfaction. The first three hypotheses only examined distributive justice, which was the original focus of Adams (1965) in determining perceptions of inequity. A direct result of these perceptions of equity or inequity is level of pay satisfaction, which has been the focus of more recent equity theory research (Berkowitz et al., 1987; Klein, 1973; Martin & Peterson, 1987; Sweeney, 1990). For this reason, instead of only focusing on the overpayment condition with pay satisfaction in Hypothesis 4, analyses examined all three payment conditions of equity theory along with NC level. Results showed a linear relationship between payment condition and pay satisfaction as well as a significant interaction, such that those high in NC were less satisfied with their pay in the underpayment condition than those low in NC. However, there were no differences between NC level for the equitable and overpayment conditions when examining pay satisfaction.
One potential consequence of the finding that those high in NC tend to be less satisfied with their pay in an underpayment condition than those low in NC is the notion that low NC employees should be hired because they can be paid less and still be satisfied with the salary. These results should be interpreted with caution as this study did use a hypothetical scenario and the pay had no real-world implications. Additionally, this finding is based upon one sample and a specific population of MTurk workers. Therefore, results would need to be replicated in order to base workplace decisions upon these findings.

In contrast to the findings for distributive justice, the results of the supplemental analyses indicated a linear relationship between payment condition and pay satisfaction. As previously displayed in Figure 2, participants in the underpayment condition were the least satisfied with their pay, those in the equitable payment condition were more satisfied than those in the underpayment condition, and those in the overpayment condition were most satisfied with their pay. In contrast to pay satisfaction, distributive justice was significantly lower in the overpayment condition than distributive justice in the equitable payment condition. Hence, those in the overpayment condition clearly perceived injustice, yet they were still the most satisfied with their pay. One possible explanation for this contrast in findings is that participants focused solely on the dollar amount they were paid to determine their pay satisfaction, which was $55,000/year in the overpayment condition and the highest of all three groups. However, this explanation does not hold up when comparing the underpayment and equitable payment conditions, which were significantly different in pay satisfaction, yet paid the same $34,000/year to the participant.

This linear finding on pay satisfaction is also contrary to the findings of Sweeney (1990). Sweeney did not find a significant difference between the equitable and overpayment conditions.
in pay satisfaction. Although pay satisfaction was not significantly lower in the overpayment condition than in the equitable payment condition, pay satisfaction was not higher either, like in the present study. Sweeney also examined justice perceptions, both in relation to the self and others, and concluded that justice (or equity) was related to pay satisfaction. The fact that this study did not find similar results is a topic of interest and could be due to a couple of reasons.

One potential explanation to the difference in findings between this study and Sweeney (1990) is that each study used a different method; Sweeney conducted his studies in a field setting whereas this study was conducted as a lab study. In his discussion as to why research has not found consistent support for inequity in the overpayment condition, Sweeney states that it is possibly due to the fact that much research has been conducted in the lab and not in the field. The present study did not access participants directly in the workplace, but roughly 77% of participants did indicate being presently employed with varying amounts of work experience. Had this study prompted participants to think of their own jobs and actual salaries, perhaps the results of pay satisfaction would have been different. This explanation, though, still does not address why those in the overpayment condition perceived inequity in terms of distributive justice, but not pay dissatisfaction.

In addressing that disconnect between findings of distributive injustice and pay satisfaction, it is possible that these two constructs are not as closely related as once thought, at least to the extent that an employee is overpaid. It is possible that when it comes to being overpaid, the amount of money the employee is being paid can cause the employee to disregard the perceptions of inequity when determining pay satisfaction. In other words, had the present study lowered the salary of the employee from $55,000/year, but still greater than the comparison employee in the overpayment condition, then the participant may have been more
dissatisfied with their pay. It would be interesting to note the differences in pay from those surveyed by Sweeney (1990), which are not directly reported, as this could provide further evidence for that possibility. Future research should address whether a large pay differential can negate the effects of distributive injustice within the workplace. An additional future direction in regard to salary is that future research should examine the actual salary of each participant. It is possible that differences between hypothetical salary and actual salary contributed to the pay satisfaction findings in this study, such that those with lower actual salaries may have been more satisfied with their hypothetical salary, whereas those with higher actual salaries may have been less satisfied with their hypothetical salary.

A final interesting finding to address with the supplemental analyses is the interaction effect between payment condition and NC level on pay satisfaction. As discussed, those high in NC were significantly less satisfied with their pay than those low in NC in the underpayment condition. In continuing with the discussion for Hypothesis 3, it is possible that those high in NC still thought more in depth about the information presented to them in the underpayment condition, even if they had not clicked on the additional links. This finding goes against the original assumptions that the information in the underpayment condition is more salient, therefore it should not matter whether one thinks more in depth (high NC) or not (low NC) and NC will not play a role. Additionally, Dickhauser et al. (2009) concluded that those low in NC tend to place more weight on salient information than those high in NC, who may also take extraneous information into account. Within the context of the present study, the Dickhauser et al. (2009) findings could still hold; however, it is possible that those high in NC thought more in depth about the salient information presented than those low in NC. Based on the results of the
future research should examine information salience more in depth with regards to NC as well as equity theory.

**Contributions**

Even though the primary focus and hypotheses of the present study were not supported, there were several important findings that further contribute to the equity theory and NC literature. The first relates to the sample of MTurk participants used to examine equity theory. This study demonstrated that not only can the predictions of equity theory occur in a traditional lab study or the workplace, but also with a more diverse group of online participants. Participant ages ranged from 18-63 and covered all six of the different races and ethnicities, which may not be the case in traditional laboratory studies. Additionally, those with work experience ranged from one year experience to more than 25 years of experience, demonstrating generalizability of equity theory predictions to workers of all ages within the United States.

Of particular importance, the present study found additional evidence of equity theory by using a different method than typical equity theory research. Specifically, this study was based on a scenario with online participants as opposed to a field study or a more applied setting. The findings in relation to equity theory and distributive justice demonstrated not only support for the underpayment and equitable payment conditions, but also the much debated overpayment condition on a sample of MTurk participants. This finding lends support for those predictions originally made by Adams (1965). The implications of these results reflect those traditional of equity theory, such that if all employees are not equitably paid, then perceptions of injustice occur, even when being overpaid.

