

EXPLORING THE MODERATING EFFECT OF MULTIPLE ROLE-IDENTITIES ON
THE RELATIONSHIP BETWEEN PERCEIVED DISTRIBUTIVE INJUSTICE AND
PSYCHOLOGICAL DISTRESS

by

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(Under the Direction of Jody Clay-Warner)

ABSTRACT

The purpose of this research is to discover how the number and quality of role-identities affect the relationship between perceived distributive injustice and psychological distress. In order to examine the relationship between under-reward in the workplace and symptoms of psychological distress, I conduct several Ordinary Least Squared regressions using data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey to determine if a count of up to 8 roles moderates this association. Results indicate that the count of role-identities does *not* moderate the strong relationship between under-reward and psychological distress. However, another analysis shows that the quality of the spousal role approaches significance as a moderating effect such that a higher quality spousal role *strengthens* the relationship between perceived distributive injustice and psychological distress. These findings suggest that workers who do not feel fairly compensated for their job responsibilities report more symptoms of psychological distress, but the quality of another role-identity could moderate this relationship.

INDEX WORDS: Perceived distributive injustice, psychological distress, identity, role quality

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CHAPTER 1

INTRODUCTION

Consider two workers who are paid less than they believe they deserve. Worker A is depressed and anxious as a result. Worker B is also unhappy that he does not get paid fairly for his job, but has few symptoms of psychological distress. What explanation is there for Worker A to be depressed as a result of her under-payment and Worker B to respond to this inequity with less distress? I propose that processes of identity help explain the different reactions of Worker A and Worker B. Being under-rewarded in her only role is devastating for Worker A's self-concept and as a result, she is depressed. Worker B, however, holds the role not only of an employee but also of a husband, a volunteer, and a student. While he is not happy about being under-rewarded, benefits from his other roles weaken the effect of unfair payment on his psychological distress. This process could work in the opposite direction - Worker B might experience *elevated* distress because his perceived under-reward negatively affects his self-concept *and* his many other roles create additional pressure. Perhaps the perceived under-payment is felt even more strongly when coupled with expectations, responsibilities, and requirements from his other roles. Further, it is possible that beyond the mere existence of other roles it is also important how positive Worker B's performance and experience is in those roles. Workers who are paid unfairly usually experience some stress - but how do the presence and quality of their other role-identities affect the amount of psychological distress they report?

In this research I focus on how theories of identity can be used to explain the variation in the relationship between distributive injustice and psychological distress. There is a known association between inequity and psychological distress (Colquitt, Greenberg and Zapata-Phelan 2005; Cropanzano and Greenberg 1997; Kalimo, Taris and Schaufeli 2003; Lively et al. 2008; Longmore and Demaris 1997; Tepper 2001; Walster, Berscheid and Walster 1976; Ybema et al. 2001). The effect of distributive injustice on psychological distress is supported strongly by theory and empirical research. Less well

understood are the conditions under which individuals tolerate perceived inequity without experiencing depression or anxiety. I offer that a moderating factor in this established relationship is the presence and quality of additional role-identities.

Roles-identities are sets of behavioral expectations that are attached to positions in social structure (Thoits 1991:104). Identities based on positional roles provide the individual with a sense of meaning and purpose in life, as well as behavioral guidance. Failing to meet normative expectations in identity performance decreases self-esteem while successful or satisfactory identity performance promotes self-esteem. If an individual is failing to meet expectations in one role (such as being under-rewarded in the role of “worker”) the possession of alternative role-identities and the successful performance of those role-identities may provide alternative sources of validation, self-esteem, and a more positive overall self-conception. From one perspective, I reason that the anxiety, depression, and psychological distress felt from being under-rewarded in the workplace may be reduced by the possession of one or more alternative role-identities. From another perspective, I reason that the pressure from multiple conflicting roles could create additional strain and overload that could increase the depression and anxiety an individual feels due to under-reward in the workplace.

This research will contribute to the justice and identity literatures on both empirical and theoretical levels. Since there is such a consistent and strong relationship between distributive injustice and psychological distress, it would be substantively meaningful to acknowledge and understand those factors that reduce this connection. One possible moderating factor is the presence of additional role-identities that could insulate and redirect some of the effect of the inequity experienced in the original role. It would be empirically interesting if non-workplace variables make being treated fairly at work less important for psychological outcomes. Further, this research brings theories of identity to bear on the issue of distributive injustice in the workplace, which informs our understanding of both identity and justice processes.

In Chapter 2, I review theoretical and empirical literature related to distributive justice theory, other potential moderating factors on the relationship between distributive injustice and psychological distress, and identity theory. In Chapter 3, I examine the relationship between distributive injustice, identities, and psychological distress as framed by the perspectives of Role Strain, Role Accumulation, and Role Quality. This chapter contains propositions about the relationships between the dependent and independent variables. In Chapter 4, I discuss the methods used in this research, including information on the data used in this analysis, the dependent variable, the independent variables, the analytical strategy and hypotheses. In Chapter 5, I present results, while Chapter 6 is a discussion of the results and implications of these findings including limitations and directions for future research.

