ABSTRACT

Title of Dissertation: THE RELATIONSHIP BETWEEN THE SYMBOLIC
MEANING OF MONEY AND RERERENT CHOICE
UNDER SITUATIONS OF INEQUITY

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Although research on equity theory has waned, understanding the influence of
different referent groups remains an important unanswered question in the justice
literature (Greenberg, 2003). This study proposes to increase understanding of the
referent selection process in two ways. One is by applying a theory explicitly focused on
pay, the reflective theory of pay (Thierry, 1998). In addition, the current research will
employ policy-capturing to effectively capture the relative influence of different referent
groups (Bordia & Blau, 2003; Law & Wong, 1998). Results indicated that perceptions of
the internal referent group showed the strongest relationship with pay satisfaction. In
addition, there was evidence that equity sensitivity and the control and spending
meanings of pay moderated the relationship between the external referent group and pay
satisfaction.

THE RELATIONSHIP BETWEEN THE SYMBOLIC MEANING OF MONEY AND
REFERENT CHOICE UNDER SITUATIONS OF INEQUITY

by

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Introduction

The Symbolic Meaning of Money

"It's not about money; it's about respect."-*Anonymous*

While the salaries of most individuals are private, professional athletes frequently have their pay and contract negotiations open to the public. Consider the case of Ty Law. In February 2004, his team, the New England Patriots, won the Super Bowl--the ultimate organizational goal in the NFL. From 2001-2004, Law was the highest paid player in the world at his position. But by spring 2004, the latter was no longer true, as a colleague on another team was now the highest paid. As a result, Law publicly voiced dissatisfaction with his $8.5 million/year contract. Despite a salary that falls within the 99th percentile of all wage earners in the United States (DeNavas-Walt, Proctor, & Mills, 2004), Law was more concerned with the relative size of his salary in comparison to his colleagues. In particular he said: "I deserve to be the highest-paid cornerback in the NFL. . . the team that I've proven that for . . . doesn't realize or can't see [that] they're not giving me the proper respect or the contract that I deserve. It's a new market right now, and I need to be at the top of that too." (Smith, 2004, pg. 36) Some of Law's other quotes illustrate his characterization of the salary issue as one of respect, such as when he argued that a $26 million contract offer from the Patriots was "an insult. . . a slap in the face" (Smith, 2004, pg. 42).

The above example pointedly illustrates the equity construct is alive and well. Equity research has shown that pay satisfaction is driven more by a function of how one's salary compares with relevant others rather than pay adequacy (Scholl, Cooper, &

McKenna, 1987). Law reinforces this point when he refers to his salary *in comparison to* his highest paid colleague. His comment about "respect" suggests his salary represents more than an ability to be financially secure, but also represents a measure of respect for his work performance. He's been quoted as saying "It's not about the money" (Smith, 2004, pg. 42). Clearly, if it is not the money, something else is going on. His feelings of inequity may be related to perceived respect more so than money.

In organizational research on compensation, Mowday (1996) has noted that one of the dominant paradigms for understanding pay comparisons has been Adams' (1963; 1965) equity theory. Equity theory suggests that individuals determine equity by comparing their ratio of inputs to outcomes against a corresponding ratio for a comparison other. Feelings of inequity have been shown to drive pay satisfaction (Summers & Hendrix, 1991), and this general model (see Figure 1) has been used to explain reactions to pay in organizations (Kulik & Ambrose, 1992). The case of Ty Law provides anecdotal evidence that some individuals are especially attuned to what others earn.

However, recent research has shifted away from studying equity theory due to theoretical problems that empirical research has found difficult to reconcile (Greenberg 2003; Mowday, 1996). Among these problems is one that is particularly relevant to the current paper. Specifically, it has been difficult to predict or determine who people would choose as their standard of comparison. As a result, it is difficult to test certain predictions of equity theory. Although research has shown that referent related equity is related to pay satisfaction (see Figure 1), the particular pay referent that is the most

important frequently shifts between studies (e.g., Taylor & Vest, 1992; Goodman, 1974; Hills, 1980).

It is possible that this research literature has found inconsistent results because researchers have failed to consider some individuals attach more symbolic meanings to money than others (Furnham & Argyle, 1998; Thierry, 1998, 2001; Mitchell & Mickel, 1999). Money may symbolically represent spending power, it could represent recognition for good job performance, or it could represent social status. Scholars have recently suggested that compensation research needs to account for individual differences in the meaning of money (Barber & Bretz, 2000; Heneman & Judge, 2000; Furnham & Argyle, 1998; Rynes & Gerhart, 2000). Previous research has also indicated that the multiple meanings of pay constitute an important individual difference (Miedema, 1994; Mitchell & Mickel, 1999; Tang et al., 2004) when studying pay satisfaction. While there have been few other attempts to empirically test individual differences in the meaning of money, these researchers underscored that understanding such differences may help our understanding of the constructs that influence pay satisfaction.

Consistent with this reasoning, research has shown that the meaning of money is subjectively determined (e.g., Tang, 1992; 1993; 1995; Shaw; 1996, Miedema, 1994) and that these different meanings are predictive of pay satisfaction (Tang, Luna-Arocas, Sutarso, & Tang, 2004). Unfortunately, when researchers typically attempt to understand the influence and meaning of money, they borrow constructs and theories from the motivation or social comparison domains (Thierry, 1992). Thierry has posited that treating money as an objective, quantifiable variable may overlook the symbolic meaning that people attach to money and the behaviors affected by this symbolic meaning. As a

result, Thierry has designed a theory of pay with an explicit focus on the symbolic value of pay, the "reflection" theory of pay (Thierry, 1992; 2001).

Thierry uses the metaphor of a mirror to suggest that pay itself has no significance, rather pay reflects subjective meanings that are connected to an individual's self-identity. For example, individuals who pride themselves on being a significant contributor to the organization may look to the size of their pay as a representation (i.e., reflection) of their value to the organization. Then again, individuals who are concerned about financial stability may look to the size of their pay as a representation of their own spending ability. Therefore, the meaning of pay is said to be a result of the "reflection" of concepts critical to individuals' self-identity. I predict that these different meanings are related to pay satisfaction such that individuals who see more symbolic meanings in pay will be more sensitive to pay inequities (see Figure 2).

This paper seeks to extend equity theory by proposing that the relationship between pay inequity and pay satisfaction is dependent on the amount of subjective meanings a person attaches to pay. I further argue that the impact of these meanings on pay satisfaction varies according to the employee's choice of referent (e.g., internal, external, same education). By simultaneously incorporating the meanings of pay and equity sensitivity into the compensation literature, I expect to gather evidence as to how individual differences illuminate the nature and effects of the referent comparison process. I contend that considering the symbolic meaning of pay will increase our understanding of how individuals tie their self-identity to money.

I will begin by discussing one of the oldest theories of distributive justice: equity theory. One of the building blocks of equity theory is the role of social comparison, so I

will discuss these concepts as they relate to pay, along with some of the difficulties

encountered in trying to predict referent selection. I will also review individual

differences that may be relevant to equity and pay satisfaction. Included in this review is

the construct of equity sensitivity, which has emerged as an individual difference variable

that can be used to understand reactions to inequity (Huseman, Hatfield, & Miles, 1985;

1987). Additionally, Thierry (1992; 2001) has suggested that the symbolic meanings of

pay vary from person to person. This symbolic meaning does not appear to be captured in

the Huseman et al. equity sensitivity measure. As a result, I expect that understanding the

symbolic value of money will explain variance in pay satisfaction above and beyond that

of equity sensitivity.

After outlining research on these individual differences, I discuss a study that tests

how these differences impact reactions to pay inequity. I assert that two individual

difference constructs are especially relevant to understanding the influence of referents:

equity sensitivity, which is defined as a personal preference for a particular balance of

rewards and inputs (in comparison to others), and the symbolic meaning of money.

Social Comparisons

Research on social comparison has suggested that individuals look to others to

judge the fairness of certain personally relevant outcomes like compensation (Suls &

Wills, 1991). However, the extant research on social comparison is conflicting, such that

individuals sometimes select similar referents and at other times dissimilar referents, a

difference which has been difficult to reconcile (Greenberg, 2003). This topic has been

frequently studied in organizations, but it is still unclear if it is possible to identify how

people select a target of comparison (Mowday, 1996; Kulik & Ambrose, 1992). Previous

research has investigated who people tend to choose as referents, and this data suggests that individuals tend not to differentiate between individual referent categories but rather, they form a mental composite that combines multiple referents (e.g., Taylor & Vest, 1992; Summers & DeNisi, 1990). While these studies have been helpful, Kulik and Ambrose (1992) have suggested that this research has done little to investigate individual differences in referent selection and interpretation. For example, important questions such as: "Do referents mean the same to everyone?" and "Does everyone compare themselves to the same set of referents?" have not been addressed. Depending on the sample in a study, different referents may emerge as the most salient to an individual.

One useful framework for understanding individual reactions to social interactions has been social exchange theory (Adams 1963, 1965; Homans, 1961; Patchen, 1961). Generally, this framework holds that individuals make contributions and receive rewards for their contributions. Individuals will make assumptions about the rewards they expect from an exchange, and the logical basis for these assumptions comes from social interactions, specifically comparisons against others. There have been multiple theories of social comparison (Mowday, 1996). In the next section of this paper, I will focus primarily on equity theory, one of the dominant theories governing distributive justice. One of the outstanding issues to be resolved in equity theory is the role of the referent other and the target individuals focus on when they make comparisons (Goodman, 1974; Kulik & Ambrose, 1992; Mowday, 1996). The research literature has made frequent attempts to resolve the role of the comparison other as it relates to compensation, however few have investigated the role of individual differences.

Equity Theory and Pay Satisfaction

Equity theory (Adams, 1963; 1965) is considered one of the main theories of the social comparison process, and has been rigorously tested as a way to understand organizational behavior (Greenberg, 1994). The theory suggests that individuals compare their ratio of inputs to outcomes against those of a referent (comparison) other. If the individual determines that the ratio is unequal, there is said to be a state of inequity that leads to psychological tension. The individual can relieve this psychological tension by: actively changing their own inputs or outputs, cognitively distorting their inputs or outputs (justification), changing the comparison other, or leaving the field (quitting).

Referent-related pay differentials are said to be the precursors to judgments of pay equity, which consequently impacts perceptions of pay satisfaction (Summers & Hendrix, 1991). Research has looked to test whether pay satisfaction is best predicted by equity perceptions or by actual salary.

Blau (1994) investigated the importance of referents in making judgments of pay satisfaction and pay equity. Participants were asked to indicate the importance and perceived pay levels of a number of referents along with their own actual salary and pay satisfaction. The results indicated that pay inequity was the best predictor of pay satisfaction, more so than actual salary. In a similar vein, both Sweeney, McFarlin, and Inderrieden (1990) and Summers and DeNisi (1990) have found that pay inequity accounts for unique variance in pay satisfaction that is not predicted by actual salary level. It also appears that pay inequity not only predicts attitudes (i.e., pay satisfaction), but also behavior, as Patchen (1961) has found that perceptions of equity were more predictive of behavior (i.e., absences) than actual salary.

Research has also attempted to test the strength of the relationship between inequity and pay satisfaction. For example, Homans (1961) conducted early research that served as a precursor to much of the theory surrounding social comparison. He studied a utility company with two job types: cash poster and ledger clerk. Due to an irregularity in the compensation system, the pay for the two positions was the same despite the fact that ledger clerk was the promotional step after cash poster which involved more thinking and responsibility. Homans (1961) found that the ledger clerks were dissatisfied with their pay in comparison to the cash posters and felt they deserved "just a few dollars more [than the cash posters] to show that the job is more important" (pg. 261). This appears to be early evidence suggesting employees' pay satisfaction may be partially determined as a result of social comparison in the work environment. One of the reasons for the popularity of many social exchange theories may be that they have much in common with intuitive, commonsense assumptions about the nature of individuals (Mowday, 1996).

However, there are certain propositions of social comparison that need more study and operationalization (Goodman & Friedman, 1971; Mowday, 1996; Greenberg, 2003), including how to predict the target of comparison as well as how the inputs and outputs of the comparison other are perceived. Studying referents has been difficult partly because the number and classification of referents is almost infinite, and can include the self, generalized others, promises made by the organization, external employees, employees in the same organization, employees in the same department, friends, and even family members (Goodman, 1974; Taylor & Vest, 1992; Law & Wong, 1998; Hills, 1980). Frequently the comparison other is ambiguous; if different subjects use different referents, interpretation of empirical results can become problematic. A number of

studies have attempted to more closely define not only the individuals who form the basis of pay-related comparisons but also the range of responses associated with making different comparisons. I will begin by outlining some of the more significant studies in referent selection.

One of the most important referent selection studies was that of Goodman (1974), who posited that referent selection was based on both the information availability and personal relevance of the referent. Goodman (1974) went further to describe the processes behind these two drivers of referent choice. He suggested that information availability is determined by personal factors and salient elements in the target's environment. As contact and exposure to a potential referent increases, the information available to make comparisons also increases. Thus, information availability can be impacted by factors ranging from social networks to the physical layout of the organization. Individual differences also may emerge in each person's propensity to conduct a search for a referent other. Goodman has further suggested that referent relevance is determined by the instrumentality of the referent for fulfilling the psychological needs of the individual. These psychological needs can include a need for performance feedback, a need for achievement, or needs related to self-esteem. A referent may also be related to *multiple* needs, and these needs may vary in strength, making the referent more relevant. The relevance of a given referent may also be influenced by socialization processes, as individuals learn "appropriate" comparison targets. Instrumentality can also be influenced by the ease of making the mental calculation and socialization about who are appropriate referents.

Goodman (1974) also distinguished between three general classes of referents. "Other" includes all individuals (different from the self, or target) who may be in similar jobs or organizations, it also includes family, friends, social contacts, and even media reports. The "System" referents include aspects of the pay system and the administration of the compensation system. When an individual joins an organization, the membership connotes an implicit expectation between the individual and organization in regards to inputs and outcomes; this contract of ratios promised or expected by the target represents the "System" referent. The "Self" referent class includes input/outcome ratios that are unique to the individual, but different from what currently exists; this may include a comparison to a past job, an ability to fulfill the role of family provider, or future goals of the individual.

In part one of Goodman's study, participants were asked to overall indicate if they were satisfied with their pay. In a follow up interview, they were then asked how they determined their (dis)satisfaction. This qualitative data suggested that the determination of pay (dis)satisfaction is frequently influenced by comparisons to others. The use of referents was actually found to be more strongly related to pay satisfaction than objective measures such as actual salary, length of tenure, education, and age. Responses also indicated that people use *multiple* classes of referents at the same time to determine their satisfaction. The most frequently used referent was the class of "Other", which includes referents both inside and outside the organization. However, individuals tended to use the "Other" category in conjunction with the other two categories ("System" and "Self"). The use of referents was also found to be more strongly related to pay satisfaction than "objective" measures such as actual salary, length of service, education, and age. Level of

professionalism (measured through conference attendance) was related to making more comparisons to others outside the organization. This could be due to the accessibility of this information for professionals as opposed to nonprofessionals. Overall, these interviews supported the role of comparison others in affecting pay satisfaction.

Summers and DeNisi (1990) have recently attempted to replicate Goodman (1974). These authors extended the Goodman study by using a sample that cut across the geographic boundaries and socialization processes of one collection site. Using survey data, pay equity was assessed in comparison to nine different referents. Respondents were asked which referents were most important when they considered pay. Results indicated that 38% of the sample relied on a generalized referent not specifically inside or outside the organization, 35% of individuals used the self as a referent, 20% indicated using inside referents and 6% used an outside referent.

