A MODERATED-MEDIATION MODEL OF PAY SECRECY

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ABSTRACT

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The present study examined the association between pay secrecy and its outcomes. Based on theories of justice and equity, pay secrecy was hypothesized to positively influence the four facets of pay satisfaction (i.e., pay level, raises, benefits, and administration) through procedural and distributive justice. The pay secrecy-justice-pay satisfaction relationship was proposed to be conditional on the value of equity sensitivity, such that it would be the strongest for individuals with the highest sensitivity for inequity. Thus, utilizing a sample of 187 individuals, a moderated-mediation model of pay secrecy was tested. Results were inconsistent with the hypothesized model, in that equity sensitivity did not moderate the relationship between pay secrecy and the pay satisfaction facets, when it was mediated by procedural and distributive justice. Furthermore, neither procedural nor distributive justice mediated the pay secrecy-pay satisfaction relationship. Thus, the current findings suggest that there are no individual differences in the perceptions of justice and pay attitudes between equity sensitive and equity insensitive employees working in organizations with varying degrees of pay secrecy. The limitations of the study and future research directions are discussed.
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INTRODUCTION: A MODERATED-MEDIATION MODEL OF PAY SECRECY

Despite the fact that pay secrecy continues to command considerable attention in the legal system and popular press, it remains largely understudied by Industrial-Organizational psychologists (Bamberger & Belogolovsky, 2010; Colella, Paetzold, Zardkoohi, & Wesson, 2007; Day, 2007, 2012). In addition, the studies that have been published reveal contradictory results (e.g., Bamberger & Belogolovsky, 2010; Futrell & Jenkins, 1978; Schuster & Colletti, 1973). Some research has shown that pay secrecy positively affects various organizational outcomes, such as organizational commitment, job performance, job satisfaction, and pay satisfaction (Day, 2007; Milkovich & Anderson, 1972; Sweins, Kalmi, & Hulko-Nyman, 2009). Other research has shown that pay secrecy negatively affects those outcomes (Card, Mas, Moretti, & Saez, 2010; Day, 2011, 2012; Schuster & Colletti, 1973).

A possible reason for these discrepancies may be due to the confusion between the concepts of pay secrecy and pay communication, which are often considered to be opposite ends of the same continuum (e.g., Bamberger & Belogolovsky, 2010; Day, 2011). For example, previous research has shown that in contrast to pay communication, pay secrecy negatively impacts justice perceptions and pay satisfaction (Day, 2011). However, recent research has shown that the two constructs are conceptually unrelated (Day, 2012), suggesting that conclusions about pay communication may not generalize to pay secrecy. Pay communication deals with the exchange of salary-related information between managers and their subordinates (Bamberger & Belogolovsky, 2010; Day, 2007); whereas pay secrecy deals with the exchange of salary-related information among employees working within the same or similar job grade (Colella et al., 2007). It is noteworthy that the exchange of salary-related information is often promoted informally, because the majority of private sector companies do not have formal pay secrecy policies in place (HRnext.com, 2001). Typically, employers inform their constituents about the norms for pay
secrecy (e.g., “we do not discuss our salaries here”) and the penalties for violating these norms (e.g., demotion, termination, and suspension) at the time of hiring (Colella et al., 2007). Aware of these norms, employees may refrain from sharing their salary information with their colleagues. Therefore, workers’ perceptions, rather than the presence or absence of written policies, were the focus in the current study—because of this, the terms pay secrecy and pay secrecy perceptions were used interchangeably.

In sum, previous research has confounded the concept of pay secrecy with the unrelated concept of pay communication—thereby limiting our understanding of the extent to which employees’ perceptions of pay secrecy policies (written or unwritten) affect important organizational outcomes, such as justice perceptions and pay satisfaction. To address this limitation and to extend the current body of literature, the present study drew from justice and equity theory and previous research by Day (2011, 2012). Specifically, the current research tested a modified version of a theoretical model proposed by Day (2011), wherein pay secrecy was operationalized as distinct from pay communication and only distributive and procedural justice were retained as mediators of the relationship between pay secrecy and pay satisfaction. Finally, a moderated-mediation model of pay secrecy was hypothesized where equity sensitivity, defined as individual sensitivity to the presence of equity, or lack thereof, in social and economic exchanges (Huseman, Hatfield, & Miles, 1985, 1987), was proposed to affect the strength of the pay secrecy-justice-pay satisfaction relationship.

Next, I describe the multidimensional structure of the primary criteria used in the current study, namely the four facets of pay satisfaction. Then, a brief discussion about pay secrecy is presented, followed by a discussion about the mediators employed in the present research (i.e., procedural and distributive justice). Finally, I introduce the concept of equity sensitivity as a
moderator of the relationship among pay secrecy, the two justice constructs, and the pay satisfaction facets.

**Pay Satisfaction**

Pay satisfaction is defined as a pleasurable or positive emotional state that results from an appraisal of one’s pay situation (Locke, 1976). Given that many compensation systems include both monetary and nonmonetary rewards (e.g., vacation times, sick days), it is reasonable to assume that employees may have varying degrees of satisfaction with different components of their compensation package. However, until the mid-1980s, the two most widely-utilized measures of pay satisfaction, the Minnesota Satisfaction Questionnaire (MSQ; Weiss, Dawis, England, & Lofquist; 1967) and Job Descriptive Index (JDI; Smith, Kendall, & Hulin, 1969), viewed pay satisfaction as a unidimensional construct. Although these measures had different response formats that targeted pay-related attitudes, they were able to produce only a single score of pay satisfaction. To overcome these shortcomings, Heneman and Schwab (1985) designed and validated a new instrument that captured various aspects of pay satisfaction. These authors determined that the construct was multidimensional in nature and consisted of four facets (i.e., pay level, raise, benefit, and administration satisfaction). *Pay level* was conceptualized as an individual’s current wage or salary (Heneman & Schwab, 1985). It is worth mentioning that bonus payments, or tangible monetary incentives distributed for an outstanding performance, can sometimes be subsumed under employees’ benefit packages or included in their compensation plans (Joseph & Kalwani, 1998). For the purpose of the current project, bonuses were treated as a part of an employee’s pay level. *Benefits* were defined as nonmonetary rewards, such as pension plans, health insurance, vacation times, maternity leave, and other perks that employees received along with their paychecks (Heneman & Schwab, 1985). *Raises* were conceptualized as upward monetary changes made to the individual’s current wage (Heneman & Schwab, 1985). And finally, *administration*
satisfaction was referred to as one’s satisfaction with the way pay-related decisions were carried out [for a complete discussion, refer to Heneman and Schwab’s (1985) article]. Therefore, the present study operationalized pay satisfaction in terms of its four dimensions (i.e., pay level, raises, benefits, and administration satisfaction).

Perceptions of Pay Secrecy

Although not a modern innovation, the use of wages as a motivating factor started to receive empirical attention only at the beginning of the 20th century, when management pioneers, such as Frederick Taylor, began including monetary incentives in workers’ compensation plans (Muhs, 1985). Since that time, managers and I-O psychologists have started studying money as a motivator at work (Muhs, 1985; Rynes, Gerhart, & Minette, 2004). In their comprehensive review, Rynes and colleagues (2004) have shown that money is important for the majority of people. In addition to monetary incentives however, organizations frequently offer nontangible rewards, such as benefits, to their employees in order to attract and retain top talent and build competitive advantage. Previous research has provided ample evidence suggesting that nontangible rewards are as important to work motivation as tangible rewards (Terborg & Miller, 1978). Because compensation, both monetary and nonmonetary, is the most common and salient extrinsic reward offered by organizations, compensation professionals frequently face the challenge of designing a fair reward distribution system (Jawahar & Stone, 2010; Ramaswami & Singh, 2003), the development of which often requires making decisions about whether or not to adopt pay secrecy policies (e.g., Alboher, 2008; Futrell & Jenkins, 1978; Gely & Bierman, 2003).