CHAPTER 2

LITERATURE REVIEW

Distributive Justice Theory

Distributive justice is fairness in the distribution of outcomes to a defined set of recipients as the result of an allocation decision (Clay-Warner, Hegtvedt and Roman 2005; Cropanzano and Greenberg 1997). Typically, outcomes are perceived as fair through the equity standard. Adams (1965) defined equity in terms of individuals' perceived ratio of their outcomes to their inputs relative to the outcomes and inputs of similar others. Formally stated, equity exists when (Adams 1965; Homans 1974; Jasso 1978; Walster, Walster and E. 1978),

$$\frac{Outcomes_A}{Inputs_A} = \frac{Outcomes_B}{Inputs_B}$$

In the organizational setting, outcomes could include monetary payment, rewards intrinsic to the job, satisfying supervision, seniority or fringe benefits, job status, and status symbols (Adams 1965:278; Colquitt, Greenberg and Zapata-Phelan 2005). The most frequently used measure of distributive injustice in workplace settings is pay equity (e.g., McFarlin and Sweeney 1992; Skarlicki, Folger and Tesluk 1999; Tepper 2001). Inputs in this exchange include education, intelligence, experience, training, skill, seniority, age, sex, ethnic background, social status, and the effort an individual expends on the job (Adams 1965:277). Distributive justice requires a balance between what workers invest in their jobs and their perception of what they receive in return. Equity requires that the outcomes one worker receives are perceived as comparable to the input and outcome ratio of a similar other (Walster, Walster and E. 1978).

Equity evaluations are affected by actor's perception of who qualifies as a similar other (Younts and Mueller 2001). For example, a particular environmental lawyer who graduated from Princeton could view her reference group as other lawyers in her firm, as other environmental lawyers in the

United States, as other lawyers who also graduated from Princeton, or as all three groups. Often individuals will use different categories of reference groups depending on the reference group the situation invokes (Markus and Kunda 1986; Stets and Carter 2011:196). For example, at a Princeton class reunion, this lawyer may compare her salary to others who also graduated from Princeton's Law School. At a conference for environmental lawyers, she may compare her salary to other lawyers in her specific field. In her day-to-day life, she may compare her salary to others in her firm. Both the comparable other and the evaluation of outcomes are based on the perceptions of the individual.

Implicit in this discussion of equity and in theories of distributive justice is the notion of consistency. All humans have a need to experience consistency and balance among understandings about self and others as well as between social norms, situations, and beliefs. When individuals feel that their understandings are out of balance, they experience negative emotional arousal and are motivated to restore a sense of consistency (Turner 2006:368). Inconsistency can occur when individuals compare their share of resources relative to their costs and investments in achieving those resources against various reference points. Reference points include conceptions of what is fair and just based on expectations regarding what people are believed to receive given their particular social structure and status value, assessments of others' ratio of relative costs to investments, comparison to one's own past outcomes, and norms of justice based on a within-group or between-group comparison (Jasso and Rossi 1977). An individual's perception of the degree of injustice in a given situation determines his or her emotional response – only if the individual *perceives* the situation as unfair (based on a particular reference point) will he or she experience negative emotions (Hegtvedt and Killian 1999; Turner 2006:368; Younts and Mueller 2001).

Based on this drive for consistency, perceived under-reward in a given role, such as under pay in the workplace, would likely lead to some level of psychological distress. Emotions are an established outcome of the evaluation of justice in a situation (Cook and Hegtvedt 1983; Hegtvedt 1990; Stets and

Osborn 2008). If an individual does not receive what he or she expects (either receiving more or less than expected) that individual will experience negative emotions (Jasso 1993). This is especially true when an individual feels *under*-rewarded based on expectations (Hegtvedt 1990:215; Jasso 1978; Stets and Osborn 2008:172). Individuals are motivated to achieve consistency between, in this case, their beliefs about how much money they should earn from their job based on their qualifications and the effort they put into the work they do and what they perceive similar others earn. If there is inconsistency between the amount they determine they *should* earn and their perception about the amount they *do* earn, negative emotions are aroused. Further, individuals may try to restore consistency by gaining more resources (i.e. asking for a raise), shifting reference point (i.e. comparing self to a less rewarded other) or decreasing inputs (i.e. putting less effort into job).

Individuals tend to avoid inequity whenever possible because of the unpleasant feelings associated with situations in which inputs and outputs are not fairly distributed (Cook and Hegtvedt 1983:227; G.S. and Bergman 1969:156). If an individual's outcome to input ratio is smaller than similar others' ratios, that person will feel dissatisfaction and anger related to the under-reward. If an individual's outcome to input ratio is *larger* than similar others' ratios that person will feel discomfort and guilt related to the over-reward (Adams 1965; Homans 1974). Individuals who feel under-benefited feel anger or depression and individuals who feel over-benefited are motivated by the drive for consistency to experience feelings of guilt (Longmore and Demaris 1997:172). The greater the discrepancy between the actual and just shares, the more negative the individuals' emotional response will be to those rewards, so that overall, individuals prefer less inequity to more inequity (Messick and Sentis 1979).

Research has shown that perceived inequity leads to distress in a variety of contexts and relationships. For example, Ybema et al. (2001) used equity theory to study the depression of 106 cancer patients and their romantic partners. They examined perceived equity as a predictor of

depression while controlling for a range of factors including neuroticism and relationship quality. The study found that perceived equity in the relationship between patients and partners was highly correlated with subjective well-being. Any imbalance – either cancer patients feeling guilty about their inability to contribute enough to the relationship or partners feeling deprived of benefits – increased symptoms of depression for both patients and partners. Inequity between romantic partners was found to be highly associated with depression.