Another area in which the present study contributes to the literature is that of pay satisfaction based on perceptions of inequity. Results from the present study demonstrate that
simply because an employee perceives inequity does not necessarily mean that it will lead to pay
dissatisfaction. In fact, those who perceived inequity of overpayment were most satisfied with
their pay. This area of pay satisfaction is one that future research should further examine because
it is traditionally thought that inequity leads to pay dissatisfaction (Sweeney, 1990). The present
study does not show support for this idea and instead suggests that examining pay satisfaction
may not be the best outcome variable to explore when studying equity theory.

The present study also further examined the effects of individual differences on equity
theory predictions. As discussed in the literature review, individual differences had been shown
to affect equity theory, specifically through the equity sensitivity construct (Hofmans, 2012;
Huseman, Hatfield, & Miles, 1987). The results of this study demonstrated that the construct of
need for cognition does not play a role in employees perceiving distributive injustice, however it
may play a role in employees determining pay satisfaction, particularly in underpayment
conditions. This study provides some evidence that those high in NC may determine their pay
satisfaction differently than those low in NC, especially in the underpayment condition. Equity
theory is one of many areas in which NC can be further applied to the workplace to better
understand why this is the case, and should be addressed in future workplace research.

Limitations

The first limitation of this study is the method of the study, which involved the use of a
scenario in a lab setting as opposed to a real-world setting. The scenario was designed and
written to be as close to reality as possible, yet reality is hard to obtain through a one-page
description of a job and its benefits. It is possible that much of the information presented in the
scenarios is not easily obtainable by employees on the job. For example, employees likely do not
have direct knowledge of the salaries and benefits of others within the organization. For this
reason, these results should be tested in the workplace to provide further support for the findings of the present study. One benefit to the method used in this study, however, is that people could be easily manipulated into an underpayment, equitable payment, or overpayment condition because the selection of a comparison other is not well understood (Kulik & Ambrose, 1992). It is difficult to understand exactly who the employee is comparing him/herself to in the workplace, as the comparison other can be anyone, and whether the employee is being paid equitably. The method used in this study allowed for better isolation and control over other potential variables that may affect results within a workplace setting.

Another limitation to consider is the dichotomization of the NC construct. In this study, approximately the middle third of all participants were removed based on their NC score. This resulted in two distinct groups: low NC and high NC. This method did result in the loss of data that could have contributed the results. However, the method did follow that of many other NC research studies, including Cacioppo et al. (1983) and Dickhauser and Reinhard (2006). Therefore, this dichotomization is consistent with past NC research.

An additional limitation of this study relates to the participants used as well as the recruiting method. The present study obtained research participants online via Amazon Mechanical Turk, which has been shown to provide great diversity and consist of cognitively capable participants (Goodman et al., 2013). However, based on the relatively quick completion times, it appears as if many participants quickly read through the scenario. Due to these quick completion times (average of 6 minutes 36 seconds), it is possible that results were not as accurate as those that would have been obtained in a workplace setting. In addition, only about two links were clicked on average, demonstrating a floor effect. This floor effect likely contributed to the non-significant results for Hypotheses 3 and 4 as they were based on the
assumption that those high in NC would access more information than those low in NC. One other potential issue with the sample is that roughly 12% were not employed. This is likely not a major concern as the scenario served as the manipulation, although it is possible that the scenario may have been less relatable to those unemployed than to those currently working. For the purposes of the present study, using the MTurk sample was ideal and provided a diverse set of participants, although these findings should be replicated in the workplace by future studies in order to better understand NC and equity theory.

A final potential limitation pertains to the outcomes on which the present study focused. This study focused solely on distributive justice and pay satisfaction resulting from equity comparisons within the workplace. However, Adams (1963, 1965) also stated that inequity could lead to overall job dissatisfaction and have negative effects on employee motivation. Pay satisfaction based upon salary has also been the primary focus of much past research (Berkowitz, Fraser, Treasure, & Cochran, 1987; Klein, 1973; Martin & Peterson, 1987; Sweeney, 1990); therefore, the focus of this study was in accordance with those studies. Due to the focus on pay satisfaction, overall satisfaction of participants in this study cannot and should not be inferred. Results of overall satisfaction could potentially be similar to those of pay satisfaction, although many other facets can contribute to an employee’s overall satisfaction. In terms of motivation, the design of this study and collection method did not allow for the acquisition of future motivation from participants. Past research has traditionally measured employee performance as a proxy for motivation (Clark, 1958; as cited in Adams, 1963), which the present study could not focus on due to the method employed. In order to assess motivation, it is almost necessary to utilize a workplace sample in which productivity can be measured among employees. Hence, motivation is another area on which future research should focus in terms of NC level.
Conclusion

Overall, the present study contributed further knowledge and evidence supporting equity theory. Results indicated that distributive justice was lower in both underpayment and overpayment conditions and highest within the equitable payment condition. Additionally, the present study indicated that employers must ensure that employees are being treated equitably as perceptions of inequity can lead to dissatisfaction with pay, but only when being underpaid relative to others within the workplace. Employers should also consider individual differences when examining the effects of equity theory. With regard to need for cognition, this study found that NC plays a role in determining pay satisfaction when being inequitably compensated to the extent that employees are underpaid. Given that those high in NC tend to be even less satisfied when underpaid, it may make sense for employers to ensure that those high NC employees are being paid equitably to maximize perceptions of distributive justice and pay satisfaction.
Chapter VI

Summary

Need for Cognition and its Effects on Equity Theory Predictions

Despite a growing trend in workplace applications of need for cognition in decision making amongst managers (Anderson, 2008), a gap exists in applications to Industrial-Organizational psychology, as a majority of need for cognition research has been completed with a social focus on attitudes (Gallagher, 2012; Haugtvedt & Petty, 1992). The present study aims to address this gap by examining the effects of need for cognition on equity theory, which states that employees make comparisons to similar others within the workplace in order to determine equity or inequity (Adams, 1965). Given the evaluation process used in equity theory, the implications of need for cognition on equity theory could provide insight for how job satisfaction and motivation, are determined.