Pay secrecy policies are favored by some organizations and opposed by others. According to HRnext.com (2011), over one-third of private sector employers have adopted a confidential pay plan, under which the compensation is kept private. According to a different survey, one-in-fourteen employers have adopted an open pay plan, which makes the compensation-related
information publically available (Gely & Bierman, 2003). Among the reasons for why some companies shy away from adopting pay secrecy is because these policies have consistently been found to be illegal under the National Labor Relations Act, which protects both union and nonunion workers (Gely & Bierman, 2003). Furthermore, women’s rights activists claim that pay nondisclosure policies perpetuate the gender-wage gap and prevent minorities from receiving equitable compensation (Alboher, 2008; Hegewisch, Williams, & Drago, 2011; New York Women’s Agenda [NYWA], 2012). NYWA (2012) further maintains that if legally enforced, pay transparency can help equalize wages among men and women. Although there is some evidence that pay disclosure practices have helped minimize the gender-wage gap in the federal government (NYWA, 2012), many privately owned companies are still reluctant to make their employees’ wages public. Often, a decision to enforce pay secrecy is stimulated by a desire to protect private employee data (Day, 2007; Sim, Bakke, Kay, & Tulgan, 2001), to conceal inequities in resource allocations (Gomez-Mejia & Balkin, 1992), or to avoid conflicts among employees (Colella et al., 2007).

Perhaps, the most crucial reason for maintaining a secret pay plan is to discourage workers from engaging in social comparisons (Day, 2007). According to equity theory, individuals gauge the fairness of the reward distribution by comparing their own inputs (e.g., education, tenure, and experience) and outputs (e.g., salary, benefits and perks) to those of a referent other (Adams, 1963; Livingstone, Roberts, & Chonko, 1995). Equity theory posits that there are three choices of a referent other: a) self-referents include one’s own pay in a past or future job; b) system referents include the pay within one’s job grade; and c) “other” referents include one’s coworkers (Adams, 1963). Arguably, in an open pay system, where compensation information is available, employees are likely to compare their rewards to those of their fellow colleagues. However, because the rewards do not convey the information about each employee’s contribution to the organization, the
social comparisons may be unfavorable, leading to a host of undesirable outcomes, including grievances, discrimination allegations, and turnover (Adams, 1963; Day, 2007). Pay secrecy, on the other hand, makes it difficult to compare one’s own input-to-output ratio to that of a colleague’s—thereby reducing the grounds for the formation of inequity perceptions.

In support of pay secrecy, numerous studies have found that open pay systems do not necessarily result in a more satisfied workforce, as was advocated in the past (Lawler, 1966, 1967). For example, Card and colleagues (2010) in their experimental study have shown that employees of the University of California, who accessed their colleagues’ salary levels, reported lower pay satisfaction, increased concerns about fairness, and higher intentions to quit, compared to those employees who had not accessed this kind of information. Day (2007) also found that pay disclosure decreased pay satisfaction and threatened perception of equity. Moreover, research has demonstrated that individuals tend to inaccurately estimate their coworkers’ compensation levels even when pay-related information has been provided (Lawler, 1966, 1967; Milkovich & Anderson, 1972; Burroughs, 1982). Taken together, the findings from previous research suggest that organizations may not benefit from adopting a transparent pay plan, because it leads to unfavorable social comparisons, which in turn may adversely influence pay attitudes and perceptions of justice.

**Differentiating pay secrecy and pay communication.** As mentioned above, previous research has established that pay secrecy and pay communication are unrelated (Day, 2012) and, therefore, should not be used interchangeably. Conceptually, pay secrecy deals with the horizontal dissemination of pay-related information, which implies a discussion about salaries among coworkers of the same or similar rank; whereas pay communication deals with the vertical exchange of this information, which implies a discussion about salaries between managers and their subordinates. Again, the policies governing pay discussions may exist in written and unwritten
forms. Written (explicit) pay secrecy policies are often included in employee manuals, whereas unwritten (tacit) policies, which are more common in the corporate world, are promoted verbally (Day, 2012). Previous research has shown that there is an empirical difference between pay communication and the two forms of pay secrecy, such that the correlations between tacit pay secrecy and pay communication, and explicit pay secrecy and pay communication, have been found to be nonsignificant ($r = -.09$, $ns$ and $r = .16$, $ns$, respectively; Day, 2012).

Research linking pay secrecy to pay-related attitudes is in its infancy—thus, the current project derived its first hypothesis based on a field study by Day (2012) and equity theory (Adams, 1963). In contrast to explicit pay secrecy, which did not predict satisfaction with pay level, raises, and administration, Day (2012) found that tacit pay secrecy predicted satisfaction with administration ($b = -.20$, $p < .05$). The association between the two forms of pay secrecy and benefit satisfaction was not reported. Although many were nonsignificant, the relationships between explicit and tacit pay secrecy and the three facets of pay satisfaction were negative, suggesting that pay secrecy may be inversely related to attitudes towards pay. However, the current study predicted a positive relationship between the two forms of pay secrecy and the four facets of pay satisfaction for several reasons. First, the sample in Day’s study consisted of public sector employees, who often have access to their colleagues’ compensation, making it difficult to generalize the results to private sector organizations. Second, because pay secrecy limits the dissemination of salary-related information (Colella et al., 2007), employees may refrain from comparing their input-to-output ratios to those of their colleagues, focusing instead on their own past, present, and projected ratios. Because organizational performance management systems often encourage employees to set individual goals and measure the progress with respect to those goals (Brown, 2001), employees may be more likely to engage in self-comparisons, juxtaposing their past and present achievements. As was suggested by others (e.g., Brown, 2001; Day, 2007), it is likely
that, at the minimum, employees will not form negative attitudes toward their pay level, raises, benefits, and administration, and at the maximum, will become satisfied with these outcomes, because those pay-related outcomes tend to follow an upward trend. In other words, Employee A may be more satisfied with his current compensation, because it is larger than his past level of pay and benefits and it is likely to grow in the future. Although research investigating the interplay between a choice of referents, equity perceptions, and pay-related attitudes is mixed (Day, 2007), it seems logical that Employee A would not generate perceptions of inequity, if his past, current, and future rewards do not compare favorably. Instead, employee A would likely to reconsider his goals and/or re-think the methods of their achievement (Brown, 2001). Thus, based on equity theory, the following hypothesis was proposed:

**Hypothesis 1.** Pay secrecy, both tacit and explicit, will be positively associated with all four facets of pay satisfaction.

**Perceptions of Justice as Mediators**

Deciding whether or not to adopt the pay secrecy policies is not the only hurdle compensation professionals encounter. According to justice theory, a compensation system is most effective when employees perceive the resource allocation as fair (Colquitt, Conlon, Wesson, Porter, & Ng, 2001). Perceptions of fairness not only ensure the success of a given pay plan, they also make employees more satisfied with various outcomes (Folger & Konovsky, 1989; McFarlin & Sweeney, 1992; Sweeney & McFarlin, 1993). Research has shown that distributive, procedural, and interactional justice perceptions explain meaningful variance in pay satisfaction (Folger & Konovsky, 1989; Howard, 1999; McFarlin & Sweeney, 1992; Tremblay, Sire, & Balkin, 1998). However, the present study focuses only on the distributive and procedural justice variables and their relationship with pay secrecy and the four facets of pay satisfaction due to several reasons. First, compared to interactional justice, both procedural and distributive justice have been shown
to account for more variance in pay satisfaction in past studies (Day, 2011). Second, interactional justice and pay secrecy have no theoretical relation, because interactional justice concerns the quality of the supervisor-subordinate interaction (Bies, 2001; Colquitt & Greenberg, 2003; Tyler & Bies, 1990); whereas pay secrecy concerns the quality of the interaction between employees of the same or similar rank. Therefore, only the distributive and procedural justice variables were examined in this study.

The following sections will explain (a) how distributive and procedural justice predict the four facets of pay satisfaction, (b) how the perceptions of pay secrecy relate to the two justice dimensions, and finally, (c) why the two justice dimensions mediate the relationship between the pay secrecy perceptions and pay satisfaction.