Inequity has been researched extensively in the workplace. For example, Kalimo, Taris and Schaufeli (2003) determined that downsizing is associated with elevated levels of inequity which is in turn associated with elevated levels of psychological strain, cynicism, and absence. The inequity caused by the downsizing leads to psychological strain and lower commitment to the organization. Tepper (2001) examines inequity in the workplace longitudinally to show that employees' perceptions of injustice are positively associated with forms of psychological distress. First, Tepper found a positive relationship between both distributive and procedural injustice and psychological distress. Second, Tepper included the main and interactive effects of distributive and procedural justice on multiple indicators of psychological distress including emotional exhaustion, anxiety, and depression. He found that employees who held less favorable justice perceptions (distributive and procedural) reported greater psychological distress (Tepper 2001:207). The interaction between distributive justice and procedural justice also accounted for a significant proportion of the variance in each outcome variable. When employees felt their outcomes were more favorable (high distributive justice), procedural justice was not strongly related to psychological distress. In contrast, when distributive justice was low, procedural justice had a larger effect on psychological distress. This indicates that procedural fairness gives employees the resources they need to cope effectively, reducing the psychological distress caused by distributive injustice.

Though, as detailed in the next section, some research has shown that the strong correlation between inequity and distress can be affected by factors outside that relationship. This means that non-workplace factors could have an effect on the relationship between under-reward at work and psychological distress.

Moderating Factors

While distributive injustice is associated with psychological distress, some factors have been found to lessen the strength of this relationship. Procedural justice and strong self-esteem each have been shown to moderate the relationship between distributive injustice and psychological distress (Brockner et al. 1994; Longmore and Demaris 1997). In a series of studies by Brockner et al. (1994), victims and survivors of job loss viewed the distributive injustice of being laid off differently based on their perceptions of procedural justice. When procedural justice was perceived to be low, individuals reacted more adversely to the negative outcomes of job loss or coworker job loss. When individuals felt procedural justice was relatively high, perceived outcome negativity was *not* related to individuals' reactions. Longmore and Demaris (1997) examined the moderating effect of self-esteem on the relationship between perceived inequity and depression. The authors found a strong relationship between inequity and depression, but that self-esteem served as a buffer against the depression induced by inequity.

There are other factors that may reasonably moderate the relationship between distributive injustice and psychological distress for individuals who are under-rewarded in the workplace including a strong belief in the meaning of one's work, the temporary nature of the work, alternative rewards besides monetary outcomes, and additional resources, such as household income. For example, an under-rewarded worker who knows he is only in a particular job until the end of the summer or an under-rewarded worker who fully believes in the mission statement of the organization may feel less

psychological distress based on his perceived monetary under-reward than a worker without those moderating factors.

Additionally, individuals may not experience high levels of psychological distress when under-rewarded at work if they can gain validation of their self-concept from some other source. One example of a source of alternative validation of self for an individual who feels under-rewarded in a particular role is the existence of other role-identities. An individual who feels he is not being paid fairly at work will likely feel psychological distress, but perhaps that relationship is weakened by the responsibilities and advantages provided by his roles of spouse, father and volunteer. An interesting outcome, given the strong and consistent relationship between distributive injustice and psychological distress would be those situations in which that relationship is weakened.

As these few examples, and the literature more generally, show, there is a strong positive relationship between inequity and distress. More specifically there is a correlation between distributive injustice in the workplace and psychological distress (Kalimo, Taris and Schaufeli 2003; Skarlicki, Folger and Tesluk 1999; Tepper 2001), and that relationship can be affected by factors outside the workplace (Longmore and Demaris 1997). While distributive injustice often leads to psychological distress, there are a number of factors that have been documented to moderate this relationship, including procedural justice and self-esteem. I will explore the moderating impact of the presence of alternative role-identities on the relationship between distributive injustice and psychological distress. In order to illustrate this interaction, I must first establish the basic premises of Identity Theory.

Identity Theory

An identity is a set of meanings that define, describe, and represent an individual. There are three key sources from which an individual builds his or her identity: 1) societal roles, 2) group membership and 3) individual characteristics. Individuals apply meanings to themselves based on the social positions they occupy within the larger social structure such as student, worker, spouse, or

parent. Membership in particular groups is another form of self-definition such as when an individual is a member of the Boy Scouts, an American, a church member, or a Democrat. Finally, personal characteristics define an individual as unique by using self-referring dispositions or physical characteristics such as liberal, working class, optimistic, or tall. All individuals hold multiple identities because they occupy multiple roles, claim membership in multiple groups, and possess multiple personal characteristics. Identity Theory deals with the specific meanings that individuals create for the multiple identities they claim, how those identities interact with each other, how those identities influence individuals' behaviors and emotions, and how individuals' multiple identities connect them to the wider social structure (Burke and Stets 2009).

Here I use definitions of identity from researchers who emphasize the concept of each role-identity as a position within the larger social structure (Burke and Reitzes 1981; McCall and Simmons 1966; Stryker 1968). Stets and Burke write that the core of an identity includes both the categorization of the self as an occupant of a role as well as the incorporation into the self of the meanings and expectations associated with that role and its performance (2000:225). For both McCall and Simmons and Stryker, social identities are defined as social role positions. They also argue that structure strongly influences an individual's identity. The central theoretical problem in these scholars' works is explaining which role-identities individuals will value most and attempt to perform in any given situation.