Need for cognition (NC) is an individual difference in “people’s tendency to engage in and enjoy effortful thinking” (Cacioppo & Petty, 1982, p. 130). This construct evolved from research into the underlying processes of cognition and how knowledge is acquired (Cacioppo & Petty, 1982) as well as from personality research by theorists like Maslow and his Hierarchy of Needs (Maslow, 1943). Within their research, Cacioppo and Petty (1982) determined that NC was a stable trait, varying only slightly in levels over time. The authors also found NC to be a unidimensional, continuous construct, as people could vary from low to high on NC level. However, after measuring NC continuously, researchers have typically dichotomized NC and
examined the two extremes, with those high in NC enjoying effortful thinking and preferring
cognitive tasks, and those low in NC preferring simple tasks requiring little thought (Cacioppo &
Petty, 1982).

Equity theory is based entirely on social comparisons within the workplace (Adams,
1965). The idea behind the theory involves an evaluation of an employee’s own outcomes to
inputs ratio to a similar other’s outcomes to inputs ratio. Inputs can consist of many different
things, including education and experience, whereas outcomes can consist of salary and
promotion (Adams, 1965; Carrell & Dittrich, 1978). This comparison may result in one of three
possible scenarios. In the first possible scenario, the employee’s ratio of outcomes to inputs is
equal to that of the comparison other, hence the employee would experience equity, or
distributive justice (Adams, 1965). Distributive justice, in the context of equity theory, refers to
the equitable payment between the employee and the comparison other (Adams, 1965). The
second possible scenario is that the employee’s ratio of outcomes to inputs is less than that of the
comparison other, therefore the employee would experience inequity due to underpayment
(Adams, 1965). The third possible scenario is that the outcomes to inputs ratio of the employee is
greater than that of the other’s, again resulting in feelings of inequity but due to overpayment
(Adams, 1965). In these last two scenarios, an employee also experiences a feeling of injustice.
Additionally, when an employee feels inequity within the comparison, cognitive dissonance is
experienced (Adams, 1965), which is the discomfort felt when an individual experiences
conflicting information from one’s own beliefs (Festinger, 1957). The perceptions of inequity
and this subsequent dissonance are ultimately the driving forces behind feelings of dissatisfaction
within the employee (Adams, 1965).
A primary component of equity theory involves the notion that once an employee finds a comparison other, that employee will willingly seek out outcome and input information about themselves and about that comparison other. In addition, there is an evaluative component to equity theory, in which the person determines if they are in an underpayment, equitable, or overpayment condition (Adams, 1965). Cacioppo et al. (1983) demonstrated that NC was involved in the process of evaluation as well, in that those high in NC and those low in NC evaluated persuasive messages differently. However, to date, no research has been conducted examining the relationship between the NC individual difference and equity theory. Hence, the purpose of the present study is to examine the potential relationship between the individual difference of need for cognition and the predictions of equity theory.

Previous research has shown that personality traits and individual differences had direct effects on equity theory through the equity sensitivity construct (Huseman, Hatfield, & Miles, 1987) and Greenberg’s (1979) research into the Protestant Work Ethic. In relation to NC, Levin, Huneke, and Jasper (2000) found that those high in NC accessed 30% more information throughout a decision making process than did those low in NC. Hence, the individual difference of NC may have an effect on the amount of information used in an equity comparison. Therefore, the following is hypothesized:

H1: Participants high in NC will utilize a greater amount of information in an equity comparison process than participants low in NC.

There is one main critique of equity theory which relates to the lack of support for the overpayment condition. Adams (1963) stated that the threshold was higher for inequity in the overpayment condition than for the underpayment condition. Vecchio (1984) and Sweeney (1990) found a trend that gave support for the idea that employees may perceive inequity when
overpaid, but these results were not significant. Since those who are high in NC have a greater intrinsic motivation to analyze information (Cacioppo, Petty, Feinstein, & Jarvis 1996) and tend to seek out a greater amount of information in the evaluation process (Levin et al., 2000), those high in NC may be more likely to experience inequity in an overpayment condition. It is possible then, that NC may help explain this weakness of equity theory. Thus, the following hypotheses are proposed:

H2: Distributive justice scores between the underpayment and equitable payment conditions will be significantly different, such that distributive justice in the underpayment condition will be lower than distributive justice in the equitable payment condition.

H3: NC will moderate the relationship between payment condition and distributive justice in the overpayment condition, such that for participants low in NC, distributive justice scores between the equitable payment and overpayment conditions will not be significantly different. However, for participants high in NC, distributive justice scores between the equitable payment and overpayment conditions will be significantly different, such that distributive justice for the overpayment condition will be lower than distributive justice for the equitable payment condition.

Adams (1965) proposed that perceptions of inequity lead to greater dissatisfaction. Following the previous hypothesis (H3), those high in NC may experience dissatisfaction in the overpayment condition significantly more than those low in NC. Additionally, much of equity theory research has examined the outcomes in terms of pay satisfaction (Berkowitz et al., 1987; Klein, 1973; Martin & Peterson, 1987; Sweeney, 1990). The present study hypothesizes the following:
H4: Participants high in NC will be more likely to experience dissatisfaction with pay in an overpayment condition than participants low in NC.

**Method**

**Participants**

The present study involved the use of online participants, specifically recruited through Amazon Mechanical Turk (MTurk), and included all participants over the age of 18 in the United States. The sample consisted of 317 participants, however due to the dichotomization of NC, approximately the middle one-third of participants on NC score were dropped, resulting in 225 participants included in the analyses. Of these 225, 63.1% were male and 36% were female, while 0.9% preferred not to respond. Participants ranged in age from 18 to 63 ($M = 30.83, SD = 9.05$) and all but 2.2% had some years of work experience.

**Materials and Measures**

**Payment scenarios.** Participants in this study were presented with one of three different payment scenarios, representing the equity payment conditions, which they read through and then responded to follow-up questions. In each scenario, the participant was given a fictitious role in a company with each employee playing the role of a customer service representative in a retail store. Various input and outcome information was listed in this scenario including the amount of education, experience, salary, benefits, and promotion for both the participant and a comparison other within the company. The first scenario was the equitable payment condition with the inputs and outcomes for the participant and the comparison other being relatively equal. The second and third scenarios were exactly the same as the first, with the exception that outcome information varied in order to create an underpayment condition and an overpayment condition. In the underpayment condition, the inputs were the same but the outcomes of the
participant will were less than those of the comparison other and in the overpayment condition
the outcomes were greater than those of the comparison other.