In addition, individuals who perceived unfavorable inequity relative to a particular referent group tended to be more dissatisfied with their pay. This relationship was maintained regardless of the referent group used by the participant. Based on these findings, the authors hypothesized that people may use a number of generalized, non-specific referents to form a gestalt as the basis for their comparisons. That is, individuals know they compare their pay against someone or something, but when asked a specific target, it is difficult to predict the actual referent with any certainty. Summers and DeNisi (1990) suggest the use of a generalized referent in future research to capture the idea that people are unable to individuate their referents.

Overall, an examination of the past research on referent selection shows abundant evidence that individuals' judgments of pay satisfaction are related to perceptions of

equity in comparison to referents (Goodman, 1974; Kulik & Ambrose, 1992; Taylor & Vest, 1992; Law & Wong, 1998; Summers & Hendrix, 1991; Summers & DeNisi, 1990; Sweeney et al., 1990). On the basis of this review, it was hypothesized that:

Hypothesis 1: Referent related pay differentials are related to pay satisfaction.

Hypothesis 2: Referent related pay differentials are a better predictor of pay satisfaction than actual salary.

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Referent Selection

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As previously indicated, one of the limitations of equity theory is that it makes no specific predictions about referent choice (Kulik & Ambrose, 1992). As these authors note, there has been an abundance of research attempting to reconcile this issue with no firm conclusions. It is apparent that people do compare their salary to others, however it appears that individuals may find it difficult to differentiate between the different referents that impact their overall judgments of equity. This gestalt may include perceptions of referents that include coworkers, neighbors, and colleagues in professional networks. The referent groups identified in some of the more significant previous research studies have been summarized in Table 1.

Much of this research surrounding referent use and selection has two similarities. First, the classes of referents tend to be study-specific such that researchers have not used similar classifications of referents across studies, making research synthesis difficult.

Second, individuals appear to use referents differentially, but may have difficulty making a distinction between them; indeed it may be that a generalized impression consisting of multiple referents forms in people's minds as a source for comparison (i.e., Homans, 1961; Finn & Lee, 1972; Taylor & Vest, 1992; Hills, 1980; Heneman, Schwab,

Standal, & Peterson, 1978; Scholl et al., 1987; Ronen, 1986; Oldham, Kulik, Stepina, & Ambrose, 1986; Austin, McGinn, & Susmilch, 1980; Ambrose & Kulik, 1988). As a result, the comparison process is related to judgments of both equity and satisfaction, but it can be a challenge for both researcher and participant alike to determine the specific target of comparison.

One potential shortcoming of this literature is an assumption that pay referents mean the same to everyone. Typically, past research on compensation and pay referents has presented a number of referents for participants to indicate which are salient or asked participants who they compared themselves to (e.g., Taylor & Vest, 1992; Hills, 1980). Results are then factor analyzed based on the full sample, an analytic procedure that may mask individual differences in referent selection.

Taylor and Vest (1992) explored the extent to which public sector employees make comparisons and how these comparisons may impact pay satisfaction. Using a relatively large number of referent choices (17 choices), they asked participants to indicate how often they used each by asking on a strongly disagree to strongly agree scale "I often compare my pay to [X]." Based on a factor analysis of the results, the authors concluded that individuals tended to have four classes of referents: 1) external (those who work for other employers), 2) personal (friends, family, and one's own accustomed pay), 3) economic (cost of living and the amount of income required to meet the individual's needs), and 4) ego (an ambiguous standard internal to the individual). These factors were then regressed onto pay satisfaction. Comparisons to the external class were most strongly related to feelings of pay dissatisfaction, which the authors note may have been due to the fact that this sample was entirely government employees. Interestingly,

comparisons to the personal referent class tended to be related to *increased* feelings of pay satisfaction. The authors note the need for a multidimensional approach, because while the zero-order correlation of the economic referent was significantly related to pay satisfaction, a multiple regression analysis indicated that the economic factor added no unique variance to the prediction of pay satisfaction. As a result, the authors urge researchers to note that 1) multiple referents are salient to individuals and 2) different referent groups may operate to impact pay satisfaction and dissatisfaction differentially. These results are typical of the referent research which has identified a number of potential referents.

Some have suggested that understanding referent selection can be accomplished by examining the selection process over time. Stepina and Perrewe (1991) examined the selection process over time and found that despite the predictions of equity theory (that individuals may change a comparison other when dissatisfied), individuals tended to keep the same comparison other over time. The fact that the results were consistent with a dispositional, individualized approach led the authors to suggest future research on individual variables that may predict referent choice and pay satisfaction.

More recently, a policy capturing approach has been suggested as a better way to capture the referent selection process (Law & Wong, 1998). Policy capturing is a regression based methodology where participants are asked to make decisions in response to a series of scenarios featuring manipulated independent variables (Aiman-Smith, Scullen, & Barr, 2002). The decision outcomes are then regressed on the manipulated variables; the resulting regression coefficients are used to make inferences about participant preferences. Law and Wong (1998) assert that the problems with the direct

approach (i.e., asking participants which referents they use) for measuring referent

selection are twofold. The first problem is that different respondents may use different

sets of referents, which makes cross-individual comparison especially difficult. In

addition, the frequency of comparison (with a certain referent group) is not necessarily

equivalent to how strongly this referent affects pay satisfaction. To empirically support

these challenges, the authors used three approaches to estimate the relative importance of

various referent groups. The *direct approach* asked on a 7 point Likert scale whether

individuals often compare their pay with five different referent groups: 1) family and

close friends, 2) those with the same job internally, 3) those with the same job externally,

4) those with the same education and experience, and 5) immediate supervisors. The

inferential approach asked five statements about the participant's pay satisfaction with

respect to the previously listed referent groups. In the *policy capturing approach,*

participants were placed into a hypothetical scenario with computer generated pay levels

for themselves and members of the previously listed referent groups. Participants were

then asked on a 6 point scale whether they were satisfied or dissatisfied with their own

pay in this scenario. The policy capturing approach used the difference between the

hypothetical pay level of the participant and various referent groups as predictors of the

pay satisfaction measure to identify the most significant referent groups.

The results of the direct approach suggest that most participants use multiple

referents when comparing their pay with others. T-tests between indicated referent groups

suggested that individuals tend to use all referent groups equally, except for the use of

supervisor as a referent. As predicted, the frequency of the comparisons measured under

the *direct approach* shows no relationship with pay satisfaction. Examining the results of

using the *inferential approach* reveals that although the use of all referent groups (except those with similar qualifications) are significantly related to satisfaction, internal colleagues appear to be the best predictor. When using the *policy capturing approach*, internal colleagues again appear to the best predictor of pay satisfaction. Furthermore, policy capturing revealed that individuals with the same education and experience are also an important referent of pay satisfaction. One of the benefits of the policy capturing approach is that it explained significantly more of the variance in pay satisfaction than the direct approach. The authors conclude that future research should be sure to distinguish between the frequency of comparison and the relative importance of various referents. In addition, their results support the explanatory power of using the policy capturing approach in compensation research. Thus, the current study employed the policy capturing approach.

As previously noted, one general trend across referent selection studies is that it has been especially difficult to reconcile whether participants differentiate between referents when making judgments of equity. As referent selection is hypothesized to be related to the information available about that referent (Kulik & Ambrose, 1992; Goodman, 1974), it seems logical to expect that more information will be available about internal referents. The previous research on referent selection tends to frequently find empirical evidence for an internal referent (Finn & Lee, 1972; Hills, 1980; Heneman et al., 1978; Scholl et al., 1987; Ronen, 1986; Oldham et al., 1986; Ambrose & Kulik, 1988). Furthermore, internal colleagues have been identified as the best predictor of pay satisfaction using both an inferential approach and a policy capturing approach (Law & Wong, 1998). As a result, it was hypothesized that:

Hypothesis 3: Pay equity in reference to internal colleagues will be the strongest predictor of pay satisfaction.

Equity Sensitivity

One conceptual advancement that has helped the understanding of equity theory, but has yet to be tied to referent choice, is the construct of equity sensitivity. Interestingly enough, reviews of equity theory have repeatedly called for a construct that could tap potential differences in reactions to equity (see Mowday, 1983; 1996). The norm of equity has predictive power, but there are exceptions that have already been demonstrated empirically in organizational justice research (e.g., Shapiro, 1975; Greenberg, 1978). The theory behind equity sensitivity proposes that individuals react in consistent but different ways to equity and inequity because they are differentially sensitive to equity issues (Huseman, Hatfield, Miles, 1985; 1987). As I will outline in the current section, this sensitivity is found to be related to individual attitudes and behaviors.

Huseman et al. (1987) segment the population into 3 categories: Benevolents, Equity Sensitives, and Entitleds. In the initial version of the theory, it was posited that Benevolents prefer to have a higher work input to outcome ratio than others (i.e., a greater tolerance than others for being under-rewarded). Equity Sensitives are "in the middle," have a preference for the equity norm, and would be the individuals most likely to follow the original predictions of equity theory closely. Entitleds, on the other hand, have a preference for a lower input to outcome ratio than others, which may be due to the fact that they have a high threshold for feeling indebted and a preference for over-reward situations.

The Equity Sensitivity Instrument (Huseman et al., 1985) is a 5 item scale. On each item, both an Entitled response and a Benevolent response are featured. Participants indicate their agreement with each statement by distributing 10 points between the two statements. The instrument is then scored by tallying the points allocated to the Benevolent responses, such that higher scores indicate Benevolence. King and Miles (1994) have established evidence that the ESI is psychometrically sound, with acceptable reliabilities and factor analyses that support its unidimensionality. They also demonstrated that the ESI is both discriminantly and convergently valid in relation to other pre-established scales.

In some of the first empirical evidence supporting the equity sensitivity construct, Huseman et al. (1985) found that as predicted, under rewarded Benevolents tended to have higher job satisfaction than under rewarded Entitleds or Equity Sensitives. Furthermore, equitably rewarded Entitleds were less satisfied than Benevolents and Equity Sensitives with the same input/outcome ratios. In a later study, Miles, Hatfield, and Huseman (1989) found that when indicating a preference for amount of work inputs, the data is consistent with the theoretical propositions of the Equity Sensitivity construct. Consistent with Huseman et al. (1985), these authors found the preferred input/outcome ratio for Benevolents was lower than for the Equity Sensitives and Entitleds. However, they also found that the 3 Equity Sensitivity groups have relatively similar attitudes about the amount of outcomes they receive but *dissimilar* attitudes about how much work input should be necessary (given the level of outcomes). Thus, it may be that the Benevolents' preference for high inputs that drives these results. Furthermore, King, Miles, and Day

(1993) found that Benevolents experience less distress than Entitleds when in either under-compensation or over-compensation scenarios.

Consistent with these findings, Patrick and Jackson (1991) have found that Benevolents and Equity Sensitives were both more likely to alter their inputs upwards during over-reward conditions. Their data showed little distinction between groups in response to under-reward situations, perhaps because this situation was focused on a difference in outcomes (i.e., participants were paid less than referent others for doing the same work).

More recently, Allen and White (2002) have made an important distinction that helps explain how individuals may respond to under-reward conditions. In one scenario, *outcomes* created the source of inequity. Specifically, participants received less pay than referent others for doing the same amount of work. Under these conditions, Entitleds significantly reduce their effort or transfer more than any other group. In the other scenario, a difference in *inputs* created the under-reward situation, as participants received the same amount of pay for doing more work than their referent. There were significant differences between all three Equity Sensitive groups in this condition. Specifically under the "input-underreward" conditions, Benevolents were significantly less likely to respond by reducing effort or attempting to transfer. Overall, the authors concluded that Entitleds are more likely to react to pay inequity, while Benevolents will be less likely to react as they appear to have a higher threshold for being under-compensated. These aforementioned results seem to support the idea that equity sensitivity impacts the relationship between equity perceptions and pay satisfaction. This relationship is shown in Figure 3.

In addition to different preferences for inputs, outputs, and equity ratios, research has also shown that the different Equity Sensitivity groups may have different values. For example, King et al. (1993) found that Entitleds placed more importance on pay and that Benevolents place more importance on work characteristics when asked to fill out the Job Descriptive Index. Similarly, Miles, Hatfield, and Huseman (1994) found evidence that when asked to rate the importance of a series of job outcomes, Entitleds tended to place a greater focus on outcomes that were extrinsic and tangible. Benevolents, on the other hand, tended to place more of a focus on outcomes that were intrinsic and intangible. Currently, the ESI appears to have significant promise for helping to understand more about individual reactions to equity (Miles, Hatfield, & Huseman, 1994; Allen & White, 2002). More specifically, the ESI can help organizational researchers to understand more about idiosyncratic reactions to compensation, as much of the empirical work on equity theory has focused on compensation (Mowday, 1996). As previously noted, research on equity theory has fallen out of favor as of late (Mowday, 1996; Greenberg, 2003) because it has not been able to predict reactions to equity, particularly regarding referent choice. Some have suggested that the investigation of individual differences may be a way to better comprehend reactions to equity (Ambrose & Kulik, 1999; Mitchell & Mickel, 1999; Barber & Bretz, 2000). Past empirical research has found that Entitleds tended to be more likely to react to pay inequities than Benevolents (Allen & White, 2002). As a result, it may be that the relationship between pay inequity and pay satisfaction is influenced by the extent to which the individual is sensitive to equity (as shown in 3). As a result, it was hypothesized that:

Hypothesis 4: Equity Sensitivity will moderate the relationship between referent related pay differentials and pay satisfaction.

Although the ESI may have promise as a moderating variable in pay level-pay satisfaction relationships, it has been argued that most organizational theories related to compensation are merely derived from more general theories of motivation or even social comparison (Thierry 1992; 2001). As a result, these theories fail to clarify the meaning of pay for an individual: a potentially multi-faceted meaning which may have an influence on pay satisfaction. Thierry has suggested that these meanings are a result of the special significance that pay takes on and that these meanings are tied to the individual's self identity.

In the following section, I contend that the strength of these symbolic meanings influences not only individual attitudes (Equity Sensitivity) but individual perceptions (responses to referent-related inequity) as well. I will briefly discuss some of the organizational research that has attempted to measure some of the subjectively determined meanings of money. I will conclude by focusing specifically on empirical work that has attempted to address the multiple meanings of pay explicitly: Thierry's "reflective theory" of pay.

The Meaning of Money

Money frequently has been studied as an inducement to work. Clearly, practitioners and business people frequently use money as a way to reward employees for their performance of assigned work tasks (Milkovich & Newman, 1998; Lawler, 1987). However, the evidence surrounding the motivational potential of money is debatable.

Since the early work of Herzberg, Mausner, & Snyderman (1959), money has been thought of as extrinsically motivating, even though some have noted that his data suggested that pay could have both extrinsic and intrinsic features (see Thierry, 1990; 1992). McGregor's (1960) Theory X vs. Theory Y assumed that people perceived being motivated by money as different than being motivated by higher order needs (e.g., achievement, recognition) and would react differently. Indeed, Deci and Ryan (1985) have shown that providing money for performing a task decreases subsequent intrinsic motivation on the part of participants in the lab, a finding they contend extends to paying salary for completion of job tasks.

However, more recent research has shown that money can have numerous meanings (i.e., Mitchell & Mickel, 1999) to individuals. For instance, it can even reflect information about higher order needs such as relative standing amongst peers, or even accomplishment. Later work by Herzberg (1966) has recognized that there may be certain individuals who will be motivated by hygiene factors such as money. The debate over money continues to this day.