While there is literature that highlights the nuances of McCall and Simmons' (1966) and Stryker's (1968) conceptions of Identity Theory (e.g., Hogg, Terry and White 1995), I will focus in this research on shared aspects of their definitions of identity (such as in Deaux and Martin 2003; Stets and Burke 2000). The important consistencies in McCall and Simmons' and Stryker's conceptions of Identity Theory is that both theories 1) assert that social positions form the basis for identities, 2) seek to explain why individuals choose to enact certain role-identities over others and 3) incorporate ideas of an identity hierarchy and commitment to predict and explain particular role performances.

Both conceptions of Identity Theory emphasize the importance of structure in defining identities as social positions and predict the performance of certain role-identities over others by utilizing an identity hierarchy created through rewarding social interactions. McCall and Simmons suggest that individuals organize their multiple role-identities into a “prominence hierarchy” that reflects the “ideal self” (McCall and Simmons 1966:83). An individual will choose to enact a given role based on its prominence, which is determined by that role’s reward value. The sources of the reward value include the degree to which an individual is committed to the identity, the degree to which significant others positively support the identity, and the fulfillments gained through competent performance of the identity (Thoits and Virshup 1997:110). In situations in which individuals are given an opportunity to choose which identity to enact, McCall and Simmons predict that individuals will choose to enact the more prominent role-identities.

Similarly, Stryker proposes that individuals organize their identities into a “salience hierarchy,” defining salience as the readiness to act out an identity across situations (Stryker and Serpe 1994). The identity the individual behaviorally acts upon is determined by the degree to which that individual’s relationships to specific others depends on that individual being a specific kind of person. In this research, I define the terms “identity” and “role” in terms of positions in social structure and draw from both Role-Identity Theory (McCall and Simmons 1966:63-104) and Identity Theory (Stryker 1968; 2000).

Thoits extends the work of McCall and Simmons and especially Stryker by also defining identities as self-conceptions in terms of individual’s roles (1992:236). The present study uses the work of Thoits as a model to address the impact of multiple role-identities on the relationship between inequity and distress. Her work (1983) testing the Identity Accumulation Theory examines the contradictory claims regarding the link between people’s stress and the number of role-identities they claim. According to Thoits’ Identity Accumulation Theory, multiple role-identities can provide psychological resources (ex. support, connections, self-complexity) that can help to reduce emotional distress such as depression.

This theory relies on the assumption that identities provide individuals with meaning and purpose and the assumption that roles give individuals' lives structure and organization (Owens, Robinson and Smith-Lovin 2010).

Toits uses the Identity Theory concept of multiple roles within social structure to examine gender (1986a; 1992), stress and coping, (1986b; 1991; 2006) and social isolation (1983). Through her empirical studies, Toits finds support for the hypothesis that the possession of multiple role-identities is negatively correlated with symptoms of psychological distress. However, there is conflicting empirical support in the literature, with some researchers finding that multiple roles can be detrimental to the individual's mental health (Role Strain) and others finding that multiple roles can be beneficial to the individual's mental health (Role Accumulation). The next chapter reviews how the presence and quality of multiple roles-identities affects an individual's psychological well-being and, further, how the presence and quality of those role-identities affects the relationship between under-reward in the workplace and psychological distress.

CHAPTER THREE

PERCEIVED DISTRIBUTIVE INJUSTICE, IDENTITIES, AND PSYCHOLOGICAL DISTRESS

The presence of alternative role-identities is not as straightforward as some other moderating factors in the relationship between distributive injustice and psychological distress. High self-esteem has been shown to reduce the effect of inequity on depression (Longmore and Demaris 1997). High procedural justice has been shown to reduce the effect of distributive injustice on psychological distress (Tepper 2001). But there are contradicting perspectives regarding how multiple role-identities affect an individual's psychological well-being. Would having more role-identities strengthen or weaken the relationship between inequity and distress? In order to answer this question of moderation, I must first address a direct effect: does having more role-identities have a detrimental or beneficial effect on an individual's well-being? Research has shown that the number of roles an individual holds is related to the amount of stress they experience, but it is unclear if having more roles increases distress (Greenhaus and Beutell 1985; Rothbard and Edwards 2003) or decreases distress (Moen, Dempster-McClain and Williams 1992; Nordenmark 2004; Spreitzer, Snyder and Larson 1979). Some research indicates that having multiple role-identities will increase an individual's psychological distress and negatively affect well-being. I will refer to this perspective as *Role Strain*. Alternately, some research predicts that having multiple role-identities will lead to better mental health and psychological well-being. I will refer to this perspective as *Role Accumulation*.

Both the Role Strain and the Role Accumulation perspectives suggest that the self-enhancement motive drives people to seek confirmation or validation of their identities by behaving in ways that elicit validating responses from others (Stryker 1980:64). Further, people want to think well of themselves. Self-esteem is linked to behaving in accordance with a salient role-identity. When people are undervalued in one role, they strive to maintain their positive self-conception by turning, to other roles in

which they are (potentially) *not* under-valued. When they are threatened in one role, people naturally turn to other sources of psychological validation to bolster their self-concept.

The Role Strain and Role Accumulation perspectives differ, however, as to whether a greater number of roles satisfies the goal of self-enhancement. From the perspective of Role Accumulation, the more identities an individual has, the more opportunities that individual has to bolster his or her self-concept from other sources. From the Role Strain perspective, individuals who are under-valued in a particular role will still attempt to enhance their self-concept but will not be able to rely on their other identities as sources of psychological validation because those other identities are further sources of negative feedback. The other identities conflict with each other and overload the individual to the point that the existence of too many role-identities serves to provide additional negative feedback to that individual's self-concept. From the perspective of Role Strain, the individual is still motivated to seek feedback that provides positive appraisals of the self, but he or she is not able to garner additional resources from alternative role-identities because those additional identities themselves cause problems for the individual.