**Need for cognition.** This study utilized the short form of the Need for Cognition Scale
(NCS) developed by Cacioppo, Petty, and Kao (1984). This short form is only 18 items instead
of the original 34 and has demonstrated analogous psychometrics to the original long form
(Cacioppo et al., 1984). The short form has a Cronbach’s alpha of .90. The NCS is measured on
a 5-point scale (Cacioppo et al., 1984). Each of the participants responds to simple statements by
marking a number from 1 (*extremely uncharacteristic*) to 5 (*extremely characteristic*). In
following the method of Cacioppo et al. (1983), and more recently, Dickhauser and Reinhard
(2006), NC was measured dichotomously, such that participants who scored in the middle third
of the overall sample were dropped. Participants who scored in the top (bottom) one-third were
considered high (low) in NC.

**Pay satisfaction.** The present study used a single-item measure of pay satisfaction. Nagy
(2002) found a high correlation (.72) between a single-item measure of pay and a facet measure
of pay from the JDI. This single-item measure was “Overall, how satisfied are you with your pay
in this scenario?” and was scored on a 5-point scale ranging from 1 (*very unsatisfied*) to 5 (*very
satisfied*).

**Distributive justice.** The Distributive Justice Scale was designed to measure outcome
fairness in the workplace (Tyler & Blader, 2002). For the purposes of the present study an
adjusted version of this scale was used in determining the perceived pay equity in comparisons.
This modified scale was composed of three items in question or statement form and participants
were asked to rate their level of agreement with each of the statements on a 5-point response
format ranging from 1 (very unfair or strongly disagree) to 5 (very fair or strongly agree). The coefficient alpha was found to be .74 for the adjusted scale.

**Amount of information.** A count of self-reported information used in the comparison reflected the amount of information used. In each of the payment scenarios, participants were presented with input and outcome information. Within these scenarios, participants had the option to click on links in order to access information that provided more detail on the inputs and outcomes. The links were placed throughout the scenario. In the instructions before the scenario, it was stated that the following links are were completely voluntary in order to advance, but that reviewing them would provide a more detailed account of the information presented in the scenario. After having read through the scenario, participants were asked to identify which of the links they clicked on, which were summed to form an overall score.

**Demographics.** Six demographic questions were included consisting of age, gender, race, education level, employment status, and work experience.

**Procedure**

For the present study, Institutional Review Board (IRB) approval at Xavier University was obtained with exempt status. In the study, all participants remained anonymous and there was no reasonable harm expected to the involved participants. A pilot study was first given to a sample of Xavier University undergraduate students to verify the payment condition manipulation. Once verifying that each of the three payment scenarios portrayed what they were designed to, a 32 question study was posted on MTurk. The study required that participants be 18 years of age and in the United States. Participants were compensated in the amount of $0.50 and thanked upon completion.
Results

The results of the first hypothesis demonstrated no significant difference in the amount of information utilized for participants high in NC ($M = 2.20$, $SD = 2.93$) and participants low in NC ($M = 2.33$, $SD = 2.84$), $t(223) = .33$, $p = .74$. Thus Hypothesis 1 was not supported. In regard to Hypothesis 2, results revealed a significant difference in distributive justice scores among payment conditions, $F(2, 222) = 58.26$, $p < .001$. Those in the underpayment condition reported lower distributive justice ($M = 2.05$, $SD = 0.85$) compared to participants in the equitable payment condition ($M = 3.51$, $SD = 0.91$), providing support for Hypothesis 2. Additionally, the other payment condition comparisons were significantly different, such that those in the equitable payment condition reported higher distributive justice ($M = 3.51$, $SD = 0.91$) than those in the overpayment condition ($M = 2.54$, $SD = 0.78$) and those in the underpayment condition reported lower distributive justice ($M = 2.05$, $SD = 0.85$) than those in the overpayment condition ($M = 2.54$, $SD = 0.78$). The results of Hypothesis 3 indicated no significant interaction between NC level and payment condition on distributive justice, $F(2, 219) = 0.80$, $p = .45$, thus the hypothesis was not supported. However, there was a significant main effect for NC level, such that those low in NC were higher in distributive justice ($M = 2.82$, $SD = 1.04$) than those high in NC ($M = 2.57$, $SD = 1.03$), $F(1, 219) = 6.24$, $p = .01$. Finally, Hypothesis 4 was not supported, such that there was no significant difference in pay satisfaction in the overpayment condition for participants high in NC ($M = 2.86$, $SD = 1.41$) compared to those low in NC ($M = 3.03$, $SD = 1.35$), $t(223) = .90$, $p = .37$.

Supplemental Analyses

Similar to Hypotheses 2 and 3 which focused on distributive justice, supplemental analyses were conducted with a focus on pay satisfaction. Results indicated a significant
interaction between NC and payment condition on pay satisfaction, $F(2, 219) = 3.87, p = .02$. Follow-up tests suggested significant differences between low NC ($M = 2.03, SD = 1.14$) and high NC ($M = 1.46, SD = 0.56$) in the underpayment condition, $t(77) = 2.78, p = .01$.

Additionally, results showed a significant main effect for payment condition on pay satisfaction, $F(2, 219) = 135.56, p < .001$. Post-hoc tests indicated significant differences between the underpayment ($M = 1.75, SD = 0.94$) and equitable payment conditions ($M = 2.97, SD = 1.11$; $t(151) = -7.39, p < .01$); between the equitable payment ($M = 2.97, SD = 1.11$) and overpayment conditions ($M = 4.22, SD = 0.72$; $t(144) = -8.06, p < .01$); and between the underpayment ($M = 1.75, SD = 0.94$) and overpayment conditions ($M = 4.22, SD = .72$; $t(149) = -18.07, p < .01$).