Not only do there appear to be multiple dimensions of symbolic meaning, but there appear to be inter-individual differences in these attributed meanings also. Little research has investigated how these individual differences relate to referent choice. Similar to equity sensitivity, the individual difference of money meanings may help lead to better understanding of the relationship between inequity and pay satisfaction. The challenge becomes how to reconcile the multiple meanings of money with individual perceptions of monetary inequity. I suggest that by paying attention to these individual

differences in the symbolic value of money, researchers will gain understanding about perceptions of inequity; particularly in regards to the referent comparison process.

Unfortunately, empirical research on compensation has shown less of a focus on individual differences in the meaning people attach to money (Mitchell & Mickel, 1999). Recently, there have been a number of different conceptualizations of how individuals may differentially value money and how these individual differences can be measured. Table 2 summarizes the different empirical and theoretical conceptualizations of the meaning of money. The conceptualizations most relevant to the study of inequity will be outlined in the following section. One important trend in this research is that most of these conceptualizations of multiple meanings include a scale dimension that relates to money as a marker of status and achievement. Money typically is said to satisfy extrinsic motives (Lawler, 1990), although this interpretation suggests money may also satisfy individual intrinsic motives.

One of the more notable attempts to bring individual difference constructs into compensation research is that of Tang and his colleagues. Tang (1992) has developed the Money Ethic Scale (MES) to measure money related attitudes, behaviors, and cognitions in organizational settings. Tang (1993) has suggested that attitudes towards money may have a significant impact on the perception of work related tasks, reward systems, and intrinsic motivation. Tang (1992) developed a preliminary set of items to tap dimensions linking money to different individual needs, positive and negative attitudes, management/control, obsession, and power. He found that the best 30 items clustered into six distinct factors with satisfactory internal consistency and test-retest reliability. The first factor, *Good*, referred to the idea that money is important and valuable while

factor 2, *Evil*, consisted of items that indicated negative attitudes towards money, including shame. *Achievement* referred to money as a symbol of success. The fourth factor, *Respect*, was consistent with the idea that money is associated with gaining self-esteem and respect from the other members of the community. *Budget* was related to the retention and careful use of money (i.e., paying bills on time). The sixth factor, *Freedom/Power*, was related to seeing money as a source of autonomy, freedom, and security.

Tang (1992) found that individuals with a high income tended to be more likely to see money as representative of achievement and less likely to see money as evil. In addition, different dimensions of the MES predicted different affective outcomes. Individuals who tended to see money as achievement also tended to have lower satisfaction with work, promotions, supervision, co-workers, and life in general. Those who saw money as freedom had low satisfaction with work, pay, co-workers, and life in general. Finally, those who tended to score high on the budget dimension, also tended to be older and have more life satisfaction.

Tang (1993) has also suggested that the different dimensions of the MES represented affective (Good & Evil), behavioral (Budget), and cognitive components (Achievement, Respect, Freedom) and that the cognitive components are associated with an external locus of control. His data demonstrated that the cognitive component of achievement was related to external locus of control, symptoms of work related stress, and being male.

Tang (1995) has more recently developed a shortened version of the MES with 12 items by selecting the two highest loading items from the larger MES. He demonstrated

that the correlations between the short version and long version of each scale dimension were adequate to believe that researchers can confidently use the short version. Factor analyses indicated that the shortened scale has 3 factors: *Success* (included the long version factors of Achievement, Power, Respect, Good), *Budget*, and *Evil*. These factors represent cognitive, behavioral, and affective components respectively. In addition, individuals who tended to endorse the MES items also tended to have a low level of pay satisfaction.

Other scholars have researched additional dimensions that money may represent. Srivastava, Locke, and Bartol (2001) have recently attempted to capture money motives (cognitions) as a way to explain how the importance of money (i.e., its valence) negatively impacts subjective well-being. Money motives were operationalized as three higher order factors: *Positive Motives* which refer to meeting needs and using money as a measure of market worth and achievement. *Negative Motives* refer to a desire to feel superior in social comparison, to acquire power over another individual, or to attempt to overcome self-doubt by showing off. *Freedom of Action* refers to spending money the way one would like to (e.g., charity, shopping, etc.). Srivastava et al. (2001) also measured general money importance as it relates to different uses (i.e., helping others, global welfare, etc.) and money aspiration (desired salary in 12 months; desired salary in 5 years). They found that the negative relationship between money importance and subjective well being was mediated by Negative Motives. This conceptualization of Negative Motives may be especially relevant to referent related research as it encompasses the idea of social comparison with others.

Although these conceptualizations of monetary symbolism have been promising, the focus of the current study is on money as a means of payment in organizations. Thierry (2001) has asserted that his own "reflective theory" (1992; 2001) has an explicit focus on pay as it relates to self-identity and work behavior, a focus that is reflected in the measure. In contrast, the equity sensitivity does not focus on specific outcomes such as pay, rather it focuses on a set of indefinite outcomes. Thierry's "reflective theory" focuses on the rewarding aspects that multiple meanings of money may reflect. He asserts that pay itself "reflects" assumptions about the employer-employee relationship and that it may have multiple categories of meaning. The salience of pay is hypothesized to be directly related to the extent that it conveys information about domains relative to the individual's self-concept. As pay takes on more meanings, it may take on more importance to the extent that it can be a way to satisfy motives in more domains relevant to the self-concept. Consequently, pay is more salient to individuals who see more symbolic meaning in their pay. This increased salience may lead some to be more sensitive to the outcome that pay represents.

Similarly, Summers and DeNisi (1990) have noted that pay valence was correlated with perceived inequity, such that those individuals who found pay to be more attractive tended to perceive more inequity. Previous work on equity sensitivity has also found that when asked to distribute points on the Job Descriptive Index, Entitleds (e.g., individuals high in equity sensitivity) placed significantly more importance on pay as a work characteristic (King, Miles, & Day, 1993). These results suggest that valuing money may be related to judgments of equity. Thierry (2001) also explicitly suggests that those who see more meanings in money are more likely to value money. As a result, it

may be the case that equity sensitivity is a spurious moderator of the relationship between equity judgments and pay satisfaction. Equity sensitivity may in fact be an outcome of attaching more meanings to money (see Figure 4). Thus, it was hypothesized that:

Hypothesis 5: Individuals who perceive more reflected meanings of pay are more likely to be Entitled.

Thierry (2001) has more specifically outlined <u>four</u> potential categories of pay meaning. The first is related to motivational properties. Pay reflects an instrumentality that allows for goal accomplishment; a vehicle that can lead to the satisfaction of certain needs or motives. For example, one may consider pay to be symbolic of things like status in society, recognition, and stability, and can be associated with the idea of "expectancy." Consequently, the motivational meaning of pay is a reflection of outcomes that an individual is motivated to satisfy with money. As individuals high in equity sensitivity (e.g., Entitleds) tend to be more outcome focused (King et al., 1993; Miles et al., 1994), it was hypothesized that:

Hypothesis 6: Individuals who perceive the motivational properties of pay are more likely to be Entitled.

Pay can also signal feedback about job performance, which Thierry (1992; 2001) calls relative position. Relative position has two important aspects. The first is to give feedback about performance in relation to a certain *standard or goal*. Secondly, pay reflects feedback about performance in relation to *others*. On a larger scale, relative

position may also informs the individual about the level of appreciation that the organization has for their work.

Pay also reflects the extent to which the individual has the autonomy to regulate themselves and others, also known as "control." Typically, in organizations, an individual will be dependent not only on the manager to set goals, but also on a network of people in the environment who provide resources necessary to do the job. As a result, pay may reflect the extent to which the person is 1) able to regulate their own behavior in an organization and 2) alter the behavior of others in the organization towards what the individual wants (i.e., more valued outcomes). The idea of pay reflecting control can be seen in terms of both organizational hierarchy and role set. Hierarchically, job level tends to be related to both level of responsibility and autonomy, and as a result, salary level. Role is also related to hierarchy such that important roles in the organization tend to be commensurately compensated. As a result, pay serves as a proxy for the amount of power and control the individual may exert. In a similar vein, Locke (1976) has noted that individuals may treat their pay as a proxy for the value of the contribution that they make to the organization.

As Thierry (2001) notes, the final meaning of pay, spending, is closely related to the first. The difference is that the motivational meaning focuses on pay as a source of intangible opportunities, while the spending meaning reflects concrete goods and services that can be purchased. Past research on equity sensitivity has found evidence that Entitled individuals have an intolerance for under-reward situations because they are focused on outcomes, the source of their satisfaction (King et al., 1993). Furthermore, Miles, Hatfield, and Huseman (1994) found that Entitleds tend to be more focused on extrinsic

rewards, such as pay. Thierry (1998; 2001) has posited that one of the meanings of pay (spending) is related to the satisfaction that results from being able to purchase tangible goods and services. As a result it was hypothesized that:

Hypothesis 7: Individuals who perceive more meanings of pay related to spending are more likely to be Entitled.

Thierry notes a general need for more research on pay and compensation, as reflective theory hypothesizes that the more reflective pay is (regarding multiple meanings), the more influence it has over a person's performance and satisfaction level (Thierry, 1998; 2001). The converse to this proposition is that when pay is less meaningful to an individual, it has less of an influence on their behavior. Rice et al. (1991) have found that the more important the outcome, the more likely the outcome will be associated with a larger range of strong emotions as opposed to neutral ones. The current study proposed that individuals who see more reflected meanings of money will be more sensitive to changes in pay equity. Similar to equity sensitivity, the meaning of pay may be an individual difference that impacts the relationship between perceptions of equity and pay satisfaction (see Figure 2). Thierry (2001) has suggested the metaphor of a mirror to represent the individual meanings of pay. Indeed, by considering the reflected meanings of money in sum, the current study proposes that each meaning of money serves as a cognitive link sensitivity to financial issues and individual behavior. Thus, more reflected meanings may be associated with individual sensitivity to pay satisfaction scenarios. As a result, it was hypothesized that:

Hypothesis 8: The reflected meaning of pay will moderate the relationship between referent related pay differentials and pay satisfaction.

Furthermore, some have proposed that money, and pay more specifically, has a special connotation (Furnham & Argyle, 1998; Thierry, 1998, 2001). As noted above, there are a number of studies that have investigated the multiple meanings of money (i.e., Furnham, 1984; Mitchell & Mickens, 1999; Tang, 1992). It is suggested that because pay can have multiple meanings and represent a number of different things to people that a scale focused on pay will have greater predictive utility than using unspecified outcomes. The MOP focuses on pay specifically, and the ESI only focuses on indefinite outcomes, and it may even be the case that equity sensitivity is an outcome of perceiving meanings of pay; therefore it is hypothesized that:

Hypothesis 9: The reflected meaning of pay will be a stronger moderator of the relationship between referent related pay differentials and pay satisfaction than Equity Sensitivity.

What the previous studies demonstrate is clear evidence for the multifaceted symbolic value of money. There are individuals who see money as a way to satisfy multiple needs in their life, both intrinsic and extrinsic (Herzberg, 1966; Mitchell & Mickel, 1999). It also appears that different facets tend to be predictive of different behaviors. One dimension that tends to consistently emerge is the idea that money is related to status and accomplishments on the job, which all fill higher order needs that are typically categorized as intrinsic. The notion that pay can also serve as a marker of

achievement is indicated by the *relative position* scale of the MOP. Herzberg (1966) noted that money can serve as both a motivator and a dissatisfier. Although it was eventually classified as a dissatisfier, Herzberg noted that money can serve as a motivator because it reflects effective performance on the job in comparison to others. Lawler (1971) has used the metaphor of pay as a yardstick with which to measure performance. The relative position subscale of the MOP reflects whether pay represents feedback in comparison to others (Thierry, 2001). It may be that the relationship between the pay of others and pay satisfaction is a result of whether the individual feels that pay represents their performance in comparison to others. It was proposed that individuals who see money as symbolic of accomplishment (an intrinsic factor) have more of both their intrinsic and extrinsic needs met through what they receive in compensation. As a result, these individuals will be more likely to be focused on what they're getting in comparison to others. It is expected that for these individuals, referent outcomes would relate more strongly to satisfaction. As a result, it was hypothesized that:

Hypothesis 10: Perceptions of pay as a marker of relative position will moderate the relationship between referent related pay differentials and pay satisfaction.

Finally, Ordonez, Connolly, and Coughlan (2000) have suggested that when individuals are presented with a number of referents, they selectively focus on a smaller subset. They have further suggested that the search process is impacted by individual differences. As a result, the current study posited that certain individual differences related to the meaning of pay covary with the selection of certain referents.

Thierry (2001) has suggested that money can represent a proxy for the level of control an individual has in an organization. I suggest that level of control in an organization is most likely to be related to comparisons against others within the same organization. As a result, it was hypothesized that:

Hypothesis 11: Individuals who perceive more meanings of pay related to control are more likely to focus on the Internal referent group.

Thierry (2001) has also suggested that money can represent a proxy for performance not only relative to organizational goals, but also relevant to others in the organization, signaling relative position. I suggest that relative position is also most likely to be related to comparisons against others within the same organization. As a result, it was hypothesized that:

Hypothesis 12: Individuals who perceive more meanings of pay related to relative position are more likely to focus on the Internal referent group.

The third symbolic meaning of pay is motivational properties (Thierry, 2001). This represents the achievement of life goals and accomplishments using money. I suggest that life goals and accomplishments are most likely to be compared with individuals outside the organization and in their social network (similar education and experience). As a result, it was hypothesized that:

Hypothesis 13: Individuals who perceive more meanings of pay related to motivational properties are least likely to focus on the External referent group.

Study 1 – Substantive Validity Assessment of Meaning of Pay Instrument

There exists a fair amount of published empirical research to support the construct validity of the Equity Sensitivity Instrument (i.e., Miles, Hatfield, & Huseman, 1994; Allen & White, 2002; Patrick & Jackson, 1991), however less evidence exists on the reliability and validity of the meaning of pay (MOP) instrument. As a result, the goals of Study 1 were twofold. First, to generate additional items to fully cover the four construct domains specified by Thierry (2001) in his writings on the reflected meanings of pay, and second, to empirically establish additional construct validity evidence for the MOP.

Thierry (2001; 1998) has suggested that the meanings of pay reflect needs that are salient to different individuals and connected to self-identity. Thus, in Study 1 an explicit attempt was made to map the reflected meanings onto an empirically established taxonomy of human needs. Sheldon, Elliott, Kim and Kasser (2001) have demonstrated empirical evidence that individual needs can include competence, autonomy, popularity-influence, and money-luxury. Sheldon et al. (2001) developed these definitions of competence and autonomy based on the self-determination theory of motivation (Deci and Ryan, 1985), which suggests that people want to feel that they are effective in their daily life (competence) and that people want to feel that they have the freedom to choose, as opposed to being externally determined (autonomy). Furthermore, Sheldon et al. (2001) used a to some extent intuitive theory of human needs, the "American dream" of winning friends and influencing people (Carnegie, 1936). This theory suggests that people are more satisfied when they are able to acquire popularity-influence and money-luxury items (Derber, 1979).

These four needs appear to map onto the MOP factors of motivational properties (popularity-influence), relative position (competence), control (autonomy), and spending (money-luxury), respectively. Sheldon et al. (2001)'s construct definitions were then used to aid in the generation of additional items. An attempt was made to have eight items represent each dimension of the MOP, a number which allows for items to be dropped while still having the minimum 4-6 items per scale recommended by Hinkin (1998). Further, Harvey, Billings, and Nilan (1985) have suggested a minimum of 4 items per scale and that it is difficult to improve the internal consistency of a scale with 5 well constructed items (Hinkin, 1985; Hinkin & Schriesheim, 1989; Schriesheim & Hinkin, 1990). All 32 items are listed in Table 3. New items generated by the author are marked with an asterisk.