In the following sections, I elaborate on the Role Strain and Role Accumulation perspectives and present hypotheses relating to my central research question of how alternative role-identities affect the relationship between distributive injustice and psychological distress.

Role Strain: Multiple Roles Increase Psychological Distress

Implicit in the concept of Role Strain is the idea that performing multiple roles is inherently difficult. Role Strain can thus be defined as the "felt difficulty" in fulfilling role obligations (Goode 1960:483). Goode (1960) suggests that the difficulty in meeting given role demands is normal because the individual's total role obligations are over-demanding. Some mechanisms for individuals to alleviate role strain are to compartmentalize, delegate, eliminate role relationships, change one's self-definition,

or create barriers against intrusion. The strain, however, can only be managed, not eliminated (Stryker and Macke 1978). This strain is evident in two forms: *role conflict* and *role overload* (Hecht 2001).

Role conflict exists when opposing legitimate expectations result in mutually exclusive or incompatible demands. An individual must sometimes choose between actions that would conform to the expectations of one role while violating the expectations of another. The definition of role conflict implies that competing demands arise during particular or overlapping points in time (Hecht 2001:112). Role conflict can occur when an individual experiences or perceives conflicting expectations about a particular role or about two roles within an individual's role set (Stryker and Macke 1978: 71). For example, role conflict occurs for a lawyer who is also a mother when she must choose between picking up a sick child from school and preparing for a deposition during the same afternoon. These expectations of incompatible behaviors deplete an individual's limited energy and result in negative psychological outcomes. When demands associated with one role interfere directly with an individual's ability to satisfy the demands of another role, role conflict occurs.

Hecht (2001) interviewed working mothers and found that feelings of role conflict significantly undermine psychological well-being. Factors that function to decrease flexibility, and therefore limit choices as to whether and when to undertake particular activities to satisfy role demands, contributed to greater feelings of role conflict, which negatively affected the psychological well-being of the mothers. Similarly, Coverman (1989) surveyed respondents about their satisfaction with particular role domains, such as job or marital satisfaction, and their psychophysical symptoms indicating stress. She found that role conflict significantly decreases both women's and men's job satisfaction and men's marital satisfaction (Coverman 1989:976). In both studies, perceived role conflict was found to affect job and marital satisfaction negatively and to be detrimental to psychological health and well-being.

Another manner in which multiple roles could manifest into psychological distress is through the increased probability of overlapping role obligations. Role overload exists when expectations overwhelm

an individual's available resources. Simultaneously fulfilling several roles could lead to role overload when an individual has too many role demands and too little time or energy to satisfy them (Barnett and Baruch 1985; Coverman 1989). This form of Role Strain deals with constraints imposed by total time available. As role obligations increase, there is greater likelihood that an individual will be forced to uphold some role expectations at the expense of others. For example, role overload occurs for our lawyer who is also a mother if she cannot fulfill all of the total demands required by her role as mother and as lawyer because both roles require more overall time and resources than she possesses. The expectations of multiple roles will require too much overall effort of the individual, which will result in negative psychological outcomes. In comparison to role conflict, role overload allows an individual a wider latitude in deciding which role demands are fulfilled and which must be unsatisfactorily resolved or forgone altogether because role overload is tied to the total demands an individual experiences (Hecht 2001:112).

McLanahan and Adams' (1987) review of the literature offers support for the role overload perspective with its overall finding that parents with children at home have lower levels of psychological well-being than do nonparents. They write that unlike other major adult roles in the United States, the role of parenthood is not associated with enhanced emotional well-being (McLanahan and Adams 1987:354). Instead, their review highlights the findings that parents report being less happy and less satisfied within the domains of friendships, marriage, and health, while simultaneously reporting more worry and higher levels of anxiety and depression (McLanahan and Adams 1987:237). This is supported more recently by the work of Evenson and Simon (2005) who find that parenthood is not associated with psychological well-being since there is no type of parent who reports less depression than nonparents. Evenson and Simon also find that certain types of parenthood, such as single parenthood, are associated with more depression than others. While the overall contrast between parents and nonparents is often small, no study has found that parents are better off than nonparents on any of the

conventional measures of well-being (Ross and Mirowsky 2006:421). McLanahan and Adams theorize that some factors may moderate the relationship between the role of parenthood and the psychological well-being of the individual, including the decline in the economic value of children, the increase in marital instability, the decline in the importance of the parental role as a central focus of an individual's identity, and the growth of women's labor force participation which increases opportunity costs of becoming a parental (McLanahan and Adams 1987:239-240). The authors suggest that examining these and other moderating factors between a detrimental role-identity and psychological well-being is an important avenue for future research.

The central concept in Role Strain is that there is inherent difficulty in the performance of multiple roles in social life. The existence of Role Strain is assumed because most individuals have a role system, or set of roles, that cause the total role obligations to be over-demanding of the individual. From the perspective of Role Strain, additional roles increase an individual's level of distress. This is due to the increasing pressures of additional roles creating overload or conflict for the individual and those pressures causing psychological distress. As has been previously hypothesized (e.g. Coverman 1989; McLanahan and Adams 1987), using the perspective of Role Strain, I predict:

P1a: In accordance with Role Strain, the number of roles is positively related to psychological distress.