**Discussion**

Contrary to the first hypothesis, those high in NC did not report accessing more information than those low in NC. This finding is in opposition to that of Levin et al. (2000), who concluded that those high in NC accessed 30% more information than those low in NC in a decision making process. A potential reason for this finding is that the participants in this study were not informed prior to reading the scenario that they were to compare themselves to the other employee, whereas the participants in Levin et al. (2000) knew that they were to make a decision in buying a laptop computer for a friend. Thus, it is possible that having the awareness of the task prior to making the comparison could lead to those high in NC seeking more information with the goal of making an accurate comparison. Additionally, according to the original findings of Cohen, Stotland, and Wolfe (1955), it is expected that those high in NC access more information to reduce ambiguity from the situation. It is possible that the scenarios for the present study were not ambiguous enough to warrant those high in NC to seek out additional information.
The results of Hypothesis 2 indicated that distributive justice was indeed lower for those in the underpayment condition and higher for those in the equitable payment condition. This finding supports Adams’ (1963, 1965) initial equity theory research and is in accordance with subsequent research demonstrating lower equity perceptions in an underpayment condition (Carrell & Dittrich, 1978; Hofmans, 2012). Thus, this study further reinforces the underpayment and equitable payment conditions of equity theory.

Findings for Hypothesis 3 indicated that there was no interaction between payment condition and NC level, but there were significant main effects. Those low in NC perceived more distributive justice overall than those high in NC. This finding could be due to those high in NC thinking more depth about the scenario, even if they did not explicitly illustrate that they did by accessing links. The other main effect showed differences in distributive justice perceptions among payment condition in line with equity theory predictions, indicating the inverted-U relationship proposed by Adams (1963, 1965). The main weakness of equity theory is the lack of consistent support for the overpayment condition (Sweeney, 1990; Vecchio, 1984), yet the results of this study demonstrate that there are indeed lowered perceptions of distributive justice in the overpayment condition. The results for Hypothesis 4 did not indicate any significant differences between the two NC levels on pay satisfaction, which is to be expected with the finding of Hypothesis 3, which showed no interaction between NC and payment condition in distributive justice.

The supplemental analyses showed a linear relationship between payment condition and pay satisfaction as well as a significant interaction, such that those high in NC were less satisfied with their pay in the underpayment condition than those low in NC. However, there were no differences between NC in pay satisfaction for the equitable and overpayment conditions. In
contrast to pay satisfaction, distributive justice was significantly lower in the overpayment condition than distributive justice in the equitable payment condition. Hence, those in the overpayment condition clearly perceived injustice, yet they were still the most satisfied with their pay. This finding is troubling due to the fact that even when those who are overpaid sense injustice, they are still satisfied with their pay.

**Limitations**

There are a few limitations to the present study. The first limitation is the method of the study, which involved the use of a scenario in a lab setting as opposed to a real-world setting. The scenario was designed and written to be as close to reality as possible, yet reality is hard to obtain through a one-page description of a job and its benefits. It is possible that much of the information presented in the scenarios is not easily obtainable by employees on the job. One benefit to the method used in this study, however, is that people could be easily manipulated into an underpayment, equitable payment, or overpayment condition because the selection of a comparison other is not well understood (Kulik & Ambrose, 1992).

Another potential limitation pertains to the outcomes on which the present study focused. This study focused solely on distributive justice and pay satisfaction resulting from equity comparisons within the workplace. However, Adams (1963, 1965) also stated that inequity could lead to overall job dissatisfaction and have negative effects on employee motivation. Due to the focus on pay satisfaction, overall satisfaction of participants in this study cannot and should not be inferred. In terms of motivation, the design of this study and collection method did not allow for the acquisition of future motivation from participants.
Contributions

The present study makes a few contributions in support of equity theory literature. Of particular importance, the present study found additional evidence of equity theory by using a different method than typical equity theory research. Specifically, this study was based on a scenario with online participants as opposed to a field study or a more applied setting. The findings in relation to equity theory and distributive justice demonstrated not only support for the underpayment and equitable payment conditions, but also the much debated overpayment condition on an MTurk sample.

Another area in which the present study contributes to the literature is that of pay satisfaction based on perceptions of inequity. Results from the present study demonstrate that simply because an employee perceives inequity does not necessarily mean that it will lead to pay dissatisfaction. In fact, those who perceived inequity of overpayment were most satisfied with their pay. This area of pay satisfaction is one that future research should further examine.

Finally, the present study further examined the effects of individual differences on equity theory predictions. The results of this study demonstrated that need for cognition does not play a role in employees perceiving distributive injustice between conditions, however it may play a role in employees determining pay satisfaction, particularly in underpayment conditions. This study provides evidence that those high in NC may determine their pay satisfaction differently than those low in NC in the underpayment condition. Equity theory is one of many areas in which NC can be applied to the workplace, and should be addressed in future workplace research.
References


Appendix A

Payment Condition Scenarios

Directions: Please thoroughly read through the entire following scenario. There will be a fact check after the scenario that you must answer correctly in order to obtain compensation. Periodically, there will be links that may be clicked on to gain additional information about the scenario. If clicked, a pop-up window will appear. These links are completely optional and do not need to be clicked in order to advance. Once you have read through both paragraphs, click the verification and then click continue at the bottom of the page.

Underpayment

Imagine that you are a customer service representative in your early 30’s at a major retail store called Main-Mart Electronics. You were hired by Main-Mart 10 years ago after having obtained a bachelor’s degree from a local college and have worked your way up from cashier to a customer service representative in that time (LINK 1). Main-Mart tends to divide employees up into different work teams to work on projects and tasks together. As is the nature of the team that you are on, you tend to receive little recognition from management (LINK 2). After having been promoted to customer service representative 3 years ago, your annual salary has remained fairly constant at $34,000 per year with some benefits (LINK 3).

Main-Mart tends to hire new personnel in batches at various points throughout the year, such that groups of about 8 are hired at once and start on the same job level as cashier. As part of the hiring process, applicants are asked to participate in group interviews during which they share their past experiences and qualifications for the position. Of the original group of 8, only you and a fellow coworker, Pat, remain at the same store. Others have either quit from their position or transferred to different stores. Pat came from the same educational background as you
by obtaining a bachelor’s degree from a similar local college and, as you learned through the group interview, worked at only one other position previously, like yourself (LINK 4). Through past discussions with Pat you recognized that Pat’s performance scores tended to be very similar to yours, and you both expressed interest in similar promotional opportunities within the company to management (LINK 5). Because Pat is now a customer service representative on a different work team, and has different responsibilities as a member of that team, you have seldom worked together recently (LINK 6). Pat’s team tends to receive recognition from upper management on a consistent basis and Pat’s position on his work team comes with regular monetary raises, a salary of $55,000 per year, and increases in benefits (LINK 7).