**Distributive justice.** Distributive justice perceptions are based on beliefs about whether or not an organization distributes outcomes equitably among its constituents (Colquitt et al., 2001). Given that salary is the most salient and tangible outcome (Rynes et al., 2004), it is possible that employees form the perceptions of distributive justice based on how well their salary reflects the effort they have exerted on the job. Because salary often depends on individual characteristics of employees, such as their knowledge, skills, and abilities (KSA; Bies & Moag, 1986; Colquitt et al., 2001), agent-system theory defines it as an agent-referenced outcome. On the other hand, agent-system theory defines the outcomes that do not directly depend on individual contributions, such as benefits, as system-referenced outcomes. In the context of the current study, pay level and raises are referred to as agent-referenced outcomes, because they are contingent upon one’s input; whereas benefit and administration of rewards are referred to as system-referenced outcomes, because they do not depend on one’s contributions.

Thus, distributive justice perceptions should predict attitudes toward agent-referenced outcomes (e.g., pay levels and raises; Sweeney & McFarlin, 1993; McFarlin & Sweeney, 1992;
Folger & Konovsky, 1989; Tekleab, Bartol, & Liu, 2005), if, for example, Person A perceives the resource allocation system in the organization as fair, he or she will likely be satisfied with his or her pay level and raises. In other words, when the distribution of resources is perceived to be just, individuals conclude that there is fairness and that their pay level and raises are satisfactory. A meta-analysis by Cohen-Charash and Spector (2001) has shown that distributive justice highly correlates with pay level satisfaction (weighted mean correlations .62). Another study has shown that distributive justice relates to satisfaction with raises ($b = .24, p < .01$; Day, 2011). In contrast, distributive justice has not been shown to predict system-referenced outcomes such as benefit and administration satisfaction. Therefore, these variables were not expected to relate significantly.

Based on agent-system theory and previous research, the following hypotheses were advanced:

**Hypothesis 2a.** Distributive justice perceptions will be positively associated with attitudes toward agent-referenced outcomes. Specifically, individuals who report high levels of distributive justice will also report high satisfaction with the level of their pay.

**Hypothesis 2b.** Individuals who report high perceptions of distributive justice will also report high satisfaction with their raises.

According to equity theory, employees evaluate the fairness of resource allocation by comparing their input-to-output ratios to those of their colleagues (Adams, 1963). Because employees often have limited insight about their coworkers’ contributions, knowledge about pay differentials may result in unfavorable social comparisons, breeding feelings of discontent, envy, and injustice (Bamberger & Belogolovsky, 2010). Unlike pay openness, pay secrecy reduces speculation about the fairness of the reward distribution system and reduces perceptions of distributive justice. As such, I expect the following:

**Hypothesis 3.** Pay secrecy, both tacit and explicit, will be positively associated with
perceptions of distributive justice, such that individuals who perceive pay secrecy to be the norm in their organization will also report high levels of distributive justice.

Research looking at the mediating effects of distributive justice perceptions on the relationship between pay secrecy and pay satisfaction is scarce. The mediation hypotheses set forth in this research were derived from justice theory, agent-system theory, and a field study by Day (2011). Day found that distributive justice perceptions mediated the pay communication-pay satisfaction relationship. However, as was mentioned earlier, Day’s research confounded pay secrecy with pay communication, making it difficult to determine what effect distributive justice had on the pay secrecy-pay satisfaction relationship. Given the differences between pay communication and pay secrecy, the current study examined the extent to which distributive justice mediated the relationship between pay secrecy (tacit and explicit) and the four facets of pay satisfaction. Because employees are prohibited from sharing salary-related information with their coworkers in organizations with pay secrecy policies, employees will be less likely to engage in inadequate social comparisons (Adams, 1963)—thereby creating an impression that the reward distribution system is fair (Colquitt et al., 2001). Consequently, perceptions of distributive justice may lead to satisfaction with one’s pay level and raises (Bies & Moag, 1986; Colquitt et al., 2001).

**Hypothesis 4.** Distributive justice perceptions will mediate the relationship between pay secrecy, both tacit and explicit, and satisfaction with raises and pay levels. Specifically, individuals who perceive norms for pay secrecy in their organization will report higher levels of distributive justice, and consequently, will be more satisfied with their pay levels and raises.

**Procedural justice.** Procedural justice is defined as fairness of the procedures used to determine various organizational outcomes, including rewards (Leventhal, Karuza, & Fry, 1980;
Perceptions of procedural justice, which result from a consistent and bias-free application of rules (Colquitt, 2001), have been linked to organizational commitment (Folger & Konovsky, 1989; Howard, 1999), job satisfaction (Bluedorn, 1982; Dittrich & Carrell, 1979; Price & Mueller, 1986) and individual task performance (Bamberger & Belogolovsky, 2010). In addition, previous research has demonstrated that perceptions of procedural justice are important to the human resource management processes (e.g., personnel selection and performance appraisal; Gilliland, 1994). In their meta-analysis, Williams, McDaniel, and Nguyen (2006) found a strong relationship between procedural justice and pay satisfaction.

Unlike distributive justice, which predicts attitudes toward agent-referenced outcomes, procedural justice predicts attitudes toward system-referenced outcomes, such as benefit satisfaction ($b = .35, p < .001$) and administration satisfaction ($b = .39, p < .001$; Day, 2011; McFarlin & Sweeney, 1992; Sweeney & McFarlin, 1993). Jawahar and Stone (2011) have shown that there is a positive association between procedural justice and satisfaction with benefits ($b = .41, p < .01$) and administration policies ($b = .32, p < .05$). Given that benefits and administration practices are often equal for everyone and do not depend on individual credentials (Kals & Jiranek, 2012), the extent to which they have been administered fairly can be evaluated by observing the procedures. If, for example, workers notice that benefits are not offered uniformly to everyone within the same job grade, then it is likely that perceptions of procedural unfairness will arise. As a consequence, employees’ satisfaction with administration and benefits may decline. No relationship between procedural justice and agent-referenced outcomes was expected, because previous studies have shown that procedural justice does not account for unique variance in the prediction of agent-referenced outcomes (Sweeney & McFarlin, 1993; McFarlin & Sweeney, 1992; Folger & Konovsky, 1989).

**Hypothesis 5a.** Procedural justice perceptions will be positively associated with
attitudes toward system-referenced outcomes. Specifically, individuals who report higher levels of procedural justice will also be more satisfied with their benefits than those who perceived less procedural justice.

**Hypothesis 5b.** Individuals who report higher levels of procedural justice will also be more satisfied with the organization’s administration policies than those who perceive less procedural justice.

Research that explores the link between pay secrecy and procedural justice is limited. Some scholars maintain that pay openness allows employees to verify fairness of the procedures used to arrive at certain compensation-related outcomes by disclosing everyone’s salaries (e.g., Bamberger & Belogolovsky, 2010; Day, 2011). Arguably, this is due to the fact that transparent pay plans allow organizational constituents to monitor the extent to which the procedures used to determine the rewards are consistent, bias-free, accurate, and are based on moral and ethical standards (Leventhal, 1980). However, even when an organization makes good faith efforts to reward its constituents equitably, the procedures governing the reward distribution may still be perceived as unfair, because procedural justice perceptions are in the eye of the beholder (Colella et al., 2007). When pay information is confidential, it is likely that employees will not form perceptions of unfairness, because any pay differences that exist due to either human errors or true performance differences will not be visible—thereby eliminating suspicions and feelings of injustice (Colella et al., 2007). Moreover, keeping pay confidential may convey to the employees that the organization respects and protects their privacy, which was shown to predict a host of positive outcomes, including satisfaction and organizational commitment (Klopfer & Rubenstein, 1977; Sundstrom, Burt, & Kamp, 1980).

**Hypothesis 6.** Pay secrecy (tacit and explicit) will be positively associated with perceptions of procedural justice, such that individuals who perceive norms for
pay secrecy in their organizations will also report high levels of procedural justice.

Since research examining the mediating effect that perceptions of procedural justice has on the relationship between pay secrecy and the four facets of pay satisfaction is limited, this study advanced a mediation hypothesis based on the field study by Day (2011). Day has shown that pay communication policies affect benefit and administration satisfaction through procedural justice. In other words, the more pay-related information employees are provided, the fairer they deem the procedures to be, and as a consequence, the happier they are with their benefits and the administration policies. Given the previous discussion about (1) the distinction between pay communication and pay secrecy, (2) the relationship between pay secrecy and procedural justice, and finally, and (3) the connection between procedural justice and satisfaction with benefits and administration, the following hypothesis was set forth.