The current study used a substantive validity assessment to support the construct validity of the MOP items. A substantive validity assessment differs from a Q-sort in the calculation of indices that indicate a given item's potential construct validity during a confirmatory factor analysis (Anderson & Gerbing, 1991). Anderson and Gerbing (1991) have recommended the method of substantive validity assessment for situations in which it is difficult to gain access to the large samples needed for empirical evidence of construct validity (i. e., confirmatory factor analysis). The method involves using judges who are similar to those in the sample of interest. Judges are given definitions of each of the constructs in everyday terms and asked to assign each item to the construct represented. Two indices can be calculated, the proportion of substantive agreement, p_{sa}, and the substantive validity coefficient, c_{sv}. The proportion of substantive agreement is the proportion of respondents that assign an item to its intended construct, while the

substantive validity coefficient is a more conservative index, as it indicates the extent to which respondents assign an item to the intended construct as compared to other options. The calculation of these indices are indicated by the equations $p_{sa} = n_c/N$, and $c_{sv} = (n_c - n_o)/N$, where n_c represents the number of respondents that assign an item to the correct construct, N represents the total number of respondents, and n_o represents the highest number of assignments to any other potential construct. It is suggested that larger, positive values of both of these indices indicate higher construct validity and are best used comparatively, such that the items to be retained are those with larger values on these indices.

A substantive validity assessment appears to be an appropriate way of assessing the construct validity of an item. Anderson and Gerbing (1991) have empirically demonstrated that the results from a substantive validity assessment significantly predicted the performance of individual items in an assessment of its construct validity (e.g., factor loadings in a confirmatory factor analysis), differentiating items with high construct validity from those with low construct validity.

Method

Participants

The judges for the substantive validity analysis were recruited from a pool of current and recent (i.e., graduated within two years) masters level business students using the snowball technique. The snowball technique is a form of non-probability sampling asks individuals enlisting other members of the target population to participate in the study (Hoyle, Harris, & Judd, 2002). Consistent with Anderson and Gerbing's (1991)

recommendations, fourteen judges who fit the criteria and were not currently enrolled at the site of the main study participated in the task.

Procedure

Construction of Item Sort Task. An item-sort task was generated by randomly ordering the 32 items, following each item was a blank line for the participant to indicate construct assignment. A construct label and a short one sentence definition of each construct were placed adjacent to the items. The construct definitions given to participants are listed in Appendix C. Participants were instructed to indicate the construct represented by each item. Participants completed the task in roughly 5-10 minutes and emailed it back to the first author.

Measures

Participants evaluated items that included the 24 items from the MOP (Thierry, 2001; Shaw, 1996) and 8 new items generated by the first author (see Table 3).

Results

The two main indices of interest, the proportion of substantive agreement and the substantive validity coefficients for all items are also presented in Table 3. Most items have substantial agreement (i.e., indices above .70), however some items have negative substantive validity coefficients, which indicates questionable construct validity.

Discussion

Based on Anderson and Gerbing's (1991) recommendations, .70 was used as the predetermined cutoff on both indices for an item to be accepted for inclusion. Based on this decision rule, the results suggest that items 1, 4, 6, 7, 10, 19, 21, 23, 26 should be

removed from the scales as they may have limited construct validity. It is also important to note that of these 9 items, the relative position and spending scales each had only one deleted item. The motivational dimension had four deleted while the control dimension had three. This may suggest that the relative position and spending dimensions are in general perceived more concretely by participants.

Study 2 – Policy Capturing

The pool of refined items from study 1 was then used to represent the meaning of pay constructs to be tested in study 2. The purpose of study 2 was to test the main hypotheses presented in the introduction, using the policy capturing approach recommended by Law and Wong (1998).

Method

Participants

The participants included 145 master's level business students from a large public mid-Atlantic University. The majority of participants were male (66.9%). Fifty-seven percent indicated that their race was Caucasian, 33% Asian, 5% Black, 4% Hispanic, and 1% indicated Other. Forty-two percent indicated that their nationality was International. The mean age of participants was 28.5 ($SD = 3.10$). Most participants indicated they were not currently employed (81.4%), however 9% indicated they were employed full-time and 9% were currently employed part-time.

Measures

  Meanings of Pay

The meaning of pay (MOP) is based on Thierry's reflection theory of pay (Thierry 1998; 2001) which holds that the meaning of pay is determined by the extent to which pay "reflects" four separate domains. These factors have been labeled: 1) motivational properties, 2) relative position, 3) control, and 4) spending. These factors will be verified in the present study using confirmatory factor analysis, an analytic procedure that can be used to determine the clustering of hypothesized variables (Nunnally & Bernstein, 1967). The current scale includes 24 items from the original MOP and 8 additional items designed by the first author. The items are all scored on a 5 point Likert scale from Strongly Disagree-Strongly Agree. Scale items and instructions as given to participants appear in Appendix D.

The internal consistency of all the final sub-dimensions of the MOP was above .70, which is considered adequate. The reliability of the scales were motivation ($\alpha = .81$), relative position ($\alpha = .87$), control ($\alpha = .71$), and spending ($\alpha = .89$).

Equity Sensitivity Instrument

Equity Sensitivity was measured using Huseman et al.'s (1985) Equity Sensitivity Instrument (ESI), a five item forced distribution scale developed to elicit an individual's preferences for outcomes versus inputs in general work situations. To score the instrument, for each item, two statements are presented: one that presents an Entitled response, the other is a Benevolent response. Participants indicate their agreement with each statement by distributing 10 points between the Entitled and Benevolent statements. The ESI score is gathered by summing the points allocated to the Benevolent responses. A copy of the scale as presented to participants can be found in Appendix E. In the current study, the reliability of the ESI was $\alpha = .69$.

Pay Satisfaction

Pay satisfaction will be measured using the 2 item pay satisfaction subscale of Hackman and Oldham's (1974) Job Diagnostic Survey. The JDS has been found to have satisfactory psychometric characteristics (Burke, 1999; Hackman & Oldham, 1975). The JDS uses a Likert response format with anchors from Extremely Dissatisfied to Extremely Satisfied. The items are featured in Appendix F as part of the experimental stimulus. The coefficient alpha for the scale in the current study was $\alpha = .95$.

Organizational Attractiveness

A single item was used to measure the attractiveness of the organization's salary offer, i.e., "Based on this scenario, how likely are you to accept a job with this organization?" The response format was a 7 item scale from Extremely Unlikely to Extremely Likely.

Future Referent

A single free response item was used to measure future individual salary expectations with the question "What salary do you expect upon graduation?"

Design

This approach used in the current study is similar to the policy capturing approach of Law and Wong (1998). In this approach, participants are placed into a number of hypothetical but realistic scenarios. The policy capturing approach has been used previously in compensation (e.g., Sherer, Schwab, & Heneman, 1987) as an effective way to assess the judgments of how individuals weight different pieces of information relevant to compensation. Furthermore, an advantage of the policy capturing approach as compared to self-report is that the policy capturing approach can purportedly attenuate

social desirability effects by indirectly inferring the importance of certain attributes from participant preferences (Arnold & Feldman, 1981; Judge & Bretz, 1992). The policy capturing approach also allows for the ability to experimentally manipulate the values of certain attributes and also minimize multicollinearity among independent variables (Karren & Barringer, 2002).

Fractional Factorial Design

If a completely crossed experimental design were employed there would be 4 factors free to vary: the salary of the participant along with the salary of the three target referent groups. Given that the level of pay varies between low, medium, and high, this would create 3 X 3 X 3 X 3 conditions, requiring participants to read and respond to a total of 81 scenarios. However, Kirk (1968) has suggested the fractional factorial design as an alternative design that can reduce the number of treatment conditions participants are exposed to. Although this reduction in treatment conditions requires the assumption that higher order interactions are small or negligible relative to main effects, the fractional factorial design has been deemed appropriate for research where main effects of are more importance than higher order interactions (Connor & Zelen, 1959; Kirk, 1968). Graham and Cable (1991) have compared the results from a full and fractional factorial design and found that the fractional factorial design is a valid alternative that gave similar results while at the same time minimizing participant fatigue.

As a result, the current experiment will employ a one-third fractional factorial design (CRFF-3^{4-1}) such that each participant is only exposed to 27 possible scenarios. As suggested by Kirk (1968), the number of treatment combinations can be reduced by systematically limiting which treatment combinations participants are exposed to. The

downside of this design is that the treatment-interaction confounding purposely

confounds main effects with higher order interactions that are expected to be relatively

small (Kirk, 1968).

Kirk has also recommended the tables of Connor and Zelen (1959) tables to

determine the design of treatment combinations to be included in the experiment. The

treatment (factor) combinations used in the current experiment (as adapted from Connor

& Zelen) are presented in Appendix G. In this design, the highest order interaction

(ABCD) is used as the defining contrast, and thus only the effects of A, B, C, D, AB^2,

AC^2, AD^2, BC^2, BD^2, and CD^2 are considered measurable (Connor & Zelen, 1959). The

three way interactions and two way interactions not listed are aliased with other effects

and therefore are not considered measurable.

However, analyzing the data using these four predictors revealed that most of the

variance in pay satisfaction was due to salary alone. Since perceptions of equity are based

on differences between the person and the referent (Adams, 1965), the predictors were

calculated by subtracting the difference between the person's salary and that of each of

the three referents, which created 3 factors and a more parsimonious model. As a result,

difference scores were used as the predictors of equity for all analyses.

Stimuli Development

The experimental manipulation in the current study varied the amount of money

being paid to not only the participant, but also varied the salary of three target referent

groups (i.e., internal, external, and educational referents). Inequity was thereby induced

by manipulating these four variables to create pay differentials between referent groups.

In order to increase psychological fidelity, the manipulation employed realistic figures

that reflected actual market values, thus the hypothetical pay level of the participants and their referents were generated based on employment survey data from the site of the study with $M = \$6237$ per month, $SD = \$1170$ per month (R.H. Smith School of Business 2004 Employment Statistics, n.d.).

The current study used a within-subjects design featuring four factors: salary of the participant, along with the salary of three specific referent groups: 1) others inside the organization (inside referent), 2) others outside the organization (outside referent), and 3) others with similar education and experience (educational referent). Aiman-Smith et al. (2002) have suggested that in policy capturing research of this nature, it is typical to choose three levels for each factor that represent the mean, and one standard deviation both above and below the mean. Thus, the pay used for each factor in the experimental manipulation varies between three levels that can be considered low ($5067/month), medium ($6237/month), or high ($7407/month).

Excepting salary levels, all other features of the different scenarios were held constant. In each scenario, the participant is provided with the hypothetical pay levels of not only themselves, but with the pay of the three selected referent groups. The participants are asked how satisfied they would be if given stated values of their pay and of the pay for each of the three referent groups. For a sample scenario, also see Appendix F.

Participants' responses were measured by a seven-point, Likert-type scale ranging from extremely satisfied (1) to extremely dissatisfied (7). A choice of 'I don't know' was provided at the midpoint of the scale *(see Appendix F)*.

Pilot Study

A pilot study was conducted to determine whether the manipulated cue values generated the desired perceptions of low, medium, and high pay values. A sample of 19 participants were presented with the full set of experimental scenarios that included survey items to check if the participants perceived differences in equity between the low, medium, and high values of each cue. The *t* tests for each referent group demonstrated statistically significant differences between the low, medium, and high levels of each cue. The first step of the data analysis was to calculate equity variables for each referent group which represented five potential salary differentials of -2, -1, 0, 1, 2 standard deviations about the mean. A one way ANOVA was conducted where the aforementioned five equity differentials represented the independent variable and the referent related survey item was the DV. For the internal equity manipulation, this *F* test was significant $F_{(4, 505)} = 318.10$, $p < .001$. Post hoc Bonferroni t-tests indicated a significant difference between all scenarios. For the external equity manipulation, the *F* test was once again significant, $F_{(4, 505)} = 229.82$, $p < .001$. Post hoc Bonferroni t-tests once again indicated a significant difference between all cue levels. Finally, the *F* test for educational equity was manipulation was significant, $F_{(4, 506)} = 306.11$, $p < .001$. Post hoc Bonferroni t-tests were significant between all cue levels. These results suggest that participants did notice the manipulated differences between salary cue values and that it was appropriate to conceptualize these differences as differences in equity.

Procedure

The participants were recruited from a master's level business course and asked to optionally participate in research as part of a class exercise. During time 1, participants indicated a unique tracking code and completed the ESI and MOP measures.

In order to control for context effects, the experimental scenarios were given out during Time 2 a week later. The scenarios present the participants with a number of hypothetical situations that represent different salary offers for a job as an "associate." The cover letter stated that the purpose of the current study was to examine individuals' attitudes about pay and reactions to salary offers. Participants then completed their responses to the 27 different scenarios. Two additional scenarios were also repeated in order to assess within-person consistency, for a total of 29 scenarios.

In order to control for order effects, the order of the scenarios was counterbalanced randomly across participants. Following completion of the experimental scenarios, the participants were asked to fill out selected demographic information and to indicate their unique identifier code.

Analyses

The data was analyzed with hierarchical linear modeling (HLM; Bryk & Raudenbush, 1992). This technique has been suggested as appropriate for policy capturing data because it allows researchers to examine both within and between person variance (Mellor, Paley, & Holzworth, 1999; Morrison & Vancouver, 2000).

In the Level 1 (within-subject) analysis, regression equations were calculated for each individual in which pay satisfaction was regressed on internal, external, and educational referent cues (including both main effects and higher order interactions).

The Level 2 (between-subject) analysis used a restricted maximum likelihood approach in which the intercept and slope parameters from the Level 1 model were regressed onto Level 2 predictors (e.g., person level variables such as the meaning of

pay). This set of analyses allows for tests of intercept and slope differences based on level 2 variables.

In addition, multiple regression/correlation (MRC) was used to test the relationships between the Level 2 (between subject) variables. MRC is a powerful analytic tool that can be used to study associations where one variable is a function of another variable (Cohen & Cohen, 1983). MRC also yields measures of effect size that reflect the magnitude of relationships between hypothesized factors and variables.

Results

Manipulation Check

The first step of the data analysis was to once again ensure that the study participants truly perceived the differences between scenarios which represented different equity differentials. A one way ANOVA was conducted where the equity differentials represented the independent variable and the referent related manipulation check was the DV. For the internal equity manipulation, this F test was significant $F(4, 2872) = 1048.48$, $p < .001$. Post hoc Bonferroni t-tests indicated a significant difference between all scenarios. For the external equity manipulation, the F test was once again significant, $F(4, 2877) = 950.80$, $p < .001$. Post hoc Bonferroni t-tests once again indicated a significant difference between all cue levels. Finally, the F test for educational equity was manipulation was significant, $F(4, 2880) = 1073.52$, $p < .001$. Post hoc Bonferroni t-tests were significant between all cue levels. These results suggest that participants did notice the manipulated differences between salary cue values and that it was appropriate to conceptualize these differences as differences in equity.

Confirmatory Factor Analyses

Based on the substantive validity assessment of Study 1, 9 MOP items appeared to have limited construct validity. These items were included in the survey, as many of these items were part of Thierry's original MOP scale. However these items were dropped during the confirmatory factor analysis. The initial factor analysis had a moderate fit, $\chi 2 = 435.58$ (df = 224), $p < .001$, with a CFI = .83 and a RMSEA = .089. Item factor loadings are featured in Table 4. However this analysis also indicated that items 2, 15, 17, 18, and 28 had factor loadings below .6, thus these items were dropped and the factor analysis was run again. The refined model had much better fit, $\chi 2 = 194.64$ (df = 129), $p < .001$, with CFI = .93 and RMSEA = .065. The correlations between the subscales of the MOP were low to moderate (ranging from $r = .03$ to $r = .47$). As a result, this refined model was used to calculate the final scales.