**Links** - Underpayment

Link 1 – Time table for promotions

After graduating college you could not find work right away, so you decided to take on a part-time job while looking for permanent work. Time passed and a part-time position with Main-Mart turned full-time and you ended up getting promoted to stocking shelves after 2 years. You worked accepting shipments and made sure that all products were placed on the shelves correctly. After stocking shelves for 5 years you were promoted to the customer service department, where you currently work. The customer service position involves dealing with any questions or complaints that customers have, answering calls relating to store products, processing returns of products, and signing customers up for credit cards.

Link 2 – Recognition from managers
The various employees that are on your work team are not highly regarded by management. The team was formed after most of the managers’ favorite employees were placed together on a separate work team. Subsequently, you and your fellow team members rarely receive employee of the month recognition or positive comments or feedback from the managers like employees on the other work teams do, and you typically have to perform the monotonous tasks of the job.

Link 3 – Benefits and Salary

Your current salary as a customer service representative is $34,000 per year and has barely increased in the 3 years you have worked the position. The benefits package you are receiving is minimal, with only basic healthcare coverage and no bonuses based on job performance. No matter how well your work team performs, there has rarely been a bonus paid out to you. Additionally, your managers have never taken your team to lunches or provided employee discounts, and it is often difficult to obtain a personal day when needed.

Link 4 – Details of previous positions

In your time spent taking courses for your bachelor’s degree, you worked at a department store to gain some money to pay for extra expenses. This was a part-time position, but you did learn some valuable skills that now apply to your current job at Main-Mart. You learned to interact with customers and understand how the retail business works. In getting to know Pat when you were both hired, you found out that Pat also worked in retail for a clothing store and had some similar experiences to yourself.

Link 5 – Details of performance reviews

Throughout your time working for Main-Mart you have received generally positive performance reviews and feedback from your managers. The managers stated that you have a strong work
ethic and show up ready for work every day. Due to these positive scores you communicated to your managers that you wanted to be promoted to a position with more responsibility in the future. Pat has also received positive review scores from the managers and managers stated that Pat is a hard worker. Pat has always had the same desire as yourself to have a long career with the company and has expressed that to the managers.

Link 6 – Pat’s Work Team

Pat’s responsibilities have changed greatly since placement on the current work team. Pat’s duties as a customer service representative mirror your duties, which include dealing with customer questions and complaints, processing returns, and signing customers up for credit cards. However, the work team that Pat is on is composed of many of the managers’ favorite employees, therefore they are able to get out of having to perform the more monotonous tasks of the job.

Link 7 – Salary and benefits

Pat’s salary as a customer service representative on his current work team has increased to $55,000 per year. Pat receives a substantial 6% raise each year while also receiving bonuses based on how well the work team performs. Pat is also able to take additional vacation days, request personal days, receive free lunches, employee discounts, and a comprehensive health plan through the company.
Overpayment

Imagine that you are a customer service representative in your early 30’s at a major retail store called Main-Mart Electronics. You were hired on by Main-Mart 10 years ago after having obtained a bachelor’s degree from a local college and have worked your way up from cashier to customer service representative in that time (LINK 1). Main-Mart tends to divide employees up into different work teams to work on projects and tasks together. As is the nature of the work team that you are on, you tend to receive consistent recognition from upper management (LINK 2). After having been added to your present work team 3 years ago, your annual salary has increased steadily to $55,000 per year with regularly increasing benefits (LINK 3).

Main-Mart tends to hire new personnel in batches at various points throughout the year, such that groups of about 8 are hired at once and start on the same job level as cashier. As part of the hiring process, applicants are asked to participate in group interviews during which they share their past experiences and qualifications for the position. Of the original group of 8, only you and a fellow coworker, Pat, remain at the same store. Others have either quit from their position or transferred to different stores. Pat came from the same educational background as you by obtaining a bachelor’s degree from a similar local college and, as you learned through the group interview, worked at only one other position previously, like yourself (LINK 4). Through past discussions with Pat you recognized that Pat’s performance scores tended to be very similar to yours, and you both expressed interest in similar promotional opportunities within the company to the management team (LINK 5). Recently, you have seldom worked with Pat, as Pat is now a customer service representative on a separate work team from you. Pat now has different responsibilities since being placed on a separate work team (LINK 6). Pat’s work team tends to receive minimal recognition from management and Pat has not seen a monetary raise,
staying at $34,000 per year, in the 5 years of holding the position. Additionally, there have been no increases in benefits during that time (LINK 7).

**Links - Overpayment**

Link 1 – Time table for promotions

After graduating college you could not find work right away, so you decided to take on a part-time job while looking for permanent work. Time passed and a part-time position with Main-Mart turned full-time and you ended up getting promoted to stocking shelves after 2 years. You worked accepting shipments and made sure that all products were placed on the shelves correctly. After stocking shelves for 5 years you were promoted to a customer service representative, where you currently work. The customer service position involves dealing with any questions or complaints that customers have, answering calls relating to store products, processing returns of products, and signing customers up for credit cards.

Link 2 – Recognition from managers

The various employees that are on your work team are highly regarded by management, since your work team is composed of most of the managers’ favorite employees. Subsequently, you are able to get out of performing the more monotonous tasks of the job. You and your fellow team members often receive employee of the month recognition and positive comments and feedback from upper management, more so than the employees of other work teams do.
Link 3 – Benefits and Salary

Your current salary as manager customer service representative is $55,000 per year and has increased a substantial 6% in each of the 3 years you have worked the position. You also receive bonuses based on how well your team performs. Also, you are able to take additional vacation days, request personal days, receive free lunches, employee discounts, and a comprehensive health plan through the company.

Link 4 – Details of previous positions

In your time spent taking courses for your bachelor’s degree, you worked at a department store to gain some money to pay for extra expenses. This was a part-time position, but you did learn some valuable skills that now apply to your current job at Main-Mart. You learned to interact with customers and understand how the retail business works. In getting to know Pat when you were both hired, you found out that Pat also worked in retail for a clothing store and had some similar experiences to yourself.