**Hypothesis 7.** Procedural justice perceptions will mediate the relationship between pay secrecy, both tacit and explicit, and satisfaction with benefits and administration.

Specifically, individuals who perceive norms for pay secrecy in their organization will also report higher levels of procedural justice, and consequently, will report higher satisfaction with their benefits and administration policies.

**Equity Sensitivity**

The information available about the boundary conditions of pay secrecy is meager. Certain individual characteristics, such as equity sensitivity, may help shed light on the circumstances under which the relationships between pay secrecy and the organizational outcomes are the strongest (King, Miles, & Day, 1993; Sauley & Bedeian, 2000). Equity sensitivity refers to a dispositional characteristic that reflects individual sensitivity to the presence of equity, or lack thereof, in social and economic exchanges (Huseman, Hatfield, & Miles, 1985, 1987). Equity sensitivity is conceptualized as a continuous variable with Benevolents at one end, Entitleds at the
other end, and Equity Sensitives in the middle (King et al., 1993). In contrast to Entitleds and Equity Sensitives, Benevolents have the highest tolerance for under-reward, because they focus on inputs rather than on outputs (Sauley & Bedeian, 2000; King et al., 1993). In other words, when Benevolents perceive that they are under-rewarded, they tend to attribute it to differences between their own inputs and those of their referent other (Sauley & Bedeian, 2000). Entitleds, on the other hand, are more focused on outputs than inputs, making them intolerant of pay inequities that do not favor them (Sauley & Bedeian, 2000). Because inequity is an important issue for Entitleds, they may strive to gather information concerning (a) the procedures used to allocate resources and (b) the extent to which their outcomes compare to those of their colleagues. Under pay secrecy, Entitleds may not have access to their coworkers’ outcomes nor to the procedures governing the administration of the rewards—thereby preventing them from evaluating the fairness of the procedures used to distribute the rewards. In the absence of such information, the procedures are likely to be considered fair and the outcomes to be satisfactory. Put differently, the more confidential the pay plan becomes, the less perceptions of unfairness are likely to arise, leading to higher satisfaction with pay-related outcomes, especially for individuals with low tolerance for inequity. Based on this logic, it is likely that equity sensitivity may moderate the strength of the mediated relationship between pay secrecy and pay satisfaction (Preacher, Rucker, & Hayes, 2007). In other words, the magnitude of the pay secrecy-justice-pay satisfaction relationship may be conditional on the value of equity sensitivity, such that the relationship is stronger for those highly sensitive to inequity (Entitleds) and weaker for those who are insensitive to inequity (Benevolents). Because distributive justice predicts satisfaction with pay levels and raises and procedural justice predicts satisfaction with administration and benefits, the following two hypotheses were advanced.

**Hypothesis 8a.** Equity sensitivity will moderate the positive effect of pay secrecy (both tacit and explicit) on satisfaction with pay levels and raises, when this relationship is mediated by
distributive justice. Specifically, the mediation will be stronger when equity sensitivity is high (for Entitleds) than when it is low (for Benevolents).

**Hypothesis 8b.** Equity sensitivity will moderate the positive effect of pay secrecy (both tacit and explicit) on satisfaction with benefits and administration, when this relationship is mediated by procedural justice. Specifically, the mediation will be stronger when equity sensitivity is high (for Entitleds) than when it is low (for Benevolents).
METHOD

Participants and Procedure

Two hundred US workers were surveyed via Amazon’s Mechanical Turk (MTurk). Previous research has shown that data collected via MTurk is demographically diverse and is “as reliable as those collected through other means” (Buhrmester, Kwang, & Gosling, 2011, p. 3). The current sample was predominantly White (71%), female (56%), and well-educated (42.9% held at least a Bachelor’s degree) with a mean age of 33. On average, respondents had been employed with their current employer for 2.3 years. Filler items (“For this question, please answer Strongly Agree”) were interspersed throughout the measures to identify careless responding. If participants responded incorrectly to at least one of these items, they were excluded from the analyses. Eight cases were eliminated from the analyses for this reason. In addition, five cases were dropped from further analyses due to an abnormally fast response rate (e.g., less than 1 minute after they have started the survey). As a result, the final sample size for analyses was 187 cases. All respondents were paid twenty-five cents for completing the survey, which was built with Qualtrics.

Measures

Justice perceptions. Justice perceptions were measured using a well-researched and reliable scale developed by Colquitt (2001). Procedural justice was measured with a seven-item instrument. Distributive justice was measured with a four-item instrument. Responses were provided on a 5-point Likert scale with anchors ranging from 1 (‘to a small extent’) to 5 (‘to a large extent’) (see Appendix A). The coefficient alphas for the procedural and distributive justice scales were .85 and .92, respectively.
Pay satisfaction. Because this study operationalized pay satisfaction as a four-faceted variable, the 18-item version of the Pay Satisfaction Questionnaire, which focused on pay level, benefit, raise, and administration satisfaction, was used (Heneman & Schwab, 1985). Respondents were asked to indicate their satisfaction with statements describing their compensation. Responses were provided on a 5-point Likert scale with anchors that ranged from 1 (‘very dissatisfied’) to 5 (‘very satisfied’) (see Appendix B). The coefficient alphas for these scales ranged from .87 to .97.

Equity sensitivity. Equity sensitivity was measured using Equity Preference Questionnaire developed and validated by Sauley & Bedeian (2000). Although the scale developers suggested the trichotomization of the variable into Entitled scoring .5 SD below the mean, Benevolents scoring .5 SD above the mean, and Equity Sensitives scoring in between, a decision to treat the variable as continuous was made because artificial categorization of a continuous variable may cause a great deal of problems, as discussed in detail by McClelland and Irwin (2003). Negatively worded items were reverse coded, as suggested by Sauley and Bedeian (2000). The items were scored using 5-point Likert scale ranging from 1 (‘strongly disagree’) to 5 (‘strongly agree’) (see Appendix C). The coefficient alpha for this scale was .93.

Pay secrecy. Given that research on pay secrecy is scarce, the efforts devoted to the development and validation of measures to assess this construct are even more limited. Only one study was located that designed and tested a measure of pay secrecy as being conceptually distinct from pay communication (Day, 2012). Pay secrecy was measured using a 10-item scale with anchors ranging from 1 (‘strongly disagree’) to 5 (‘strongly agree’). A self-reported measure was used because employees (1) have better insight about whether or not they discuss their salary-related information among each other; (2) are the best sources of information about their own perceptions of the extent to which nondisclosure policies are emphasized by their managers; and
have a better understanding about what would happen to someone who breaks the pay secrecy policy (Day, 2011; see Appendix D).

Exploratory factor analysis performed by Day (2012) revealed that the measure consisted of two factors, namely explicit and tacit pay secrecy. I conducted a confirmatory factor analysis on the 10 items to provide further evidence for the two-dimensional structure. The CFA results indicated that the items loaded on their respective factors and the two-factor model showed good model fit ($\chi^2 (34) = 409.25, p < .05, CFI = .99, RMSEA = .09, SRMR = .04$), compared to the fit of a single-factor model ($\chi^2 (35) = 1355.07, p < .05, CFI = .85, RMSEA = .28, SRMR = .26$). The RMSEA fell within the bounds of acceptable fit (e.g., MacCallum, Browne, & Sugawara, 1996). The coefficient alphas for tacit and explicit pay secrecy were .95 each.

**Control variables.** Previous research has shown that a disposition to experience negative emotions, labeled as negative affectivity (NA; Watson & Lcark, 1984), may account for systematic variance in the relationships between variables in organizational research (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Because high-NA individuals tend to report distress and dissatisfaction (Watson & Clark, 1984), it is possible that high-NA employees may report lowered pay satisfaction and feelings of unfairness—thereby systematically skewing the respondents’ ratings on the self-reported questionnaires (Podsakoff et al., 2003). To ensure that systematic variance did not affect the relationships between the focal variables, the current study controlled for NA. Although both positive and negative affectivity were included in the measure developed and validated by Watson and Clark (1984), only NA was administered to the participants in the present research, because positive affectivity, defined as a tendency to report high self-esteem and life satisfaction (Watson & Clark, 1984), had little potential for influencing the results. The NA scale
included 10 adjectives that were scored on a 5-point Likert scale ranging from 1 (‘very slightly or not at all’) to 5 (‘extremely’) (see Appendix F). The coefficient alpha for this scale was .94.