Beyond the main effect prediction from Role Strain that a larger number of role-identities will lead to more psychological distress, I also draw from the Role Strain perspective to predict how roles may moderate the relationship between under-reward at work and psychological distress. I assert that not only will individuals with more roles experience a higher level of psychological distress, but that the relationship between under-reward at work and psychological distress will also be stronger as the number of roles increases. When an individual feels that he or she is being under-rewarded in a given role, such as employee, he or she will experience emotional distress and be motivated to restore a sense of consistency to his or her conception of self.

One manner through which this realignment of self-identity may occur is through seeking alternative sources for valued resources. An individual might seek validation of self through successful fulfillment of role-identities other than that of employee. But from the Role Strain perspective, other roles are an additional source of stress because they conflict with one another and overload the individual. Having a large number of role-identities increases the likelihood of the individual experiencing role conflict or role overload. While an individual, driven by the motivation of self-enhancement, might turn to alternative roles for positive feedback, those other roles themselves cause stress and strain on the individual. Additional roles that cause an individual to experience role overload or role conflict could increase the effect of under-reward in the workplace on symptoms of psychological distress. Thus, individuals who have more role-identities will be more susceptible to depression and anxiety related to their under-reward in the workplace than those who have a smaller number of role-identities.

P2a: In accordance with Role Strain, the number of roles moderates the relationship between distributive injustice and psychological distress, such that having more roles results in a *stronger* relationship between distributive injustice and psychological distress.

Role Accumulation: Multiple Roles Decrease Psychological Distress

In contrast to the Role Strain perspective, the Role Accumulation perspective predicts that a large number of roles will have a *positive* effect on an individual's sense of well-being. Role Accumulation asserts that a larger number of role-identities will *lessen* the psychological distress felt in relation to any one role. Role Accumulation (Sieber 1974) highlights the benefits individuals can gain from multiple role-identities, outlined below.

Role accumulation (Sieber 1974) suggests that there are specific benefits for individuals who have acquired multiple roles. According to Sieber, the positive outcomes associated with an individual maintaining multiple roles include (1) role privileges, (2) overall status security, (3) resources for status enhancement and role performance and (4) enrichment of the personality/ego gratification (1974:569).

The concept of role privileges emphasizes that each role carries with it rights, both inherent and emergent, in addition to duties. Sieber acknowledges exploitative relationships in which the obligations of a role exceed the allotment of rights but makes the reasonable claim that there is a tendency for the rights to be adjusted to the obligations. This creates the possibility for a generalization that the greater the number of roles an individual performs, the greater the number of privileges enjoyed by that individual (Sieber 1974:569).

Another way multiple roles might compensate for role strain is through providing overall status security by creating numerous buffers. If an individual experiences status loss in one role, the existence of a wide array of role partners would allow that individual to “fall back” on another relationship. Having alternative role relationships provides the opportunity for compensatory affection, moral support, emergency resources and perhaps even assistance for a renewal of effort in the original role (Sieber 1974:573).

A third benefit of role accumulation is the resources provided by role partners that present the opportunity for status enhancement and successful role performance. Distinct from the earlier privileges, these resources can be described as the “non-institutionalized by-products of social relationships” including such informal advantages as recommendations or introductions to third parties who might advance an individual’s career or personal goals (574).

Finally, role accumulation can enrich an individual’s personality and self-concept. Having wide and varied contacts brings such advantages as exposure to many sources of information, flexibility in adjusting to the demands of diverse role partners, reduction of boredom, and tolerance of discrepant viewpoints (Koch and Shepperd 2004; Sieber 1974:574). Any strain accrued from the performance of multiple roles could reasonably be outweighed by the privileges, buffers, resources, and sense of personal worth gained from role accumulation. Sieber argues that there is enough compensation in the maintenance of multiple roles to allow accumulation of roles to be overall more gratifying than stressful.

There is extensive empirical work that supports the perspective of role accumulation (Ahrens and Ryff 2006; Brook, Garcia and Fleming 2008; Moen, Dempster-McClain and Williams 1992; Spreitzer, Snyder and Larson 1979). Ahrens and Ryff (2006) found that greater role involvement (up to eight roles) was associated with greater psychological well-being, even while controlling for effects of gender, education and perceived control. Brook, Garcia and Fleming (2008) studied the effect that the number, importance, and relationship between multiple identities had on psychological well-being. They found that having many (versus few) role-identities led to greater psychological well-being provided that the identities did not conflict with one another. Another study uses a panel study of women in 1956 and again 30 years later in 1986 to demonstrate that the number, duration and timing of six non-family roles throughout adulthood affects health outcomes (Moen, Dempster-McClain and Williams 1992). They found that an increase in roles is positively correlated with positive health outcomes – especially with discretionary roles such as volunteer or organizational membership as opposed to caregiver (1634). Another set of researchers examined the quality and quantity of five roles and found that an individual's well-being increases with the number of roles enacted and that satisfaction in one role can help to compensate for deprivation in another role (Spreitzer, Snyder and Larson 1979).

Another mechanism through which role accumulation can provide benefits to individuals holding multiple roles is explained by Marks (1977). Introducing the concept of role expansion, Marks questions the assertion (Goode 1960; Slater 1963) that individuals' total role obligations are sometimes too demanding and that those individuals are forced to make compromises that cause distress. Instead, Marks highlights individuals from studies who do *not* experience role overload and psychological distress despite performing multiple roles. Role expansion is based on the premise that some roles may be performed without any net energy loss at all and the performance of those roles may even *create* energy for use in that role or other role performances (Marks 1977: 926).