Link 5 – Details of performance reviews

Throughout your time working for Main-Mart you have received generally positive performance reviews and feedback from your managers. The managers stated that you have a strong work ethic and show up ready for work every day. Due to these positive scores you communicated to your managers that you wanted to be promoted to a position with more responsibility in the future. Pat has also received positive review scores from the managers and managers stated that Pat is a hard worker. Pat has always had the same desire as yourself to have a long career with the company and has expressed that to the managers.
Link 6 – Customer service representative duties

Pat’s responsibilities have not significantly changed since placement on the current work team. Pat’s duties as a customer service representative mirror your duties, which include dealing with customer questions and complaints, processing returns, and signing customers up for credit cards. However, the work team that Pat is on was formed after most of the managers’ favorite employees were placed together on a separate team. Subsequently, Pat and the team members rarely receive employee of the month recognition or positive comments or feedback from the managers like employees on the other work teams do, and they typically have to perform the monotonous tasks of the job.

Link 7 – Salary and benefits

Pat’s current salary as a customer service representative is $34,000 per year and has barely increased in the 3 years working the position. The benefits package Pat is receiving is minimal, with only basic healthcare coverage and no bonuses based on job performance. No matter how well Pat’s work team performs, there has rarely been a bonus paid out to Pat. Additionally, Pat’s managers have never taken the team to lunches or provided them with employee discounts, and it is often difficult to obtain a personal day when needed.
Equitable Payment

Imagine that you are a customer service representative in your early 30’s at a major retail store called Main-Mart Electronics. You were hired by Main-Mart 10 years ago after having obtained a bachelor’s degree from a local college and have worked your way up from cashier to a customer service representative in that time (LINK 1). Main-Mart tends to divide employees up into different work teams to work on projects and tasks together. As is the nature of the work team that you are on, you tend to receive little recognition from management (LINK 2). After having been promoted to customer service representative 3 years ago, your annual salary has increased with the cost of living to $34,000 per year and includes some benefits (LINK 3).

Main-Mart tends to hire new personnel in batches at various points throughout the year, such that groups of about 8 are hired at once and start on the same job level as cashier. As part of the hiring process, applicants are asked to participate in group interviews during which they share their past experiences and qualifications for the position. Of the original group of 8, only you and a fellow coworker, Pat, remain at the same store. Others have either quit or transferred to different stores. Pat came from the same educational background as you by obtaining a bachelor’s degree from a similar local college and, as you learned through the group interview, worked at only one other position previously, like yourself (LINK 4). Through past discussions with Pat, you recognized that Pat’s performance scores tended to be very similar to yours, and you both expressed interest in similar promotional opportunities within the company to management (LINK 5). You work alongside Pat on a daily basis, as Pat is also a customer service representative for the store and you are both on the same work team (LINK 6). Pat also tends to receive few accolades from the store manager and Pat is on a similar pay scale, with a salary of $34,000 per year and some increases in benefits (LINK 7).
Links – Equitable Payment

Link 1 – Time table for promotions

After graduating college you could not find work right away, so you decided to take on a part-time job while looking for permanent work. Time passed and a part-time position with Main-Mart turned full-time and you ended up getting promoted to stocking shelves after 2 years. You worked accepting shipments and made sure that all products were placed on the shelves correctly. After stocking shelves for 5 years you were promoted to the customer service department, where you currently work. The customer service position involves dealing with any questions or complaints that customers have, answering calls relating to store products, processing returns of products, and signing customers up for credit cards.

Link 2 – Recognition from managers

The various employees that are on your work team are not highly regarded by management. The managers placed a couple of their favorite employees on the work team with you. Subsequently, members of your work team only sometimes receive employee of the month recognition, positive comments, and feedback from the managers.

Link 3 – Benefits and Salary

Your current salary as a customer service representative is $34,000 per year and has increased with cost of living in the 3 years you have worked the position. The benefits package you are receiving is average, with basic healthcare coverage and small bonuses based on job performance, as well as an employee discount.
Link 4 – Details of previous positions

In your time spent taking courses for your bachelor’s degree, you worked at a department store to gain some money to pay for extra expenses. This was a part-time position, but you did learn some valuable skills that now apply to your current job at Main-Mart. You learned to interact with customers and understand how the retail business works. In getting to know Pat when you were both hired, you found out that Pat also worked in retail for a clothing store and had some similar experiences to yourself.

Link 5 – Details of performance reviews

Throughout your time working for Main-Mart you have received generally positive performance reviews and feedback from your managers. The managers stated that you have a strong work ethic and show up ready for work every day. Due to these positive scores you communicated to your managers that you wanted to be promoted to a position with more responsibility in the future. Pat has also received positive review scores from the managers and managers stated that Pat is a hard worker. Pat has always had the same desire as yourself to have a long career with the company and has expressed that to the managers.

Link 6 – Customer service representative duties

Pat’s responsibilities have increased just like yours since placement on the same work team as you. Since Pat works in the same job role and on the same team as you, Pat’s duties involve dealing with any questions or complaints that customers have, answering calls relating to store products, processing returns of products, and signing customers up for credit cards.
Link 7 – Salary and benefits

Pat’s salary as a customer service representative is also $34,000 per year. Since Pat was placed on the work team, Pat has received cost of living increases in salary each year and receives small bonuses based on job performance. Pat also receives basic healthcare coverage and an employee discount as part of a benefits package.
Appendix B

Need for Cognition Scale

The Need for Cognition Scale Short Form is protected by copyright and therefore is not reproduced in this document. This measure is available in the following reference:

Appendix C
Distributive Justice Scale

The Distributive Justice Scale is protected by copyright and therefore is not reproduced in this document. This measure is available in the following reference:

Appendix D
Demographic Questionnaire

Please answer the following demographic questions:

1. Age: ____

Please select one of the following for each question:

2. Gender: Male
   Female
   Prefer not to respond

3. Race: Native American/Alaskan Native
   Asian/Asian American
   Black/African American
   Hawaiian/Pacific Islander
   Hispanic/Latino
   Non-Hispanic White/Caucasian
   Other
   Prefer not to respond

4. Highest education completed: Some high school
   High school diploma or GED
   Some college/Technical school
   Associate’s Degree
   Bachelor’s Degree
   Advanced Degree (Master’s, Ph.D.)