Descriptive statistics

Descriptive statistics and correlations for within person and between person measures are reported in Tables 5 and 6, respectively. Given the high correlation between the pay satisfaction and organizational attractiveness measures, the latter was dropped form all future analyses.

Unconditional Means Model (One-way ANOVA)

The unconditional means model, alternatively known as a one-way analysis of variance, is a model which specifies no predictors, thus the model only estimates an intercept for each individual. This allows the researcher to specify a baseline amount of within and between person variance that can be explained (Level 1 and Level 2 variances

respectively; Hofmann, 1997; Singer, 1998). In order to do this, a one way ANOVA was conducted using pay satisfaction as the dependent variable.

The model estimated the within person variance $\sigma^2 = 2.90$ and the between person variance $\tau_{00} = .18$. This yielded an intra-class correlation (ICC) value of .057, which suggests that most of the variation of the dependent variable is within-person.

Level 1 (Within-Person) Analyses

Hypothesis 1 predicted that referent related pay differentials (internal, external, and educational equity) would be related to pay satisfaction. In order to test this hypothesis, both the main effects and higher order interactions of these differentials were used as predictors of pay satisfaction using the maximum likelihood function in HLM. Initially, only main effects were modeled in the first step. The main effects accounted for 69% of the within-person variance in pay satisfaction. Next, the two way interactions were entered, which explained an additional 0.62% of the within-person variance in pay satisfaction. Finally, the 3 way interactions added an additional 1.34% of the within-person variance in pay satisfaction. In sum, this suggests that despite the presence of significant higher order interactions, most of the within person variance is accounted for by the main effects.

The parameter estimates for the average intercepts and slopes across participants are also reported in Table 7. A significant main effect for all three forms of equity was found. Further, there was a significant External X Educational two-way interaction and a significant three way interaction (see Figures 5 and 6). These coefficients all differ significantly from zero and thus provide support for Hypothesis 1. Pay satisfaction is

affected by the relative standing of one's salary compared to the salary of all three

referent groups.

For ease of interpretation, the three way interaction has been plotted with separate

figures for conditions of negative (i.e., unfavorable for participant) internal equity (Figure

5) and conditions of positive (favorable for participant) internal equity (Figure 6),

respectively. Considering the condition of negative internal equity first (Figure 5), pay

satisfaction is the lowest when external and educational referents receive more money.

However, as pay becomes more favorable with regard to educational referents, pay

satisfaction increases steeply. What is especially surprising about the interaction shown in

Figure 5 is that when salary relative to internal referents is low and salary relative to

external referents is high, pay satisfaction actually *decreases* as salary relative to the

educational referent increases, even though equity theory would predict the opposite.

Turning to Figure 6, which features positive internal equity, the most striking

thing is the similarity between the two conditions on the left, which represent positive

internal equity and low educational equity. When these two conditions are in place, it

appears that the external referent becomes insignificant. In addition, by examining the

darker line, it appears that when there is positive internal and negative external equity

that gains in educational equity (from negative to positive) do little to improve pay

satisfaction. In fact, the slope of this line is close to flat and slightly negative. Finally, the

shaded line suggests that when both internal and external equity are positive, as

educational equity rises, there is a significant gain in pay satisfaction.

Hypothesis 2 predicted that equity would be more strongly related to pay

satisfaction than would actual salary level. A series of statistical analyses were conducted

to test this hypothesis. First, the amount of variance explained by a model using actual salary level as the only predictor of pay satisfaction was compared to the amount of variance explained by a model using the equity variables as the predictor of pay satisfaction. The model consisting of actual salary accounted for 60% of the within person variance in pay satisfaction whereas the model consisting of the equity predictors accounted for 71% of the within person variance in pay satisfaction. This finding is consistent with Hypothesis 2.

Next, I compared the fit of a model using objective predictors of salary (i.e., manipulated cue values) against the fit of a model that used subjective perceptions of referent related equity using Akaike's Information Criterion (AIC). The AIC is a quantitative fit index that allows a comparison of fit for non-nested models. The AIC statistic is smaller for the better fitting model (Singer, 1992). The model using objective predictors of salary had an AIC of 8430.4 whereas the subjective equity model had an AIC of 5816.4. Once again, there is support for Hypothesis 2 that an equity conceptualization explained more variance in pay satisfaction better than salary.

Hypothesis 3 predicted that the internal referent group would be the strongest predictor of pay satisfaction. To begin with, the dependent variable was standardized within-person. This serves to remove the influence of the individual respondent. Although Hotelling's t-test has been the traditional test for significant differences between correlated coefficients (Hotelling, 1940), more recently Meng, Rosenthal, and Rubin (1992) have updated the formula for such computations. Thus, the relative strength of each referent group was tested using a statistical test which yields a Z score that represents the difference between the internal referent predictor and the other two

predictors. This Z was significant, $Z = -7.15$, $p < .01$. This suggests that the internal referent is a stronger predictor of pay satisfaction than either of the other two referent groups. Hence, Hypothesis 3 was supported.

Level 2 (Between Person) Analyses

Hypothesis 5 predicted that equity sensitivity would be negatively associated with the number of reflected meanings of pay. To test this hypothesis, I added the number of reflected meanings of pay across the MOP dimensions. The correlation between equity sensitivity and the summed MOP score was $r = -.18$, $p = .07$, which trended toward significance. In other words, participants that were more equity sensitive (i.e., Entitled) tend to report more reflected meanings of pay than did less equity sensitive (i.e., Benevolent) participants. Thus, there was weak support for Hypothesis 5.

Hypothesis 6 predicted a negative relationship between equity sensitivity and the motivational MOP dimension. The correlation between equity sensitivity and the motivational dimension was $r = -.28$, $p < .01$. Participants that were more equity sensitive (i.e., entitled) tend to endorse more motivational meanings of pay. Thus, Hypothesis 6 was supported.

Hypothesis 7 predicted a negative relationship between equity sensitivity and the spending dimension of the MOP. The correlation between equity sensitivity and the spending dimension was $r = -.22$, $p < .05$. Participants that were more equity sensitive (entitled) tended to endorse more of the spending reflected meanings of pay. Thus, Hypothesis 7 was supported.

Cross-Level Analyses

As reported previously, the majority of variance in pay satisfaction occurred within people (i.e., only 5.7% of the variance occurred between people). The random coefficient modeling analysis also suggested that the slopes and intercepts for the two-way and three-way interactions showed no significant variance across individuals. Thus, I set these coefficients as fixed effects for all subsequent analyses.

Hypothesis 4 predicted that equity sensitivity would moderate the relationship between the equity predictors and pay satisfaction. To test this hypothesis, I used equity sensitivity to predict the slope and intercept of the equity predictors to pay satisfaction. The results for this analysis are shown in Table 8. As can be seen from this table, equity sensitivity was significantly related to only the slope of pay satisfaction and external equity ($\gamma_{21} = -.008$, $p < .01$). This finding is consistent with Hypothesis 4 that individuals lower in equity sensitivity (i.e., those who are more entitled) tend to be more sensitive to the pay of their external colleagues. As equity sensitivity increases, the strength of the relationship between external equity and pay satisfaction increases.

Equity sensitivity failed to moderate any of the other equity-pay satisfaction relationships. It should be noted, however, that even though equity sensitivity was not a significant moderator of these other equity-pay satisfaction relationships, there was a significant amount of variance in the slopes of the internal and educational equity-pay slopes across individuals. This indicates that other unidentified variables moderate these relationships. In summary, Hypothesis 4 was only partially supported.

Hypothesis 8 predicted that the number of reflected meanings of pay would moderate the relationship between the different forms of equity and pay satisfaction. To

test this hypothesis, the composite reflected meaning of pay measure was used as a predictor of the equity-pay satisfaction slopes. These results appear in Table 9. Unfortunately, this composite measure was not related to any of the equity-pay satisfaction slopes at the traditional 0.05 level of significance. However, there was a trend in the predicted direction for the external referent equity variable, t (104) = 1.82, $p < .10$. This result suggests that those who have more meanings in pay are more sensitive to the equity of their pay in relation to external others. In summary, Hypothesis 8 was not supported

Hypothesis 9 predicted that the number of reflected meanings of pay would be a stronger moderator of cross level relationships than would equity sensitivity. However, because the meaning of pay failed to moderate any of the equity-pay satisfaction relationships, Hypothesis 9 was not supported. In fact, it appears to be just the opposite. Equity sensitivity is a stronger moderator of the equity-pay satisfaction relationships than the meaning of pay construct.

Hypothesis 10 predicted that the relative position dimension of the meaning of pay would moderate the relationships between pay differentials (equity) and pay satisfaction. To test this hypothesis, I used only the relative position meaning of pay dimension to predict the equity-pay satisfaction slopes. The results of this analysis are in Table 10. Unfortunately, this dimension of meaning of pay failed to predict any of the equity-pay satisfaction slopes. Thus, Hypothesis 10 was not supported.

Hypothesis 11 predicted that the control dimension of the meaning of pay would moderate the relationship between internal equity and pay satisfaction. Consistent with this hypothesis, a trend was found for this moderation hypothesis ($\gamma_{11} = .080, p < .10$), see

Table 11. Individuals who believe money reflects control exhibit a stronger relationship between the pay of internal others and pay satisfaction. These individuals also exhibit a stronger relationship between external equity and their pay satisfaction. Thus, there was limited support for Hypothesis 11.

Hypothesis 12 predicted that the dimension of relative position meaning of pay would moderate the internal referent equity-pay satisfaction relationship more strongly than any other equity-pay satisfaction relationship. This hypothesis was not supported because the relative position meaning of pay variable did not significantly moderate any of the equity-pay satisfaction slopes.

Hypothesis 13 predicted that the motivational meaning of pay dimension would be a stronger moderator of the external referent equity-pay satisfaction relationship compared to any other equity-pay satisfaction relationship. The results of this analysis are shown in Table 12. Unfortunately, since the motivational meaning of pay did not significantly moderate the external referent equity-pay satisfaction relationship, Hypothesis 13 was not supported. Motivational properties failed to predict any of the equity-pay satisfaction slopes.

Post Hoc Analyses

It was predicted in Hypothesis 11 that the control meaning of pay dimension would moderate the internal equity-pay satisfaction relationship. Although there was a trend in the predicted direction, the effect was not significant at the traditional .05 level. I conducted a post hoc analysis using the control dimension to determine if it moderated any of the other equity-pay satisfaction relationships. As seen in Table 11, there was a significant moderation effect for the external equity-pay satisfaction relationship ($\gamma_{21} =$

.076, $p < .05$). In other words, individuals that perceive pay as control are more sensitive to external equity.

A second post-hoc analysis was conducted to determine if the spending dimension of the meaning of pay moderated any of the equity-pay satisfaction relationships. One significant effect was found. In particular, the spending meaning of pay dimension moderated the external equity – pay satisfaction slope ($\gamma_{21} = .066$, $p < .05$). Individuals that perceive pay as the ability to spend were more sensitive to external equity issues.

I ran a third post-hoc analysis to determine if future salary expectations might moderate any of the equity-pay satisfaction relationships. Even though I did not have any hypotheses regarding future salary expectations, it is possible that these expectations may constitute a future-self referent which impacts attitudes and behavior. It may be that individuals who set high salary expectations on themselves may also be more sensitive to the pay of others. To test this post hoc hypothesis, a model was created that used the future expected salary as a predictor of the pay satisfaction intercepts and equity-pay satisfaction slopes. Future expected salary significantly predicted the pay satisfaction intercept ($\gamma_{01} = -.000015$, $p < .01$). Individuals who have higher future salary expectations also reported lower average pay satisfaction. Unfortunately, I was unable to test the future referent in the context of other moderating variables since missing data (non-respondents) resulted in a significant loss of power for analyses with this variable.

A final post-hoc model was created in which all of the significant moderators of equity-pay satisfaction slopes were included as predictors. Specifically, I used equity sensitivity, the control meaning of pay, and the spending meaning of pay as predictors of the external equity-pay satisfaction slope. Nevertheless, when all three variables were

simultaneously tested, the spending dimension emerged as no longer significant. As a result, a final model featuring only equity sensitivity and the control meaning were modeled as significant predictors of the external equity – pay satisfaction slope. The results are shown in Table 13. As can be seen from this table, the equity sensitivity and control meaning of pay were the significant predictors of the external equity-pay satisfaction slope, (i.e., γ_{21} = -.01, p < .05; γ_{22} = .07, p < .05, respectively).

Discussion

The initial goal of the current study was to investigate the relative importance of three different referent groups. The pattern of results suggested that while equity associated with referent groups was related to pay satisfaction, the internal referent group emerged as the strongest driver of pay satisfaction. Secondly, the current study sought to explore individual differences in sensitivity to equity. There was a significant amount of individual variation in the strength of the relationships between pay satisfaction and the three referent groups, which suggests the possibility of one or more possible moderators. Indeed, equity sensitivity and the spending and control meanings of pay were found to moderate the relationship with the external referent group. These results are especially compelling because they suggest that pay satisfaction can be determined by both features of the situation (i.e., the salaries of the target and others) and by features unique to the individual (i.e., equity sensitivity). However the current study found that the features associated with the situation had much stronger effects.

Indeed, equity still does matter to individuals, and salary information of themselves and others appears to drive judgments of equity. While pay satisfaction could be reliably predicted using salary alone, the current study found evidence that more

variance in satisfaction was predicted by also taking into account the salary of the three referent groups used in this study (internal, external, educational). These findings are consistent with previous studies that have found that such salary differences (Adams, 1965; Law & Wong, 1998) are related to perceptions of equity and pay satisfaction. In addition, organizational attractiveness was found to be significantly associated with pay satisfaction. This makes these results practically important to organizations, as organizational attractiveness is an outcome frequently associated with the decision to enter or exit an organization (Sweeney & McFarlin, 2004).

Level 1 Analyses

The majority of the within person variance in pay satisfaction was explained by the main effects of the three referent groups: internal, external, and educational. This is consistent with previous research that has found support for these referent groups (Sweeney & McFarlin, 2005, 2004; Shore, 2004; Scholl et al., 1987; Law & Wong, 1998). Although the higher order interactions in the current study are not as robustly supported in the extant literature (Sweeney & McFarlin, 2005), the ability to detect these interactions may have been due to the statistical power of the within-subjects design (Kirk, 1968).

The current study also suggested that although all referent groups were important, the internal referent group showed the strongest relationship with pay satisfaction. The relative importance of these referent groups appears to be consistent with the theoretical framework of referent selection proposed initially by Goodman (1974) and more recently by Kulik and Ambrose (1992). They have both suggested that referent selection is guided

by referent relevance and information availability. This would suggest that the three aforementioned referents emerge as salient for different reasons.

The internal referent may influence pay satisfaction in part because information about the internal referent is likely to be the most easily available. Individuals interact and form social networks, both formal and informal, with internal referents in the workplace (Kilduff & Tsai, 1993) and as a result, information about these internal referents may be easily available. As a result of these networks, individuals may have the opportunity to compare information about not only outputs such as salary but inputs such as effort on the job. For example, information about relative inputs may be more accessible given the "taboos" that may sometimes surround discussions about pay and money (Furnham, 1998). Given that individuals tend to have higher perceptions of their own job performance (Atwater, 1998), it also seems logical to assume this would lead to higher perceptions of their own relative inputs, a judgment process that can impact the perceived ratio of input/outputs.