Role expansion is the notion that individuals can actively control their available energy by deciding whose demands will be honored and withholding the full flow of energy into a given role. Individuals carry out role performances based on their commitment to the role, and each individual generally has enough energy to fulfill the roles to which he or she feels the strongest commitment, despite other “expenditures” of energy made earlier in that day. While an individual may have many roles to fulfill, the roles to which he or she is most committed will always be fulfilled and can even create energy for use in other roles to which the individual is less committed.

Empirical work focusing on role expansion supports the notion that multiple roles are beneficial to individuals’ psychological well-being (Barnett and Hyde 2001; Gove and Geerken 1977; Nordenmark 2004). Barnett and Hyde (2001) draw from literature in psychology to assert that multiple roles are beneficial for reasons including buffering, added income, increased social support, increased opportunities to experience success, expanded frame of reference, and increased self-complexity. Gove and Geerken (1977) tested for gender differences in psychiatric illness among married men and women in an attempt to determine whether individuals with more roles have more resources. They find that feelings of incessant demands, desire to be alone, and loneliness (all largely produced by the individual’s role) act as a major link between role and psychological distress. Nordenmark (2004) uses a longitudinal representative sample of 9000 Swedes to test the relevance of role expansion theory by analyzing whether having multiple social roles in general decreases or increases individual well-being. He finds that both the number of social roles and any increase in social roles are negatively correlated with the risk of suffering from insomnia, lingering illness, and taking medications for a lingering illness. His findings that multiple social roles increase individual well-being offer support for the role expansion mechanism of role accumulation.

Drawing from the Role Accumulation perspective, I offer a second, alternative proposition: a large number of role-identities has *positive* consequences for an individual’s psychological well-being.

Role Accumulation includes advantages such as role privileges, status security, additional resources, ego gratification, and role expansion (Marks and MacDermid 1996; Sieber 1974). In light of the literature supporting this perspective, an individual with a larger number of roles will have a lower level of psychological distress than an individual with a smaller number of roles. As has been previously hypothesized (e.g. Nordenmark 2004; Thoits 1983), using the perspective of Role Accumulation, I predict:

P1b: In accordance with Role Accumulation, the number of roles is negatively related to psychological distress.

I also draw from the Role Accumulation perspective to predict how roles may moderate the relationship between under-reward at work and psychological distress. When an individual is under-rewarded in a particular role, that individual will experience a negative emotional reaction such as anger or depression. I assert that this negative emotional response serves as a motivation to change the situation and re-establish equity (Murphy and Tyler 2008:663). If an individual is under-rewarded in a particular role, that individual may seek validation from other roles and, if more roles are available, there are more opportunities to realign his or her identity based on those other roles. From the perspective of Role Accumulation, I predict that a greater number of additional role-identities will provide (1) buffers and (2) resources for an individual that will weaken the relationship between under-reward in a particular role identity and psychological distress.

According to the buffering argument, when individuals with only one role-identity are under-rewarded in that identity, the threat to self-concept and overall status is much stronger than it would be for individuals who have multiple role-identities because that one role defines more of the individuals' self-concept. If an individual has enough alternative roles, the under-reward felt in one role will be diluted by the existence of other roles. If an individual experiences an injustice in one role, such as worker, his or her total self-concept will be affected less if he or she has multiple alternative roles than if he or she has only one other role. Having more role-identities makes any one role less important and so

experiencing distributive injustice in the workplace will have a smaller effect on workers' psychological distress if they have many role-identities than if they have few role-identities.

Additionally, if individuals experience psychological distress due to the perceived incongruity between actual and deserved earnings at work, these individuals may seek to reconfirm their self-worth by seeking validation from other role-identities. The unfair allocation of rewards in the workplace will cause the individual to seek to restore consistency in his or her self-conception. One source of validation of self could be through the existence of role-identities other than that of employee. If an individual has multiple role-identities, the resources and status provided by those roles could be a source of validation which would lessen the effect of under-reward from a particular role identity on psychological distress.

In summary, two mechanisms through which a greater number of role-identities could lessen the effect of injustice on distress are through placing less importance on any one role-identity (buffering) and creating the possibility of validation from alternative role-identities (alternative sources of resources). Therefore:

P2b: In accordance with Role Accumulation, the number of roles moderates the relationship between distributive injustice and psychological distress, such that having more roles results in a *weaker* relationship between distributive injustice and psychological distress.

Curvilinear Relationship between Count of Identities and Psychological Distress

Thus far I have presented two conflicting views of the relationship between multiple role-identities and psychological distress. Predictions from Role Strain suggest that a higher count of role-identities is detrimental for mental health while predictions from Role Accumulation suggest that a higher count of role-identities enhances psychological well-being. In light of the research supporting these conflicting claims, it is possible that the possession of multiple role-identities is beneficial for mental health up to some optimal number of identities, but then the numerous or conflicting demands could increase psychological distress. Indeed, some research suggests that the relationship between

multiple role-identities and psychological distress is not additive but curvilinear (Thoits 1983; Thoits 1986a).