Research has also shown that pay-related attitudes are affected by how valuable money is to a particular individual (Mitchell, & Mickel, 1999). For example, if one values money highly, he or she may react acutely to any changes made to his or her monetary rewards. To control for the effects that the importance of money may have on the results of the current study, a four-item measure of money importance developed and validated by Mitchell et al. (1998) was administered. The items were measured on a Likert-type scale ranging from 1 (‘strongly disagree’) to 5 (‘strongly agree’) (see Appendix G). The coefficient alpha for this scale was .80.

Demographics. To ensure that the data were representative of the employed population in the U.S., demographic variables were collected, including race, age, gender, level of education, and tenure with the organization (see Appendix H).

Analyses. The hypotheses were tested in three steps. The direct effects hypotheses, which predicted a direct association between the two forms of pay secrecy and the four facets of pay satisfaction as well as between the two justice constructs and the pay satisfaction facets, were tested in the first step by using a multiple regression technique available in SPSS. Prior to conducting the regression analyses, the basic assumptions (e.g., linearity, normality, homoscedasticity, and presence of outliers) that underlie these statistical techniques were tested. There were no severe violations of these assumptions—hence, permitting the use of regression analyses.

By using Baron and Kenny’s (1986) approach, Hypotheses 4 and 7, which predicted that distributive and procedural justice would mediate the relationship between the two forms of pay secrecy and the corresponding pay satisfaction facets, were tested in the second step. According to Baron and Kenny’s approach, mediation needs to be tested by 1) regressing the mediator onto the
predictor variable, 2) regressing the outcome variable onto the predictor, and finally 3) regressing the outcome variable onto the predictor while controlling for the mediator. To establish mediation, the following conditions should hold: (1) the relationships described above should be statistically significant and (2) the effect of the predictor on the outcome should be less when the mediator is controlled (Baron & Kenny, 1986). The second step of the hypothesis testing utilized a multiple regression technique available in SPSS.

The final step involved testing Hypotheses 8a and 8b, which predicted that equity sensitivity would moderate the paths between the two forms of pay secrecy and the four facets of pay satisfaction when mediated by distributive and procedural justice, respectively. Prior to conducting these analyses, all continuous variables were mean centered in order to reduce the correlation between the main effect and interaction term, as recommended by Aiken and West (1991). Mean centering is important when performing multiple moderated regression analyses because the interaction term that is created to test moderation is correlated with the predictor variables used to calculate it. This phenomenon, known as multicollinearity, may increase the standard errors used to estimate the regression weights rendering them inaccurate (Aiken & West, 1991).

The SPSS macro MODMED developed by Preacher and colleagues (2007) was used to test the moderated-mediation relationships proposed in Hypotheses 8a and 8b. Although a number of different macros exist that test moderated-mediation (e.g., SAS, MPLUS, etc.), MODMED was chosen for several reasons. First, unlike other macros, this command allows a regression-based estimation of a specific moderated-mediation model, wherein a causal independent variable influences an outcome variable through a proposed mediator variable, conditional on a moderator of the path from the predictor to the mediator (Preacher et al., 2007). This model fits with the theoretical framework advanced in the current study, such that the pay secrecy-justice-pay satisfaction relationship is contingent upon the extent to which equity sensitivity
moderates the path between the two forms of pay secrecy and the justice variables. In other words, as described earlier, the pay secrecy policies are likely to affect the perceptions of procedural and distributive justice in those highly sensitive to inequity (Entitleds)—thus, making equity sensitivity a moderator of the path between pay secrecy and the justice variables. Another advantage of MODMED is that it permits the test of a continuous moderator variable, unlike other macros that only allow the treatment of dichotomous moderators (e.g., gender; Preacher et al., 2007).

Finally, MODMED allows the estimation of a number of statistics useful for determining the significance of moderated-mediation models. Among the available significance testing techniques, the current study tested the first-order standards errors (SE) and bootstrapped 95% confidence intervals (CI) described below. According to the simulation study conducted by Preacher et al. (2007), these statistics show higher power and more accurate Type I error rates compared to other methods applied to a sample size of 200. The bootstrapping technique, which allows a calculation of the statistics of interest in multiple resamples of the dataset, was chosen because it does not assume normality and can be performed with a sample of any size. This strategy, which permits the user to specify a desired number of resamples, yields a 95% CI useful for testing significance of the moderated-mediation effects at various values of the moderator—thus, making the bootstrapped CI a preferred inferential method. If the CI does not contain zero, the null hypothesis of no moderated-mediation is rejected. As recommended by Preacher et al. (2007), 5000 bootstrapped resamples were run each time. Additionally, to assess mediation at any chosen value of the moderator, first order SE were calculated. The SE estimation, which is used in z-tests to determine the statistical significance, was important because it allows one to determine the boundaries of the region of significance for the mediators at various levels of the moderator (Preacher et al., 2007). Thus, to establish moderated-mediation effects, the interaction term
between the moderator and the mediator should be significant (Preacher et al., 2007) with a significant \( z \)-test and CI that does not include zero. Thus, using MODMED, eight full moderated-mediation models were tested, wherein (a) the two forms of pay secrecy (tacit and explicit) were tested individually as predictors, (b) procedural justice was tested as a mediator of the relationship between pay secrecy and satisfaction with benefits and administration, (c) distributive justice was tested as a mediator of the relationship between pay secrecy and satisfaction with pay levels and raises, and finally, (d) equity sensitivity was tested as a moderator of the pay secrecy-justice path, which was hypothesized to ultimately influence the pay-related attitudes. In each moderated-mediation model, the variables, including the controls (i.e., negative affectivity and money importance), were entered simultaneously decreasing the likelihood of propagating Type I error.
RESULTS

Descriptive Statistics

Means, standard deviations, and bivariate correlations for the measures are presented in Table 1. Of particular interest to the current study are the following significant correlations.

Procedural justice was positively correlated with benefit satisfaction ($r = .17$, $p < .05$) and highly correlated with administration satisfaction ($r = .42$, $p < .01$). Similarly, distributive justice was fairly highly correlated with pay level satisfaction ($r = .67$, $p < .01$) and moderately with raise satisfaction ($r = .52$, $p < .01$). These correlations are consistent with previous research, which has provided evidence for the discriminant validity between distributive justice and pay level satisfaction (Day, 2012; DeConinck, Stilwell, & Brock, 1996; Jawahar & Stone, 2010) and between procedural justice and administration satisfaction (Day, 2011, 2012; Jawahar & Stone, 2010), suggesting that these constructs are unique.

The two pay secrecy subscales were significantly correlated ($r = .43$, $p < .01$), which corroborated the findings in previous research (Day, 2012). Furthermore, consistent with the results reported by Day (2012), both explicit and tacit pay secrecy were negatively correlated with some of the four facets of pay satisfaction. Specifically, explicit pay secrecy was negatively correlated with pay level satisfaction ($r = -.15$, $p < .05$) and administration satisfaction ($r = -.25$, $p < .01$); whereas tacit pay secrecy was negatively associated with pay administration ($r = -.17$, $p < .05$).