Consequently, not only is there a substantial amount of information available about the internal referent, but internal referents may also be seen as relevant because they are perceived as similar others based on having a similar employer and job title. Social comparison theory (Festinger, 1954) suggests that people prefer to compare themselves with similar others, and this perceived similarity of the internal referent may increase this group's relevance. Moreover, internal referents may be increasingly relevant because information about these referents may communicate information about an individual's status within the organization. Consequently, the internal referent group may be the most important because the internal referent satisfies needs of *both* information

availability and referent relevance, whereas the other referent groups may not necessarily satisfy both of these needs. Consistent with this reasoning, the coefficients associated with the internal referent were not only the largest, but were significantly larger than those associated with the main effects or interactions between the other referents.

The information about the inputs and outputs of external referents may be limited due to the decreased frequency of contacts within the individual's social networks. The external referent may even be perceived as less important than the internal referent due to a perceived lack of similarity between the individual and external others. However this referent may still have relevancy because information about the external referent communicates information about potential job opportunities elsewhere (i.e., market worth comparisons) or the standing of the organization amongst its peers as an employer of choice. Others (e.g., Sweeney & McFarlin, 2005; Sherer, 1990) have suggested that external comparisons are relevant because pay level serves as a marker of status in society. Making such an evaluation of relative status would necessitate a broader search for referents outside the organization.

Similar to the external referent, information about the educational referent may not be as readily available as compared to the internal referent group. Once again, differences in organization, job title, and job requirements may serve to increase the dissimilarity of the educational referent. However, the educational referent may be an important referent for reasons connected to referent relevance. The acquisition of a degree may create expectations about what constitutes an appropriate level of compensation, and these expectations are likely similar to those within the educational referent group. Equally important, knowledge level is typically one of the factors that

organizations use to dictate the compensation levels of employees (Milkovich &
Newman, 1996). Previous research examining the educational referent has suggested that
individuals at the early stages of their career tend to use their educational cohort as a
social network (Law & Wong, 1998) and since the sample in the current study was
comprised of current students, this may have further increased the relevance of this
referent group.

What was especially surprising was the evidence for *negative* higher order
interactions. Although the strength of these interactions was small compared to those of
the main effects (2% vs. 69% of the variance, respectively), these negative interactions
suggest that there are situations where making more money compared to a given referent
group can actually serve to *decrease* pay satisfaction. Upon closer examination, it appears
that the effects of the different forms of equity may at times be contextually dependent
(i.e., dependent on equity relative to other referent groups). Returning again to Figure 5
(low internal equity), the line representing high external equity (i.e., higher relative pay)
shows a surprising decrease in pay satisfaction as educational equity increases. This
corresponds to situations of underpayment in relation to internal coworkers (identified as
the most important referent) and overpayment relative to external market value. Under
these conditions, being underpaid relative to educational peers may be easily rationalized
with the judgment that one's fellow graduates are in a similar financial situation. But as
educational equity rises, the fact that one is now paid better than both the external market
and educational cohorts may make the internal underpayment equity all the more salient,
which is consistent with the observed decrease in pay satisfaction. This is also consistent

with the idea that most individuals chronically report being underpaid (Lawler, 1987; Summers & DeNisi, 1990) and may look for evidence to support this idea.

The notion of "looking for evidence" can also be seen by examining Figure 6 (high internal equity). In this Figure, the line representing situations of negative external equity suggests that as educational equity increases, pay satisfaction once again decreases, which is the opposite of what equity theory would predict. However, it may be that under conditions of internal overpayment and external underpayment, an increase relative to an educational cohort makes the *external* underpayment more salient. Although these interactions suggest that it may be difficult to ever satisfy the pay needs of employees, it is once again important to note that the strength of these interactions are small compared to the main effects.

Practically speaking, these results suggest that to the extent that organizations have control over discretionary pay, the internal referent appears to be the most salient consideration for individuals. However, given that the supply of financial incentives is finite, it is important for organizations to identify more cost effective, intangible incentives such as celebrating success and recognizing high performers.

Between Person Analyses

As was expected, there were modest intercorrelations between the different dimensions of the MOP. The strongest relationship was between the spending and motivational dimensions. These dimensions both appear to reflect aspects of the American dream, which has traditionally represented the idea that hard work will lead to fortune and the ability to acquire material goods (Furnham, 1998; Sheldon et al. 2001; Derber, 1979; Carnegie, 1936). In addition, the control dimension was related to relative

position. This may be because these both reflect meanings related to competence on the job. This status may be represented by both one's perceived performance and level of control.

It was also hypothesized that individual difference variables related to salary (i.e., equity sensitivity and the reflected meanings of pay) would be related to one another because both constructs reflect a concern for outcomes. Equity sensitivity was only marginally related to a summed composite of the meanings of money. However, equity sensitivity was related to both the motivational and spending components of the meaning of pay. These goals that are related to the "American dream" also appear to be related to equity sensitivity. Furthermore, although no specific predictions were made about the future referent group, the significant relationship between the future referent and the equity sensitivity construct is consistent with the theoretical rationale used to define the latter (Huseman et al. 1985; 1987). The future referent may also represent a conceptualization of self-worth.

In addition, the motivation and spending meanings of pay were also related to race (coded White vs. minority) such that minorities were more likely to endorse these symbolic meanings. Once again, these are the meanings of pay associated with the notions of the American dream, however this finding may be specific to the sample. The current study had a high percentage of students who were of international origin. While merely speculative, it may be that masters programs (or even advanced degree programs in general) attract individuals who see a master's degree as one way of achieving these principles that are consistent with the American dream. Consistent with this idea, post

hoc *t*-tests revealed significant differences between international and American students on those aforementioned meanings.

Cross Level Analyses

One of the principal goals of the current study was to investigate cross level relationships - - to see if either equity sensitivity or the meanings of pay moderated the relationship between equity and pay satisfaction. Despite the existence of three different forms of equity, only individual differences in the external referent-pay satisfaction relationship were moderated by the variables included in the current study. The cross-level analyses indicated that there was a significant amount of between person variance to be explained in the internal and educational referent relationships, however none of the individual differences measured were shown to moderate these relationships.

Despite the lack of cross-level effects for the internal and educational referent, there were explainable individual differences when it came to the external referent. Results indicated that individuals who were higher in entitlement and who saw more control and spending meanings of pay tended to perceive a stronger relationship between the external referent and their own pay satisfaction. This supports the idea that there are individuals who are more sensitive to differences between their own salary and that of others. This is consistent with previous studies that have found individuals high in entitlement to be sensitive to outputs (Allen & White, 2002). Nevertheless, it appears that the relative size of these effects is small when compared to the effects of equity itself.

It is unclear why the moderated relationships were found with the external referent group exclusively. Sweeney & McFarlin (2005) have posited that the external referent may be particularly important because it provides individuals with relevant

market wage comparisons. They also suggest that the external referent may best be understood by a relative deprivation model. Relative deprivation (Crosby, 1982) suggests that reactions to fraternal deprivation are different than responses to egoistic deprivation. It may be the case that external referent comparisons represent fraternal deprivation, the sense that a group (in this case fellow employees) has been similarly wronged or deprived.

Another potential explanation may be the experimental manipulation itself. The experimental manipulation did not take into account job performance (i.e., "inputs" in the language of Adams), and thus only reflected a comparison of outputs across a series of job offers. In a field sample, individuals may tend to have more information available about the relative inputs of internal referents as compared to those externally. Having this information about internal referents may potentially change the nature of the relationships observed in the current research. Equity theory (Adams, 1965) stresses the ratio of inputs to outputs, so it may be fruitful for future research to consider manipulating variables that represent workplace inputs.

Conclusions

It appears that all of the forms of equity (internal, external, and educational) measured in the current study are important to individuals and are substantially related to individual pay satisfaction. Furthermore, it appears that the internal referent may have the strongest impact on pay satisfaction as it satisfies individual preferences for referents that are both relevant and available.

In sum, it is proposed that all of the referent groups are important, but their importance may be driven by different reasons. This would suggest that using a single

generalized referent as suggested elsewhere (e.g., Summers & DeNisi, 1990; Hills, 1980) may obscure the understanding of how different referent groups work to influence pay satisfaction.

The internal referent appears particularly important because when information about the internal referent is available, it has the strongest relationship with pay satisfaction. Furthermore, even though the internal referent appears to be the most salient referent, the external referent is essential to understand because perceptions of external equity are particularly sensitive to individual (cross-level) differences such as equity sensitivity, and certain symbolic meanings of pay. This inclination towards external comparisons may be driven by market wage comparisons or feelings of fraternal deprivation. Finally, it appears that educational equity is important because when information about the educational referent is available, it interacts with the other forms of equity to influence pay satisfaction, sometimes in the opposite direction that equity theory would predict. Thus, educational equity appears to be contextually dependent on the other forms of equity. Given that the coefficients associated with the educational referent are similar to those associated with the external referent, the educational referent may be an especially important external referent when considered in the context of other forms of equity.

In sum, it appears that there are individual differences that influence sensitivity to equity, however these individual differences do not account for as much variance as perceptions of equity itself. The relationship between pay satisfaction and organizational attractiveness found in the current study begins to shed light on the practical importance of these results. If individuals perceive that they are inequitably paid, it may affect their

decision to enter or exit the organization. Understanding how individuals determine judgments of equity may help practitioners design compensation systems that are perceived as fair by employees, which in turn may help in the attraction and retention of high performers.

Future Research Directions

The three referent groups examined in the current study are by no means comprehensive or exhaustive of all possible referents. Future research should seek to develop a taxonomy of referent groups to guide future research. One promising area is the recent work of both Sweeney and McFarlin (2004) and Brygen (2004) who have found evidence for a referent representing comparisons against a national standard (i.e., compared to other people in your country). In fact, Sweeney and McFarlin's (2004) cross-cultural research on referent groups found evidence that in the U.S., the best predictor of pay satisfaction was equity related to the national referent. Furthermore, the strength of this relationship was stronger in the U.S. than in any of 12 other countries.

Although the discovery of promising moderating individual difference variables was limited in the current study, the results of the current cross level analyses suggest the potential for other individual differences that may serve as moderators. Other potential constructs such as motives for achievement and power may also moderate equity pay satisfaction relationships. Those individuals high in need for achievement may be more sensitive because their pay is symbolic of achievements, both on the job and in their career. Likewise, individuals high in a need for power may be more sensitive to the different forms of equity because money may reflect a desire for status. There are also other taxonomies of the meanings of money that may be related to equity and pay

satisfaction, such as Tang's (1992) MES scale and Mitchell et al. (1998)'s Money Importance scale.

One further question for future research is to determine how these perceptions of equity may impact job satisfaction. Is there one form of equity that has a stronger relationship with job satisfaction? Does the strength of the relationship between job satisfaction and pay satisfaction differ between people?

Finally, one potentially promising area of future research is to investigate other behavioral reactions to inequity. Participants in the current study seemed to react in similar ways to inequity in that there was more between scenario variance than between person variance in pay satisfaction. However, one potentially fruitful area for future research is the individual differences that emerge when a person is allowed to react in other ways than decreased pay satisfaction. As Adams (1965) has suggested, other reactions to inequity may include speaking out/complaining, badmouthing the organization, rationalization, job hunting, withholding effort, withholding OCB's, etc. Future research should also investigate these options, as it is evident that equity still impacts perceptions of pay satisfaction. These unanswered questions make the area of referent related research a promising area for future research.

Limitations

The current study was not without limitations. The first was that it was a lab study and used a series of artificial job scenarios. However, the manipulation check indicated that participants were sensitive to the experimental manipulation and changed their perceptions of equity based on manipulated cue values. In addition, the inclusion of two identical scenarios as a within person reliability check also indicated that participants

were engaged and responded consistently across the repeated measures of the task. Even so, future research should attempt to investigate these cross-level relationships in a field setting.

Another limitation of the current study is that the salary of the targeted referent groups was made explicit and salient, which may not be the case in all organizational settings. Despite this limitation, there is evidence that others may hypothesize about the salary of others when faced with an absence of information (Lawler, 1987). Nevertheless, future research should investigate if individuals differentially search for information about referents when given the opportunity to conduct such a search.

One additional limitation of the study is that only salary related information about each job offer was manipulated between scenarios, thus differences in perceptions of organizational attractiveness are likely to reflect differences in pay satisfaction experienced across scenarios. Future research should attempt to manipulate other potential inputs and outputs of the job in addition to pay. For example, a more rigorous test of the MOP would manipulate other features of the job such that one job offer may present the potential of more interesting work. Reflective theory would predict that individuals high on the MOP would be more attracted to the job with the high salary as opposed to the one with high intrinsic interest.

Furthermore, not only are the features of a given job offer multidimensional, pay satisfaction itself is also multidimensional. Heneman (1985) has suggested that pay satisfaction actually has four levels. More recently, Tekleab, Bartol, and Liu (in press) have found evidence that a multidimensional consideration of this construct has explanatory power. They found that distributive justice had the strongest relationship

with pay level satisfaction while procedural justice had the strongest relationship with pay *raise* satisfaction. The authors suggest that procedural issues are more likely to be associated with turnover in organizations. From a practical point of view, this may also have the side effect of causing low performers to leave the organization.

Finally, the sample of master's level students in business may have presented a unique sample that limits the generalizability of the results. The sample tended to have more males, was particularly diverse cross-culturally, and had limited racial diversity among Americans. Furthermore, the nature of the sample of master's students tends to be especially well-educated. Equally important, an open ended question at the end of the survey indicated many of the participants plan to enter jobs that focus on finances. As a result, this may have limited the variance in the individual difference measures related to money. Other professions and industries may have different expectations related to the earning power associated with their degree. Thus, future research should also attempt to expand the results of this research to a sample broader than that used in the current study.

APPENDIX A-TABLES

Table 1
Previous Empirical Attempts To Categorize Referent Groups

Authors	*Referent Dimensions*	*Outcome Variables*
Homans (1953)	Other coworkers	Pay satisfaction
Patchen (1961)	Idealized self	Absences
Finn & Lee (1972)	Internal External	Pay satisfaction
Goodman (1974)	Other System Self	Pay satisfaction
Heneman et al. (1978)	Internal External Historical Cost of living Relatives & friends	Pay satisfaction
Austin, McGinn, Susmilch (1980)	Future self Social comparisons	Pay satisfaction Fairness perceptions
Hills (1980)	Internal External Expected Past self Personal worth Friends & family	Pay satisfaction Ease of finding work
Ronen (1986)	Internal External No frame of reference	Pay satisfaction Propensity to leave
Oldham et al. (1986)	Self inside Self outside Other inside Other outside	Pay satisfaction
Scholl et al. (1987)	System Self Job Company Occupation Age Education	Pay satisfaction
Kulik & Ambrose (1988)	Internal External	Pay satisfaction

Authors	Referent Dimensions	Outcome Variables
Summers & DeNisi (1990)	Other System Self	Pay satisfaction
Taylor & Vest (1992)	External Personal Economic Ego	Pay satisfaction
Blau (1994)	Social Financial needs Historical Organizational (Internal) Market (External)	Pay satisfaction
Law & Wong (1998)	Internal same job External same job Same education Family & friends Supervisors	Pay satisfaction
Brown (2001)	Social Financial needs Historical Organizational (Internal) Market (External)	Pay satisfaction

Table 2

Dimensions & Sample Items of the Measurement of Money Meaning

Wernimont & Fitzpatrick (1972)	• **Shameful Failure**	N/A
	• **Social Acceptability**	N/A
	• **Pooh-Pooh Attitude**	N/A
	• **Moral Evil**	N/A
	• **Comfortable Security**	N/A
	• **Social Unacceptability**	N/A
	• **Conservative Business Values**	N/A
Yamauchi & Templer (1982)	• **Power/Prestige**	"In all honesty, I own nice things in order to impress others."
	• **Retention/Time**	"I put money aside on a regular basis for the future."
	• **Distrust**	"It bothers me when I discover I could have gotten something for less elsewhere."
	• **Quality**	"I spend more to get the very best."
	• **Anxiety**	"It's hard for me to pass up a bargain."
Furnham(1984)	• **Obsession**	"I firmly believe that money can solve all of my problems."
	• **Power/Spending**	"I sometimes buy things that I don't need or want to impress people because they are the right things to have at the time."
	• **Retention**	"I often say 'I can't afford it' whether I can or not."
	• **Security/Conservative**	"I always know how much I have in my savings account."
	• **Inadequate**	"The amount of money I have saved is never quite enough."
	• **Effort/Ability**	"I believe that my present income is about what I deserve, given the job I do."
Tang (1992)	• **Success**	"Money is a symbol of success."
	• **Budget**	"I use my money very carefully."
	• **Evil**	"Money is the root of all evil."