5. Work experience: None
   1 year or less
   5 years or less
   10 years or less
   25 years or less
   More than 25 years

6. Current employment status: Employed
   Self-Employed
   Out-of-work
   Retired
   Student
   Unable to work
December 2, 2014

Eric Bookmyer

Re: Protocol #14-042, Need for Cognition and its Effects on Equity Theory Predictions

Dear Mr. Bookmyer:

The IRB has reviewed the materials regarding your study, referenced above, and has determined that it meets the criteria for the Exempt from Review category under Federal Regulation 45CFR46. Your protocol is approved as exempt research, and therefore requires no further oversight by the IRB. We appreciate your thorough treatment of the issues raised and your timely response.

If you wish to modify your study, including the addition of data collection sites, it will be necessary to obtain IRB approval prior to implementing the modification. If any adverse events occur, please notify the IRB immediately.

Please contact our office if you have any questions. We wish you success with your project!

Sincerely,

Kathleen J. Hart, Ph.D., ABPP
Vice Chair, Institutional Review Board
Xavier University

KJH/sb
Appendix F
Pilot Study Informed Consent Form

My name is Eric Bookmyer and you are being given the opportunity to volunteer to participate in a project conducted through Xavier University, as part of my master’s thesis. Please read this form carefully before agreeing to participate in the survey.

The purpose of the study is to provide evidence of effectiveness for materials to be used in a future experiment. You were selected to participate in the following survey because you are a Xavier undergraduate student and fit the qualifications to take the study.

If you agree to take part in this study, you will be asked to complete one survey containing 1 item and a short scenario. Completion of the study will take no more than 10 minutes. Participation in this study is completely voluntary and you may withdraw from the study at any time, although you must answer the required question in order to receive course credit. By participating in this study, you will contribute to the effectiveness of a future experiment’s design. There are no known risks in participating in this study. The question has no correct answer and I ask you to please respond honestly to the question. All responses in the study will remain anonymous.

Upon completion of the survey, and if the previously mentioned criterion is met, you will be compensated in course credit.

Refusal to participate in this study will have no effect on any future services you may be entitled to from Xavier University. You are free to withdraw from the study at any time without penalty; however, you will not receive course credit is the question is not answered. You may only take this study one time.

If you have any questions at any time during or after the study, you may contact Eric Bookmyer (principal researcher) at [ teléfono número o correo electrónico ] or Dr. Mark Nagy (research supervisor) at [ teléfono número o correo electrónico ]. Questions about your rights as a research subject should be directed to Xavier University’s Institutional Review Board at [ teléfono número o correo electrónico ].

If you agree to take part in this study, please check the box below.

___ I have been given information about this research study and its risks and benefits and have had the opportunity to ask questions. I freely give my consent to participate in this study.
Appendix G

Pilot Study Debriefing Form

Thank you for your participation in this study!

The purpose of this study was to ensure the effectiveness of the scenario that was presented to you. You were presented with one of three different scenarios, which will be used in a future experiment examining how individual differences affect workplace equity perceptions.

All responses will remain anonymous and no identifying information will be associated with your responses. If you decide that you would not like your data to be used in this research and would like to have it removed from the study, please notify the researcher immediately.

If you have any questions or concerns about this study, would like to receive a summary of findings, or would like to learn more about this study or the future experiment, please feel free to contact Eric Bookmyer (principal researcher) at bookmyere@xavier.edu or Dr. Mark Nagy (research supervisor) at nagyms@xavier.edu.
Appendix H
MTurk Informed Consent Form

My name is Eric Bookmyer and you are being given the opportunity to volunteer to participate in a project conducted through Xavier University, as part of my master’s thesis. Please read this form carefully before agreeing to participate in the survey.

The purpose of the study is to investigate employees’ reactions to various information that they may become exposed to on a daily basis. You were selected to participate in the following survey because you are an MTurk user and have met the required qualifications.

If you agree to take part in this study, you will be asked to complete one survey containing 32 items and a short scenario. Completion of the study will take no more than 30 minutes. Participation in this study is completely voluntary and you may withdraw from the study at any time, although you must answer all required questions in order to receive compensation. By participating in this study, you will provide information into employee reactions based on various types of workplace information. There are no known risks in participating in this study. Most questions have no correct answer, however there will be a few quality checks that you must answer correctly in order to receive compensation. Additionally, a fact check of what you have read must be passed in order to receive compensation. I ask you to please respond honestly to each question. All responses in the study will remain anonymous.

Upon completion of the survey, and if all previously mentioned criteria are met, you will be compensated in the amount of $0.50 from Amazon Mechanical Turk.

Refusal to participate in this study will have no effect on any future services you may be entitled to from MTurk or Xavier University. You are free to withdraw from the study at any time without penalty; however, you will not receive compensation if all required questions, including the quality and fact checks, are not completed correctly. You may only take this study one time.

If you have any questions at any time during or after the study, you may contact Eric Bookmyer (principal researcher) at [email protected] or Dr. Mark Nagy (research supervisor) at [email protected] or [email protected]. Questions about your rights as a research subject should be directed to Xavier University’s Institutional Review Board at [email protected]

If you agree to take part in this study, please click the box below.

___ I have been given information about this research study and its risks and benefits and have had the opportunity to ask questions. I freely give my consent to participate in this study.
Appendix I

MTurk Debriefing Form

Thank you for your participation in this study!

The purpose of this study was to examine how individual differences affect workplace equity perceptions. The goal of this research is to find evidence that an individual difference of need for cognition plays a role in the likelihood of employees perceiving equity in the workplace.

All responses will remain anonymous and no identifying information will be associated with your responses. You will be compensated in the amount of $0.50, dependent upon the accuracy of your responses on the quality and fact checks presented in the study. If you decide that you would not like your data to be used in this research and would like to have it removed from the study, please notify the researcher immediately.

If you have any questions or concerns about this study, would like to receive a summary of findings, or would like to learn more about this study, please feel free to contact Eric Bookmyer (principal researcher) or Dr. Mark Nagy (research supervisor) at bookmyere@xavier.edu or nagyms@xavier.edu.