It is noteworthy that the directions of these relationships were in the opposite direction of what was proposed in Hypothesis 1, which predicted a positive association between the two forms of pay secrecy and the four facets of pay satisfaction. Table 2 reports the results of the regression analyses conducted to test Hypothesis 1. As can be seen, explicit pay secrecy and tacit pay secrecy predicted only satisfaction with administration [$\beta = -.19$, $t(186) = -3.48$, $p < .01$ and $\beta = -.13$, $t(186) = -2.17$, $p < .05$, respectively]. These findings suggest that the higher the employees’ perceptions of pay secrecy, the less satisfied the employees become with the way compensation is administered. As such, Hypothesis 1 was not supported.
Test of direct effects hypotheses. Table 4 reports the results of the regression analyses conducted to test Hypotheses 2a, 2b, 5a, and 5b, discussed next. Hypotheses 2a and 2b predicted that there would be a positive association between distributive justice and satisfaction with one’s pay levels and raises, respectively. Consistent with the statistically significant correlations between these variables reported in Table 1, the results of multiple regression analyses revealed that distributive justice predicted satisfaction with pay levels and raises—thereby providing support for Hypotheses 2a and 2b [$\beta = .60$, $t(186) = 12.50$, $p < .01$ with pay level satisfaction as an outcome and $\beta = .40$, $t(186) = 8.28$, $p < .01$ with raises satisfaction as an outcome]. These findings suggest that employees are more satisfied with their individual outcomes (pay levels and raises) when they perceive that rewards are distributed fairly in their organization. Hypotheses 5a and 5b predicted that there would be a positive association between procedural justice and satisfaction with benefits and administration. Consistent with the statistically significant correlations between these variables in Table 1, procedural justice did predict one’s satisfaction with benefits and administration [$\beta = .22$, $t(186) = 2.27$, $p < .05$ and $\beta = .43$, $t(186) = 6.18$, $p < .01$, respectively]. These results suggest that employees tend to become satisfied with their benefits and the way rewards are being administered as their perception of procedural justice increases. Taken together, the findings that distributive and procedural justices exert a direct effect on their respective pay satisfaction facets are consistent with previous research (Day, 2011, 2012; McFarlin & Sweeney, 1992; Sweeney & McFarlin, 1993).

As can be seen from Table 3, Hypotheses 3 and 6, which posited that pay secrecy would directly influence distributive and procedural justice, were not supported. These results suggest that pay secrecy perceptions do not influence perceptions of procedural or distributive justice.
**Test of simple mediation.** Hypothesis 4 predicted that distributive justice would mediate the relationship between pay secrecy and satisfaction with pay levels and raises. Hypothesis 7 predicted that procedural justice would mediate the relationship between pay secrecy and benefits and administration satisfaction. Procedural justice was not associated with either explicit or tacit pay secrecy ($r = -.04$, ns and $r = -.03$, ns, respectively). Likewise, distributive justice was not related to either explicit or tacit pay secrecy ($r = -.11$, ns and $r = -.04$, ns, respectively). As such, the first condition for establishing mediation was not met in either case. With Baron & Kenny’s approach, a violation of any one of the conditions for establishing simple mediation suggests that there are no mediation effects. Therefore, no further tests for simple mediation were conducted. However, the absence of significant mediation does not preclude a test for moderated-mediation, because a lack of significant results could be attributed to a moderation effect (Preacher et al., 2007). In other words, as was hypothesized, the pay secrecy-justice-pay satisfaction relationship may become significant for a certain level of equity sensitivity (for Entitleds).
**Test of moderated-mediation.** Table 5 shows the results for the moderated-mediation analyses. As mentioned earlier, to establish moderated-mediation, the interaction term in the regression equation has to be significant \((p < .05)\), the bootstrapped 95% CI should not contain zero, and the first-order SE estimates should be small, because they are used to calculate the z-test statistic necessary to determine the significance of the interaction term (Preacher et al., 2007). The CI and SE statistics are useful when identifying the values of the moderator and the mediator, respectively, for which the model transitions between statistically significant to nonsignificant (Preacher et al., 2007). As can be seen, the interaction terms (equity senility and justice variables) were nonsignificant except those of Model 7 and 8, which included tacit and explicit pay secrecy as a predictor, distributive justice as a mediator, and pay level satisfaction as an outcome \((\beta = -.13, t(186) = -2.03, p < .05 \text{ and } \beta = -.13, t(186) = -2.04, p < .05, \text{ respectively})\). However, a closer examination of the statistics used to define the region of significance across various points of the moderator and mediator revealed that the bootstrapped CI contained zero (95% CI: -.03 to .15 and -.04 to .19 with 5000 resamples for Models 7 and 8, respectively) and the first-order SE estimates were nonsignificant \((z = .18, \text{ ns and } z = .40, \text{ ns for Model 7 and 8, respectively})\). These results indicate that the significant interaction terms were found either by chance or because the appropriate region of values of the moderators for which the model translated between significant to nonsignificant was not identified. In other words, the study was unable to separate the values of equity sensitivity for which the pay-secrecy-justice-pay satisfaction relationship would be significant from those that would render this relationship nonsignificant. Thus, the significant interaction term could indicate that the moderated-mediation exists for the values that fell outside of the values examined in the current study (1 through 5). Taken together, the results of the moderated-mediation tests suggest that equity sensitivity does not moderate the relationship between pay
secrecy and pay satisfaction, when mediated by distributive and procedural justice. Therefore, Hypotheses 8a and 8b were not supported.

**Post hoc analyses.** Because tacit pay secrecy was found to directly influence satisfaction with administration and explicit pay secrecy was found to directly influence satisfaction with pay level, raises, and administration, a decision was made to perform post hoc analyses, which predicted that equity sensitivity would moderate the pay secrecy-pay satisfaction relationship. Hierarchical linear regression available through SPSS was used, wherein the control variables (NA and money importance) were entered in Step 1, the predictors (pay secrecy (tacit and explicit) and equity sensitivity) were entered in Step 2, and the interaction term (pay secrecy by equity sensitivity) was entered in Step 3. Table 6 shows the results of the moderated direct effects analyses for the aforementioned relationships. The continuous variables were centered prior to testing the moderated direct effects, as recommended by Aiken and West (1991). As can be seen, of all the tested relationships, only one was significant. Specifically, equity sensitivity moderated the direct effect of tacit pay secrecy on satisfaction with administration ($\Delta R^2 = .02, F(5,181) = 4.65, p < .01$).

This suggests that compared to equity insensitive employees (Benevolents), employees who are sensitive to inequity (Entitleds) tend to be less satisfied with the administration of the rewards in a nontransparent pay system, where the pay nondisclosure policies are promoted tacitly. It is also worth mentioning that consistent with the correlations reported in Table 1, the unstandardized regression weights for the predictors (tacit and explicit pay secrecy) were negative suggesting a reverse relationship between pay secrecy and the pay-related attitudes. Thus for example, holding all else constant, for every unit increase in tacit pay secrecy, employees’ satisfaction with administration decreases by .13 units. In sum, the results of the post hoc analyses suggest that equity sensitive individuals (Entitleds) tend to generate negative attitudes toward the way the rewards are administered in response to the unwritten (tacit) pay secrecy policies their organization adopts, bypassing the perceptions of distributive and procedural justice.
DISCUSSION

The major goal of the current study was to identify the boundary conditions of pay secrecy, which was operationalized as a distinct construct that differs conceptually from pay communication (cf. Day, 2012). Specifically, the present project examined the extent to which the effects of pay secrecy (tacit and explicit) influenced the four facets of pay satisfaction (i.e., pay level, raise, benefit, and administration), and whether justice perceptions mediated this relationship. In addition, equity sensitivity was also examined as a potential moderator of this mediated relationship. In the first step, the direct effects of pay secrecy on the four facets of pay satisfaction were tested. The hypothesis predicting the direct positive path between pay secrecy and pay satisfaction was not supported. In fact, the effect was in the opposite direction of what was hypothesized here. Specifically, tacit pay secrecy was negatively associated with administration satisfaction, while explicit pay secrecy was negatively linked with satisfaction with pay levels, raises, and administration, which corroborated previous findings by Day (2012). The current results suggest that employees tend to generate negative attitudes toward their compensation plan in response to both written and unwritten pay secrecy policies.

The second step involved testing the simple mediation hypotheses, which predicted that distributive and procedural justice would mediate the pay secrecy-pay satisfaction relationship. The current study found no evidence to support the hypothesized mediating effects, the lack of which may point to the fact that mediators other than justice perceptions may be at play. Past research has found that pay equity mediated the link between tacit pay secrecy and satisfaction with administration, pay levels, and raises (Day, 2012). Although the present study did not find significant mediation, this previous work suggested that there were psychological mechanisms that
transmitted the link between pay secrecy and pay satisfaction. Therefore, future research should continue investigating other potential factors that mediate the pay-secrecy-pay satisfaction relationship. For example, the extent to which pay secrecy affects employees’ pay-related attitudes may depend on how much the employees trust management (Folger & Konovsky, 1989). Specifically, when trust in management is high, workers may be likely to accept the policies and norms that the managers promote without questioning their fairness and this may increase their pay satisfaction attitudes. Pay equity, defined as perceptions of whether pay differentials are equitable in a given organization (Colquitt & Greenberg, 1993), may also play an important mediational role between pay secrecy and pay-related attitudes. In another study, Bamberger and Belogolovsky (2010) showed that perceived instrumentality, defined as the extent to which one’s level of performance is commensurate with one’s tangible outcomes (Vroom, 1964), partially mediated the path between pay secrecy and task performance. Therefore, future research should continue studying the psychological mechanisms, like pay equity and instrumentality, that may mediate the relationship between pay secrecy and its outcomes.