Mitchell et al. (1998)	• **Value importance**	"I believe that the more money you have, the happier you are."
	• **Personal involvement**	"I make out a budget for my expenditures."
	• **Time spent thinking about finances**	"I have explicit plans for how I can make more money."
	• **Knowledge of financial affairs**	"I am aware of the tax implications of my financial activities."
	• **Financial risk taking**	"I would prefer to win big or lose big than to be conservative."
	• **Skill at handling money**	"I never have checks that bounce."
	• **Power/Status**	"I use money to influence others."
Srivastava, Locke, and Bartol (2001)	• **Positive Motives**	"To get just compensation for my efforts."
	• **Negative Motives**	"To prove that I am not as dumb as some people assumed."
	• **Freedom of Action**	"To implement my ideas by starting my own business."
Thierry (1992)	• **Motivational**	"My income enables me to enhance personal growth."
	• **Relative Position**	"Through my income I learn the priorities in my work."
	• **Control**	"Through my income I learn how influential my opinion is."
	• **Spending**	"My income enables me to acquire luxury goods and services."

Table 3

Item Level Proportions of Substantive Agreement and Substantive Validity Coefficients

#	Item	p_{sa}	c_{sv}
	Motivation		
1	My pay should enable me to enhance personal growth.	.64	.36
2	My pay should enable me to establish contacts off the job.	.86	.71
3	My pay should enable me to be recognized in society.	.93	.86
4	My pay should enable me to achieve a stable way of life.	.57	.14
5	My pay should enable me to acquire recognition from family and friends.	.86	.79
6	My pay should enable me to show off my success.*	.64	.29
7	My pay should enable me to be admired for my success.*	.79	.64
8	My pay should enable me to be respected for my success.*	.86	.79
	Relative Position		
9	Through my pay I learn how well I meet job expectations.	1.0	1.0
10	Through my pay I learn the priorities in my work.	.79	.57
11	Through my pay I learn the extent to which I perform my job efficiently	1.0	1.0
12	Through my pay I learn how well I perform in comparison with my colleagues.	.93	.86
13	Through my pay I learn the amount of effort I put in my job.	1.0	1.0
14	Through my pay I learn the extent to which I put the right amount of effort in my job as compared to others.*	1.0	1.0
15	Through my pay I learn the extent to which my performance is valued in relation to my colleagues.*	.93	.86
16	Through my pay I learn how well I took on and completed hard projects at work.*	.93	.86
	Control		
17	Through my pay I learn how much freedom I have to do things my own way.	.86	.79
18	Through my pay I learn what people think of my work.	.93	.86
19	Through my pay I learn how responsible I am for the work of others.	.79	.64
20	Through my pay I learn how influential my opinion is.	.93	.86
21	Through my pay I learn how important my work is to the organization.	.36	-.07
22	Through my pay I learn how much influence I have upon the activities of my department.	.93	.86
23	Through my pay I learn how influential I have been concerning the operation of the organization.	.36	-.14
24	Through my pay I learn how satisfied the customers of the organization are.*	.86	.71

Spending

25	My pay should enable me to buy what I want.	1.0	1.0
26	My pay should enable me to go on vacation as I want.	.71	.57
27	My pay should enable me to live a luxurious life.	1.0	1.0
28	My pay should enable me to attain a desirable standard of living.	1.0	1.0
29	My pay should enable me to be well off.	.86	.71
30	My pay should enable me to purchase the goods and services I desire.	1.0	1.0
31	My pay should enable me to acquire luxury goods and services.	1.0	1.0
32	My pay should enable me to live where ever I want.*	.86	.79

Note. * indicates new items generated by the first author.

Table 4

Standardized Factor Loadings from Initial Confirmatory Factor Analysis of MOP Items

#	Item	Factor Loadings
	Motivation	
2	My pay should enable me to establish contacts off the job.*	.50
3	My pay should enable me to be recognized in society.	.82
5	My pay should enable me to acquire recognition from family and friends.	.92
8	My pay should enable me to be respected for my success.	.75
	Relative Position	
9	Through my pay I learn how well I meet job expectations.	.62
11	Through my pay I learn the extent to which I perform my job efficiently	.72
12	Through my pay I learn how well I perform in comparison with my colleagues.	.77
13	Through my pay I learn the amount of effort I put in my job.	.91
14	Through my pay I learn the extent to which I put the right amount of effort in my job as compared to others.	.80
15	Through my pay I learn the extent to which my performance is valued in relation to my colleagues.*	.40
16	Through my pay I learn how well I took on and completed hard projects at work.	.75
	Control	
17	Through my pay I learn how much freedom I have to do things my own way.*	.49
18	Through my pay I learn what people think of my work.*	.51
20	Through my pay I learn how influential my opinion is.	.66
22	Through my pay I learn how much influence I have….	.54
24	Through my pay I learn how satisfied the customers of the organization are.	.62
	Spending	
25	My pay should enable me to buy what I want.	.67
27	My pay should enable me to live a luxurious life.	.89
28	My pay should enable me to attain a desirable standard of living.*	.36
29	My pay should enable me to be well off.	.60
30	My pay should enable me to purchase the goods and services I desire.	.66
31	My pay should enable me to acquire luxury goods and services.	.91
32	My pay should enable me to live where ever I want.	.81

Note. Meaning of pay scale (MOP). *Indicates items that were subsequently dropped from final scales.

Table 5

Means, Standard Deviations, Reliabilities, and Correlations of Within Person Variables

Variable	*M*	*SD*	1	2	3	4	5
1. Internal Equity	-42.02	1364.17	--				
2. External Equity	85.46	1305.36	.45*	--			
3. Educational Equity	-1.13	1383.36	.48*	.56*	--		
4. Pay Satisfaction	4.21	1.76	.65*	.56*	.58*	(.95)	
5. Organizational Attractiveness	4.18	1.86	.61*	.58*	.61*	.87*	--

Note. Equity in US dollars. $N = 2886$ observations. Reliability of the multi-item measure is indicated in parentheses.

* $p < .05$

Table 6

Means, Standard Deviations, Reliabilities, and Correlations of Between Person Variables

Variable	*M*	*SD*	N	1	2	3	4	5	6	7	8	9	10
1. Race	2.1	1.4	85										
2. International	1.4	0.5	102	.52**									
3. Gender	1.3	0.5	101	-.05	.05								
4. Age	28.5	3.1	98	.07	.37**	-.13							
5. Future Referent	86024	10981	84	-.08	-.06	.01	.08						
6. MOP: Motivation	3.3	0.9	107	.25*	.29**	.03	-.01	-.11	(.81)				
7. MOP: Relative Position	3.7	0.8	107	-.08	.03	-.04	.09	-.03	.10	(.87)			
8. MOP: Control	3.2	0.8	107	.06	.14	.00	.10	-.17	.27**	.35**	(.71)		
9. MOP: Spending	3.7	0.8	107	.21*	.17	.03	-.10	.06	.40**	.07	.17	(.89)	
10. ESI	24.5	5.9	107	.11	.19	.00	.14	-.28**	-.26**	.13	-.08	-.22*	(.69)

Note. Data is coded such that higher numbers indicate International status and the female gender. Future referent in US dollars. Meaning of pay (MOP). Equity sensitivity instrument (ESI) coded such that higher scores are associated with the Benevolent response.

* $p < .05$, ** $p < .01$

Table 7

Level 1 Simultaneous Model of Equity and Pay Satisfaction

Variable	Pay Satisfaction			
	Coefficient	SE^a	t	Variance[b]
Intercept, β_0	4.25	.06	76.11[†]	.291
Main Effects				
Internal, β_1	.702	.04	17.68[†]	.131
External, β_2	.431	.03	16.23[†]	.034
Educational, β_3	.394	.03	14.08[†]	.047
Two way Interactions				
Internal X External, β_4	.004	.02	.24	.001
Internal X Educational, β_5	-.005	.02	-.34	.006
External X Educational, β_6	-.053	.01	-3.95[†]	.002
Three way interaction				
Internal X External X Educational, $\beta 7$	-.103	.01	-9.48†	.003

Note. N = 105. [a] Average estimated *SE* of the Level 1 regression coefficients. [b] Variance in Level 1 parameter estimates.
[†] $p < .001$

Table 8

Results of Hierarchical Linear Modeling Level 2 Analysis for Equity Sensitivity

| | Pay satisfaction | | |
Variable	Coefficient	*SE*	*t*
Internal, β_1			
Equity Sensitivity, γ_{11}	.00	.00	.14
External, β_2			
Equity Sensitivity, γ_{21}	-.01	.00	-2.39*
Educational, β_3			
Equity Sensitivity, γ_{31}	-.00	.01	-.15

Note. $N = 105$.

* $p < .05$

Table 9

Results of Hierarchical Linear Modeling Level 2 Analysis for the Meaning of Pay
(MOP)

| | Pay satisfaction | | |
Variable	Coefficient	SE	*t*
Internal, β_1			
MOP, γ_{11}	.01	.01	.58
External, β_2			
MOP, γ_{21}	.02	.01	1.86
Educational, β_3			
MOP, γ_{31}	.01	.01	.409

Note. $N = 105$.

Table 10

Results of Hierarchical Linear Modeling Level 2 Analysis for Relative Position

	Pay satisfaction		
Variable	Coefficient	*SE*	*t*
Internal, β_1			
Relative Position, γ_{11}	.02	.04	.51
External, β_2			
Relative Position, γ_{21}	.01	.03	.43
Educational, β_3			
Relative Position, γ_{31}	.03	.04	.84

Note. N = 105.

Table 11

Results of Hierarchical Linear Modeling Level 2 Analysis for Control

	Pay satisfaction		
Variable	Coefficient	*SE*	*t*
Internal, β_1			
Control, γ_{11}	.08	.05	1.70
External, β_2			
Control, γ_{21}	.08	.03	2.29*
Educational, β_3			
Control, γ_{31}	.03	.03	.87

Note. $N = 105$.

* $p < .05$

Table 12

Results of Hierarchical Linear Modeling Level 2 Analysis for Motivational Properties

Variable	Pay satisfaction		
	Coefficient	*SE*	*t*
Internal, β_1			
Motivational properties, γ_{11}	.01	.04	.26
External, β_2			
Motivational properties, γ_{21}	.01	.03	.46
Educational, β_3			
Motivational properties, γ_{31}	.00	.02	.17

Note. $N = 105$.

Table 13

Results of Hierarchical Linear Modeling Level 2 Analysis for Final Post Hoc Model

| | Pay satisfaction | | |
Variable	Coefficient	*SE*	*t*
External, β_2			
ESI, γ_{21}	-.01	.00	-2.06*
Control, γ_{22}	.06	.03	2.07*

Note. $N = 105$. Equity sensitivity instrument (ESI).

*$p < .05$

APPENDIX B-FIGURES

Figure Caption

Figure 1. Theoretical model supported by previous research (e.g., Hills (1980); Taylor & Vest, 1992) of referent equity relating to pay satisfaction.
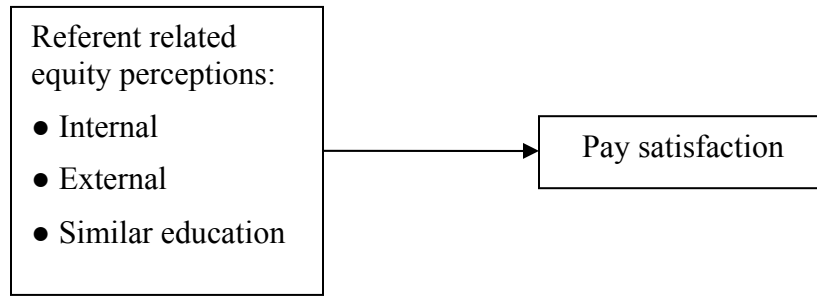
Figure 2. Hypothesized model of the current study, relating referent equity to pay satisfaction, moderated by the meaning of pay.

Figure 3. Hypothesized model relating equity perceptions to pay satisfaction, moderated by equity sensitivity.

Figure 4. Exploratory model relating equity sensitivity to the originally hypothesized model.

Figure 5. Line graph portraying the three way interaction between the forms of equity for conditions of low internal equity.

Figure 6. Line graph portraying the three way interaction between the forms of equity for conditions of high internal equity.

Figure 1.

Referent related
equity perceptions:

● Internal

● External

● Similar education

Pay satisfaction

Figure 2.

Figure 3.

Equity Sensitivity

Referent related
equity perceptions:

● Internal

● External

● Similar education

Pay Satisfaction

Figure 4.