Post hoc analyses were performed to investigate the extent to which the direct effects of pay secrecy on pay satisfaction were moderated by equity sensitivity. Consistent with previous research, which has shown that equity sensitivity moderates the relationship between pay secrecy and organizational outcomes directly (Bamberger & Belogolovsky, 2010), the current findings indicate that equity sensitivity moderates the direct link between tacit pay secrecy and satisfaction with administration. This suggests that unwritten confidential pay systems tend to elicit negative attitudes toward the way rewards are administered. In other words, for employees who are intolerant of inequities that do not favor them (i.e., Entitleds; Sauley & Bedeian, 2000), a nontransparent
compensation system that is promoted tacitly may render them less satisfied with the
administration of rewards. Future research should replicate these findings to confirm the ically, when
trust in management is high, workers may be likely to accept the policies and
norms that the managers promote without questioning their fairness and this may increase their
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continue studying the psychological mechanisms, like pay equity and instrumentality, that may
mediate the relationship between pay secrecy and its outcomes.

Before then, the findings from the current research should be interpreted with caution.

The final step in the present study involved the examination of the moderated-mediation
models of pay secrecy. As was suggested earlier, the lack of evidence for the mediation does not
preclude the test of moderated-mediation, because the strength of the pay secrecy-justice-pay
satisfaction relationship may be moderated by a separate variable and this moderating effect may
explain the lack of significance in the mediation path. In this study, equity sensitivity was explored
as this moderator. However, results indicated that equity sensitivity did not moderate these
relationships. Although a statistically significant interaction between equity sensitivity and
distributive justice was found in the model with tacit and explicit pay secrecy predicting pay level
empirical endeavors may choose to study other moderators, such as gender. It is possible that
women may become suspicious and distrusting of managerial compensation practices under a
confidential pay plan in light of the perpetuated gender wage gaps (Alboher, 2008). Thus, female
employees may prefer an open pay system where they are allowed to monitor the fairness of the
reward distribution and may be more likely to form positive justice perceptions and pay-related
attitudes in this context.

Limitations

The reason why the hypothesized relationships were not supported by the data may be due
to several limitations. First, because the present research involved cross-sectional single-source
data, common method bias could have adversely affected the observed correlations between the
statistical remedies were employed to mitigate this problem (Podsakoff et al., 2003). First, to
control for different biases (e.g., primacy and recency effects, fatigue, demand characteristics, etc.),
the order of the measures as well as the items within them were counterbalanced. Second, to
ensure that the participants did not edit their responses in a socially desirable way, the answers
were allowed to be anonymous. Finally, the effects of negative affectivity and money importance
were controlled in order to partial the effects of these constructs from the criteria and the
predictors (Podsakoff et al., 2003). However, as was suggested by Podsakoff and colleagues (2003),
procedural and statistical remedies ameliorate the effects that common method bias may have on
the proposed relationships, but they do not eliminate them. Future research endeavors should
investigate the proposed variables longitudinally by employing multiple sources.
A second limitation involved an insufficient statistical power necessary to detect moderation. As discussed by McClelland and Judd (1993), moderator effects are notoriously difficult to detect in non-experimental studies due to several reasons. First, correlational studies such as this one suffer from lack of adequate control over the phenomenon in question. Lack of appropriate control may introduce noise to the measurement of the important constructs—hence rendering the observations less reliable. Second, measurement error (produced by the lack of control) presents additional difficulties when investigating moderator effects in the field studies, because the errors associated with suboptimal measurement of the predictors are exacerbated when the interaction terms are created (multicollinearity; McClelland & Judd, 1993). To alleviate the issue of multicollinearity, the predictors were centered prior to calculating the product term, as recommended by Aiken and West (1991) and McClelland and Judd (1993). Furthermore, using GPower3.1, the current study determined a sample size sufficient to detect moderation. However, as was mentioned earlier, the sample size was reduced due to unusable cases and missing values—thus, decreasing statistical power. Given this shortcoming, future research should test the moderated-mediation model of pay secrecy in a more controlled setting using reliable measurements.

Tied to the second limitation, the third limitation of the current study involved a lack of systematic research investigating the psychometric properties of the pay secrecy measure developed by Day (2012), which is the best available measure of pay secrecy located at the time of writing this report. Although the factor analysis employed in the present research confirmed the factor structure of the pay secrecy measure, it remains unclear whether or not the scale taps into a broad range of pay secrecy practices. Future research should provide evidence for convergent and discriminant validity of the measure as well as for its concurrent and predictive validity, in order to be able to use it as reliable and valid operationalization of pay secrecy perceptions.
CONCLUSIONS

The current study aimed to address the dearth of studies on pay secrecy in the applied psychological literature. In contrast with previous studies, pay secrecy was operationalized as distinct from pay communication. However, inconsistent with the theorized relationships, the tests of simple mediation and moderated-mediation were not supported by the data. Thus, the results of the current study suggest that procedural and distributive justice do not mediate the relationship between pay secrecy and pay satisfaction. Regardless of these findings, there was some evidence that pay secrecy is related to pay satisfaction. Therefore, future research should explore this relationship in more depth.
REFERENCES


Table 1
Means, Standard Deviations, and Bivariate Correlations

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Note: The reliabilities of the scales are located on the diagonal. In this and subsequent tables, NA refers to negative affectivity.

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).
Table 2

*Regressions Testing the Direct Effects of Pay Secrecy on Pay Satisfaction*

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<th>Equation No</th>
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Note: The control variables (NA and money importance) were included in the first step of each equation. Equations 1-4 test explicit pay secrecy as a predictor. Equations 5-8 test tacit pay secrecy as a predictor.

**Significance level is below .01.

*Significance level is below .05.

a. To ease readability, results from control variables are not shown, and can be obtained from the author.
Table 3

Regressions Testing the Direct Effects of Pay Secrecy on Distributive and Procedural Justice

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<th>Equation No</th>
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<th>t</th>
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Note: The control variables were included in the first step of each equation. Equations 1-2 test explicit pay secrecy as a predictor. Equations 3-4 test tacit pay secrecy as a predictor.

a. To ease readability, results from control variables are not shown, and can be obtained from the author.
Table 4
Regressions testing Direct Effects of Distributive and Procedural Justice on the Pay Satisfaction Facets

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**Significance level is below .01.
*Significance level is below .05.

Note: The control variables were included in the first step of each equation. Equations 1-2 test distributive justice as a predictor. Equations 3-4 test procedural justice as a predictor.

b. To ease readability, results from control variables are not shown, and can be obtained from the author.
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<td>11.63**</td>
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*Note: To ease readability, the results for the t-tests and their p values were not included in the table and are available from the author.

**Significance level is below .01.

*Significance level is below .05.

a,c. Administration satisfaction as an outcome.

e.g. Benefit satisfaction as an outcome.

i,k. Raise satisfaction as an outcome.

m,o. Pay level satisfaction as an outcome.

b,d,f,h. Interaction term is a product of Equity Sensitivity and Procedural Justice.

j,l,n,p. Interaction term is a product of Equity Sensitivity and Distributive Justice.
Table 6
Regressions Testing the Moderator Effects of Equity Sensitivity on the Direct Relationship between Pay Secrecy and the Pay Satisfaction Facets

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Steps in Hierarchical Regression</th>
<th>Predictor</th>
<th>$b$</th>
<th>$t$</th>
<th>F</th>
<th>$\Delta R^2$</th>
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<td>2.21*</td>
<td>.00</td>
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<tr>
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<td>-.15</td>
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<tr>
<td>Administration Satisfaction</td>
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<td>Explicit Pay Secrecy</td>
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<td>-2.72</td>
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<tr>
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<td>2.34</td>
<td>5.22**</td>
<td>.03</td>
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<td>.20</td>
<td>4.18**</td>
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<td>.02</td>
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<tr>
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<td>Explicit Pay Secrecy by Equity Sensitivity</td>
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<td>-2.03*</td>
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</tr>
</tbody>
</table>

Note: Control variables (NA and money importance) were entered at a first step in each hierarchical regression. The results for these analyses are available from the author.

*Significance level is below .05.
**Significance level is below .01.
APPENDIX A

Procedural Justice

The following items refer to the procedures used to arrive at your pay level and pay administration. To what extent:

1. Have you been able to express your views and feelings during those procedures?
2. Have you had influence over procedures used to arrive at your pay level and pay administration?
3. Have those procedures been applied consistently?
4. Have those procedures been free of bias?
5. Have those procedures been based on accurate information?
6. Have you been able to appeal the procedures used to arrive at your pay level and pay administration?
7. Have those procedures upheld ethical and moral standards?

Distributive Justice

The following items refer to your pay level and raise. To what extent:

1. Does your pay level and raise reflect the effort you have put into your work?
2. Is your pay level and raise appropriate for the work you have completed?
3. Does your pay level and raise reflect what you have contributed to the organization?
4. Is your pay level and raise justified, given your performance?
APPENDIX B

Pay Satisfaction

How satisfied are you with each of the following? 1 to 5 scale, “very dissatisfied” to “very satisfied”

Pay Level Satisfaction

My take home pay
My current salary
The size of my current salary
My overall level of pay

Benefit Satisfaction

My benefit package
The amount my organization pays toward my benefits
The value of my benefits
The number of benefits I receive

Pay Raise Satisfaction

My most recent raise
The raises that I have typically received in the past
The influence my supervisor has on my pay
How my raises are determined

Pay Administration Satisfaction

My organization’s pay structure
The pay of other jobs at my organization
The information my organization gives about pay issues of concern to me
The consistency of my organization’s pay policies
Differences in pay among jobs at my organization
How my organization administers pay
APPENDIX C

Equity Sensitivity
Indicate the level of your agreement with the following statements. Use the scale below.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neither Agree nor Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

I prefer to do as little as possible at work while getting as much as I can from my employer. (R)
I am most satisfied at work when I have to do as little as possible. (R)
When I am at my job, I think of ways to get out of work. (R)
If I could get away with it, I would try to work just a little bit slower than the boss expects. (R)
It is really satisfying to me when I can get something for nothing at work. (R)
It is the smart employee who gets as much as he/she can while giving as little as possible in return. (R)
Employees who are more concerned about what they can get from their employer rather than what they can give to their employer are the wise ones. (R)
When I have completed my task for the day, I help out other employees who have yet to complete their tasks.
Even if I received low wages and poor benefits from my employer, I would still try to do my best at my job.
If I had to work hard all day at my job, I would probably quit.
I feel obligated to do more than I am paid to do at work.
At work, my greatest concern is whether or not I am doing the best job I can.
A job which requires me to be busy during the day is better than a job which allows me a lot of loafing.
At work, I feel uneasy when there is little work for me to do.
I would become very dissatisfied with my job if I had little or no work to do.
All other things being equal, it is better to have a job with a lot of duties and responsibilities than one with few duties and responsibilities.
APPENDIX D

Pay Secrecy Measure by Day (2012)

Indicate the level of your agreement with the following statements. Use the scale below.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

My company has a written policy that instructs employees not to discuss our own base pay levels with other employees. Although it may not be a written policy, management clearly does not want us to discuss our own base pay levels with other employees.

My company has a written policy that instructs employees not to discuss our pay range minimums and maximums with other employees. Although it may not be a written policy, management clearly does not want us to discuss our pay minimums and maximums with other employees.

My company has a written policy that instructs employees not to discuss our base pay increase percentages with other employees. Although it may not be a written policy, management clearly does not want us to discuss our base pay increases or increase percentages with other employees.

My company has a written policy that instructs employees not to discuss our performance appraisal ratings with other employees. Although it may not be a written policy, management clearly does not want us to discuss our performance appraisal ratings.

My company has a written policy that instructs employees not to discuss the bonuses and/or incentives we receive. Although it may not be a written policy, management clearly does not want us to discuss the bonuses and/or incentives we receive.
APPENDIX E

The Negative Affectivity Scale

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

1 very slightly  2 a little bit  3 moderately  4 quite a bit  5 extremely or not at all

_distressed
_upset
_guilty
_scared
_hostile
_irritable
_ashamed
_nervous
_jittery
_afraid
APPENDIX F

Money Importance

Please answer the items below using the following scale:

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

I believe that the more money you have, the happier you are.
I value money very highly.
Money is important.
I daydream about being rich.
What is your age? ____________

What is your gender? Male Female

Please indicate your race/ethnicity:

White or Caucasian
Black or African-American
Hispanic
Native American
Asian
Other (please specify)______________

Please indicate your level of education:

High School or equivalent
Vocational/technical school (2 years)
Some college
Bachelor's degree
Master's degree
Doctoral degree
Other (please type your level of education in the box)________________

Please indicate your tenure with the organization.

less than 1 year
1 to 5 years
5 to 10 years
10 to 15 years
15 to 20 years
20 to 25 years
25 to 30 years
30 to 35 years
35 to 40 years
Other (please specify)______________

APPENDIX G
Informed Consent

The purpose of this study is to improve our understanding of the attitudes employees have in relation to different pay-related policies their organizations adopt. This study is being conducted by Julia Berger, a graduate student in the psychology department at Bowling Green State University (BGSU), for her Master’s thesis. This project is being advised by Dr. Christopher Nye, a psychology professor at BGSU.

Research on compensation and work attitudes is important for several reasons. First, research in this area can help us shed light on the attitudes that employees form in response to various pay plans. Second, research in this area can help us assess employees’ perceptions of fairness of various pay systems. Finally, research on compensation and work attitudes can help us understand how different people react to various compensation plans that their organizations adopt. In short, while you will not receive any direct benefits for participating in this research, you will be helping us increase our understanding of the consequences that various pay-related plans have on employees—which is important for the well-being of individual employees and organizations as a whole. The risks associated with participating in this study are no greater than those encountered in daily life.

This study will take place at two time points two weeks apart. If you decide to participate in this study, at Time 1, you will be assigned with a randomly generated number code that you will have to input into MTurk to indicate that you have completed the survey. You will also need to use the same number code at the beginning of the survey at Time 2. To ensure your confidentiality, your data will be stored on password-protected computers of the researchers involved in the project.

You must be 18 years old to participate in this study. Your participation in this study is completely voluntary, and you are free to discontinue participation in this study at any time. Deciding to participate or not will not affect any relationship you may have with Bowling Green State University. You may also freely decline to respond to any questions without loss of credit. Declining to respond to particular questions is not the same thing as carelessly responding and will not be penalized. Completing the survey indicates your consent to participate in this study.

At both Time 1 and Time 2, you will be asked to complete a short survey consisting of eight questionnaires regarding your salary-related attitudes and a few demographic questions about your background characteristics. It should take less than 30 minutes to answer the questions, and you will be paid $0.25 for your participation at Time 1 and $0.40 for your participation at Time 2 through Amazon’s Mechanical Turk service. Please note that the researchers will carefully review every line of the data and participants who are found to have carelessly responded will not be paid (i.e., marking all of the same response; responding in ways that are identifiably inconsistent). For your security, after you finish making and submitting your choices, please clear your browser history and page cache; in addition, you may want to complete the survey on a personal (non-public) computer.
We hope to use the results of this study to publish an article discussing the relationship between salary-related policies that companies adopt and attitudes employees form in relation to those policies, but no one person’s answers will be used – only a summary of data from many subjects. The data will be stored on a password-protected computer to which only the researchers involved in this project will have access.

In addition, if you have any questions about the study, you may contact either myself - at yberger@bgsu.edu or 718-674-4698 - or my faculty supervisor, Christopher Nye, Professor of Psychology, at cdnye@bgsu.edu or 419-372-4250. If you have questions about your rights as a research participant, you may contact the Chairperson, Human Subjects Review Board at Bowling Green State University, at 419-372-7716 or at hsrb@bgsu.edu.

By clicking "next," you are consenting to participate in this study.