Reflected Meanings of Pay → Equity Sensitivity

Referent related equity perceptions:
- Internal
- External
- Similar education

Pay Satisfaction
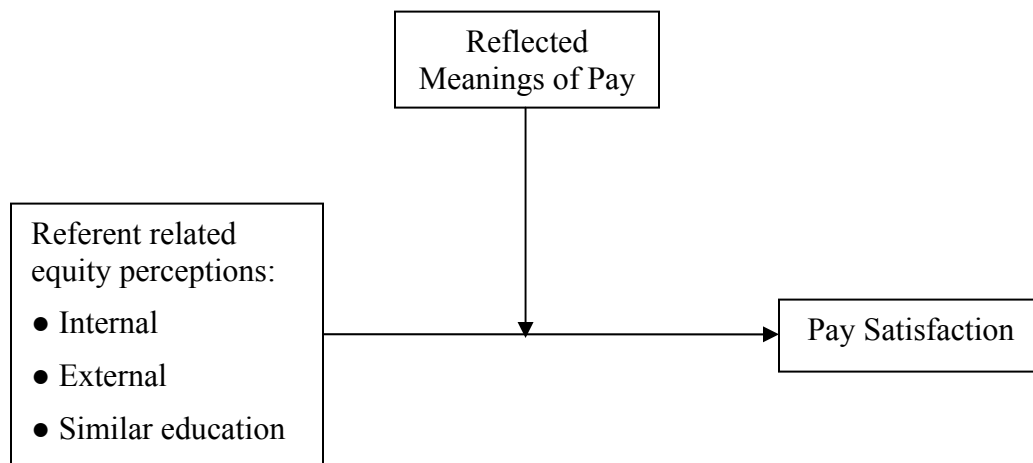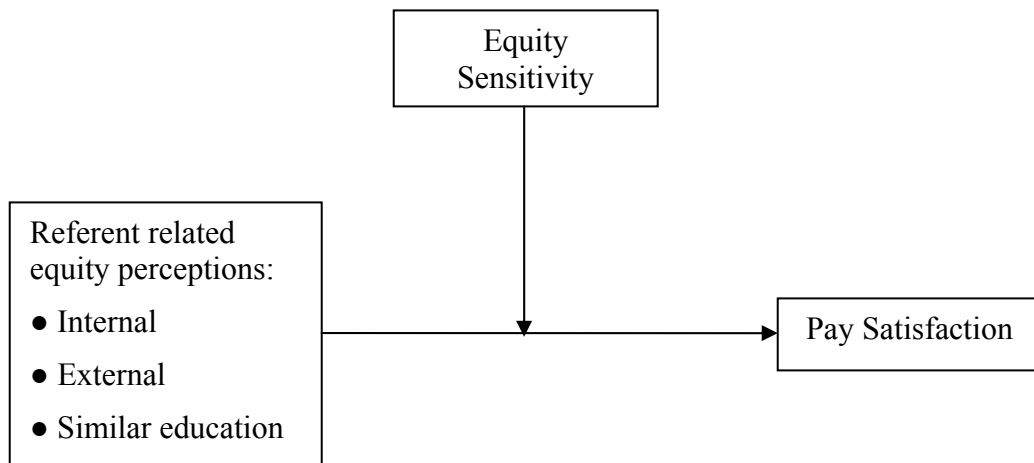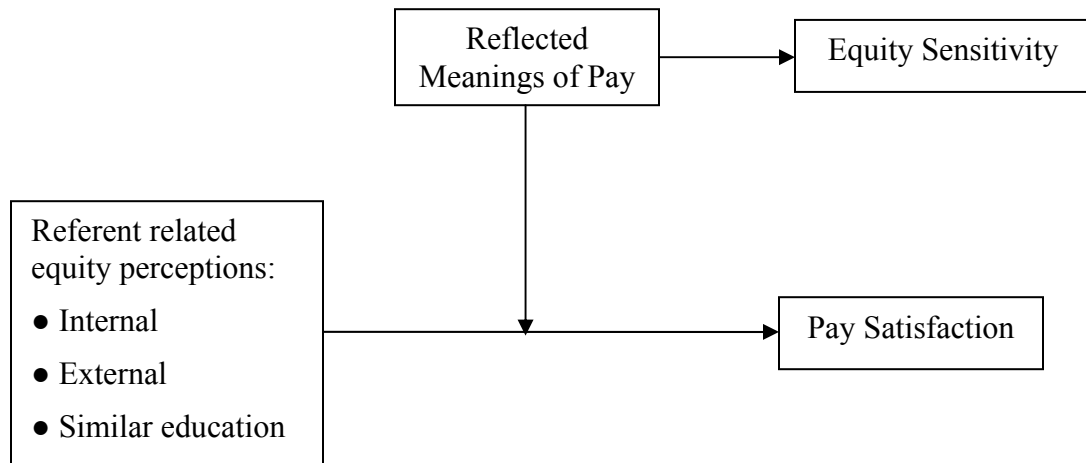
Figure 5.

Internal Equity = Low for participant (-)
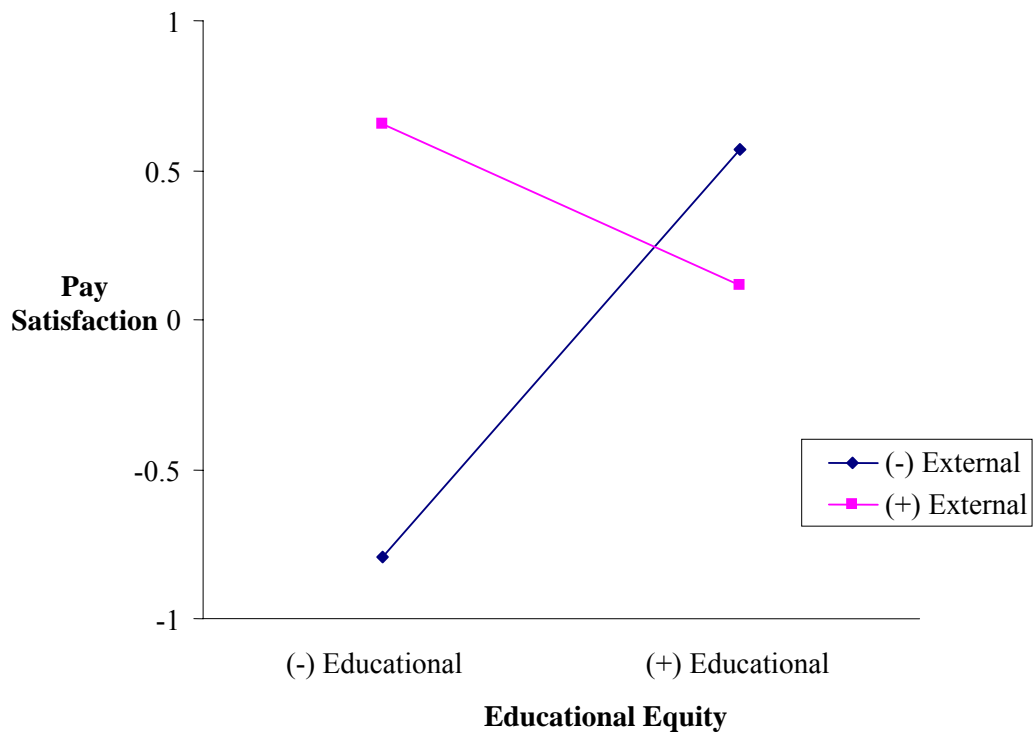
Figure 6.

Internal Equity = High for participant (+)
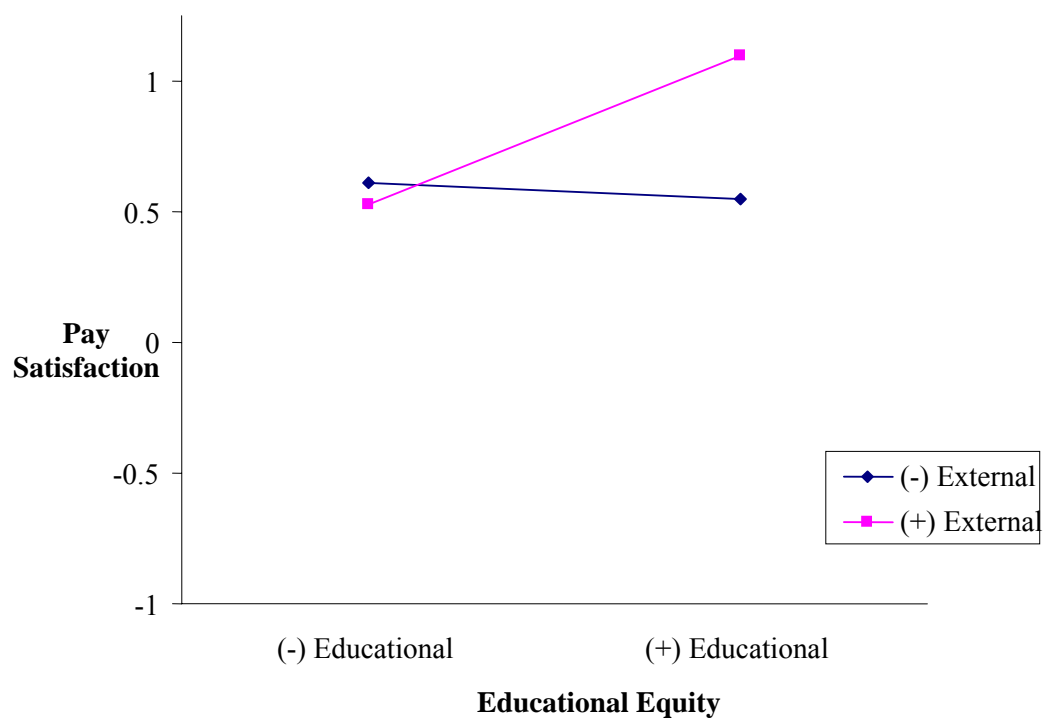
Appendix C

Short Construct Definitions for the Meaning of Pay Scale Used in Substantive Validity Assessment

Control: My pay represents how much power and control I have in my work environment.

Motivational: My pay represents a way to achieve abstract *intangible* goals such as security, recognition, & status.

Performance: My pay tells me how well I'm performing up to standards and how well I'm doing compared to others.

Spending: My pay represents an ability to buy the things that I want.

Appendix D

Instructions:
In this section you are asked to describe what pay *means* to you. Pay refers to your total income and includes your salary, bonuses and fringe benefits such as medical insurance, savings or pension plans, as well as income from profit and gain sharing plans. We use the term *pay* to refer to all these components. Please indicate for each item the extent to which you agree or disagree with that statement. The right answer is the one which represents most closely how you feel.

1 Strongly Disagree	2 Disagree	3 Undecided	4 Agree	5 Strongly Agree

1. My pay should enable me to enhance personal growth.	1	2	3	4	5
2. My pay should enable me to establish contacts off the job.	1	2	3	4	5
3. My pay should enable me to be recognized in society.	1	2	3	4	5
4. My pay should enable me to achieve a stable way of life.	1	2	3	4	5
5. My pay should enable me to acquire recognition from family and friends.	1	2	3	4	5
6. My pay should enable me to show off my success.	1	2	3	4	5
7. My pay should enable me to be admired for my success.	1	2	3	4	5
8. My pay should enable me to be respected for my success.	1	2	3	4	5
9. Through my pay I learn how well I meet job expectations.	1	2	3	4	5
10. Through my pay I learn the priorities in my work.	1	2	3	4	5
11. Through my pay I learn the extent to which I perform my job efficiently	1	2	3	4	5
12. Through my pay I learn how well I perform in comparison with my colleagues.	1	2	3	4	5
13. Through my pay I learn the amount of effort I put in my job.	1	2	3	4	5
14. Through my pay I learn the extent to which I put the right amount of effort in my job as compared to others.	1	2	3	4	5
15. Through my pay I learn the extent to which my performance is valued in relation to my colleagues.	1	2	3	4	5
16. Through my pay I learn how well I took on and completed hard projects at work.	1	2	3	4	5
17. Through my pay I learn how much freedom I have to do things my own way.	1	2	3	4	5
18. Through my pay I learn what people think of my work.	1	2	3	4	5
19. Through my pay I learn how responsible I am for the work of others.	1	2	3	4	5
20. Through my pay I learn how influential my opinion is.	1	2	3	4	5
21. Through my pay I learn how important my work is to the organization.	1	2	3	4	5
22. Through my pay I learn how much influence I have upon the activities of my department.	1	2	3	4	5
23. Through my pay I learn how influential I have been concerning the operation of the organization.	1	2	3	4	5
24. Through my pay I learn how satisfied the customers of the organization are.	1	2	3	4	5
25. My pay should enable me to buy what I want.	1	2	3	4	5
26. My pay should enable me to go on vacation as I want.	1	2	3	4	5
27. My pay should enable me to live a luxurious life.	1	2	3	4	5
28. My pay should enable me to attain a desirable standard of living.	1	2	3	4	5
29. My pay should enable me to be well off.	1	2	3	4	5
30. My pay should enable me to purchase the goods and services I desire.	1	2	3	4	5
31. My pay should enable me to acquire luxury goods and services.	1	2	3	4	5
32. My pay should enable me to live where ever I want.	1	2	3	4	5

Appendix E

Instructions:
The questions below ask what you'd like for your relationship to be with *any* organization for which you might work. On each question, *divide* 10 points between the two choices (choice A and choice B) by giving the most points to the choice that is *most* like you and the fewest points to the choice that is *least* like you. You can, if you'd like, give the same number of points to both choices (for example, 5 points to choice A and 5 points to choice B). And you can use zeros if you'd like.

Just *be sure* to allocate **all 10 points** per question between each pair of possible responses.

In any organization I might work for:

1) It would be more important for me to:

_____ A. Get from the organization

_____ B. Give to the organization

2) It would be more important for me to:

_____ A. Help others

_____ B. Watch out for my own good

3) I would be more concerned about:

_____ A. What I received from the organization

_____ B. What I contributed to the organization

4) The hard work I do should:

_____ A. Benefit the organization

_____ B. Benefit me

5) My personal philosophy in dealing with the organization would be

_____ A. If I don't look out for myself, nobody else will

_____ B. It's better for me to give than receive

Appendix F

Pay Differential Manipulation

A corporate recruiter has contacted you about a potential job offer hired at an **Associate** level. This job has a salary structure that will be outlined below.

Assuming that the new job offers monthly pay of **$5067**, please indicate how *satisfied* you would be if the average monthly pay of the following groups of people were:

> **$5067 for the other Associates at the same level <u>in your organization</u>**
>
> **$5067 for Associates at the same level <u>in other organizations in this industry</u>**
>
> **$5067 for people with <u>similar education and experience as you</u>**
>
> **$5067 for <u>your salary</u> offer**

1	2	3	4	5	6	7
Extremely Dissatisfied			**Don't Know**		**Extremely Satisfied**	

Based on this scenario, how satisfied are you with:

		1	2	3	4	5	6	7
1.	The amount of pay you receive	1	2	3	4	5	6	7
2.	The degree to which you are fairly paid for what you contribute to the organization	1	2	3	4	5	6	7

Based on this scenario, how satisfied are you with your pay as compared to :

		1	2	3	4	5	6	7
3.	the other Associates in your organization	1	2	3	4	5	6	7
4.	Associates in other organizations	1	2	3	4	5	6	7
5.	people with similar education and experience as you	1	2	3	4	5	6	7
6.	the real job you have currently	1	2	3	4	5	6	7

1	2	3	4	5	6	7
Extremely Unlikely			**Don't Know**		**Extremely Likely**	

		1	2	3	4	5	6	7
7.	Based on this scenario, how likely are you to accept a job with this organization?	1	2	3	4	5	6	7

Appendix G

CRFF-3$^{4-1}$ Treatment Interaction Design (Connor & Zelen, 1959)

a_j = Participant Salary	b_k = Internal Referent Salary	c_l = External Referent Salary	d_m = Educational Referent Salary
a_0 = low a_1 = medium a_2 = high	b_0 = low b_1 = medium b_2 = high	c_0 = low c_1 = medium c_2 = high	d_0 = low d_1 = medium d_2 = high

Scenario #	Treatment Combination
1	$a_0b_0c_0d_0$
2	$a_1b_2c_1d_2$
3	$a_2b_1c_2d_1$
4	$a_0b_0c_2d_1$
5	$a_1b_2c_0d_0$
6	$a_2b_1c_1d_2$
7	$a_0b_0c_1d_2$
8	$a_1b_2c_2d_1$
9	$a_2b_1c_0d_0$
10	$a_0b_1c_0d_2$
11	$a_1b_0c_1d_1$
12	$a_2b_2c_2d_0$
13	$a_0b_1c_2d_0$
14	$a_1b_0c_0d_2$
15	$a_2b_2c_1d_1$
16	$a_0b_1c_1d_1$
17	$a_1b_0c_2d_0$
18	$a_2b_2c_0d_2$
19	$a_0b_2c_0d_1$
20	$a_1b_1c_1d_0$
21	$a_2b_0c_2d_2$
22	$a_0b_2c_2d_2$
23	$a_1b_1c_0d_1$
24	$a_2b_0c_1d_0$
25	$a_0b_2c_1d_0$
26	$a_1b_1c_2d_2$
27	$a_2b_0c_0d_1$

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