From this perspective, there is a predicted U-shaped curvilinear relationship between the number of roles held and psychological distress. This means that, in general, the more identities an individual possesses, the fewer symptoms of psychological distress that individual will report, up to a given point. Beyond some optimal number of identities, more roles may overwhelm or overload an individual and be associated with more symptoms of psychological distress. Thoits (1983) tested this hypothesis directly and found that the symptoms of distress vary inversely with the number of role-identities possessed and that changes in identities over time are psychologically helpful or detrimental, depending upon the direction of the change. While she did not find evidence of curvilinearity in the 1983 study, it seems reasonable that a curvilinear relationship between role count and psychological distress could exist and that role count could curvilinearly moderate the relationship between under-reward at work and psychological distress.

P1c: There is a curvilinear relationship between the count of roles and psychological distress.

P2c: Role count moderates the relationship between distributive injustice and psychological distress, such that up to a given point, more roles weaken the relationship between distributive injustice and psychological distress.

Beyond Number of Roles: Quality and Fulfillment of Roles

Although many researchers focus on the effect of the *number* of identities on psychological distress, some research highlights the importance of *role quality* (Barnett 1994; Frech and Williams 2007; Gareis and Barnett 2002; Helson, Elliott and Leigh 1990). That the quality of an individual's roles may matter above and beyond the simple count of those role-identities is logical but understudied in the literature. One basis for the conceptualization of role quality is the subjective evaluative circumstances of the role, such as in a relationship characterized by frequent arguments, which can result in the dissatisfaction with the role of spouse. Another basis for the conceptualization of role quality is the felt

difficulty in fulfilling a role, such as for a mother who has a loving relationship with her daughter but continuously feels that she is not able to devote enough time to her role as parent. From the perspective of role quality, it is not only the objective number of roles an individual holds, but the subjective quality of those roles that matters. For example, a single high quality role may have a greater impact in reducing an individual's psychological distress than multiple low quality or conflicting roles.

We can imagine an individual who has a great relationship with her children, loves her job and is happily married gaining positive resources from all of her role-identities. We can imagine another person who has a great relationship with her children but feels under-rewarded in the workplace and fights constantly with her husband. Although both women hold three role-identities, it would be reasonable to predict that the second person will have greater psychological distress than the first person. The subjective quality of the role is based on both 1) the circumstances of and relationships in that role and 2) an individual's capacity to fulfill the obligations of the role. The research in this area asserts that the existence of role-identities is not enough to predict psychological distress but that the subjective *quality* of the role is a better predictor of psychological distress. For example, an individual could benefit from being a wife, mother and employee if these roles are rewarding and supportive and she is able to fulfill the obligations associated with those roles, but the same three roles could also be over-demanding, stressful, and detrimental to psychological well-being depending on the individual's perception of their quality.

Previous research has examined the effect of role quality and role fulfillment on psychological distress. Gareis and Barnett (2002) studied full-time female doctors with at least one child younger than age 14 to explore the importance of objective work hours versus perceived job demands on psychological distress. Importantly, doctors who had poor relationships with their children were more reactive to perceived job demands. For mothers who had low-quality relationships with their children, high perceived job demands were associated with higher levels of psychological distress than for their

counterparts with better relationships with their children (Gareis and Barnett 2002:493). In a longitudinal survey, Helson, Elliott, and Leigh (1990) explored whether the number and the quality of roles midlife women held were related to psychological and physical health. While a count of the number of roles an individual possessed was not related to the psychological outcomes of well-being and contentment, the *quality* of the marital role (measured through satisfaction) showed a substantial positive relation to contentment (Helson, Elliott and Leigh 1990:97), even while controlling for past psychological functioning.

Barnett and Baruch (1985) found that the subjective quality of the worker and parental roles were significant predictors of role overload, and the quality of the parental role was a significant predictor of role conflict and anxiety. Baruch and Barnett (1986) tested hypotheses of role overload in a study that focused on the roles of worker, spouse, and parent. They found no support for hypotheses based on the count of role-identities an individual holds. Baruch and Barnett find that instead of the number of roles predicting an individual's energy to fulfill these roles, the important factor is the *quality* of the role benefits gained from each role above and beyond the costs of that role. Their findings suggest that to the degree that a particular role yields a net gain of benefits over costs, involvement in that role will have a positive impact on well-being, "even if such involvement also increases the number of roles a woman occupies" (583-584). The literature outlined above shows that beyond the objective number of roles an individual holds, role quality is an important factor to consider for predicting the level of psychological distress an individual experiences.

Another form of role quality is an individual's (in)ability to fulfill role demands. For example, in the role of parent, individuals might have a loving and positive relationship with their children but feel as if they cannot dedicate enough time or energy to the role leaving obligations unfulfilled. Inability to fulfill role demands indicates poor quality of a role without assuming poor quality of individuals'

relationships with their spouse or children. If the quality of the role is poor, an individual will feel more psychological distress.

In light of research (Barnett 1994; Gareis and Barnett 2002; Helson, Elliott, and Leigh 1990) that suggests that it could be the quality of role-identities, not just their existence that is significant, I will examine individuals' perceived quality of experiences and fulfillment of responsibilities in each role. The lower the fulfillment or quality of the given role, the higher psychological distress expected. The higher the fulfillment or quality of the given role, the lower the expected symptoms of psychological distress. I view role quality as the subjective evaluative circumstances of the role, such as the stressful or beneficial nature of the relationship and I view role fulfillment as the ability to fulfill role demands. With these definitions in mind, I make the following proposition about the direct effect of the fulfillment and quality of an individual's role and his or her psychological distress.

P3: Satisfaction in and fulfillment of alternative roles is negatively associated with psychological distress.

Beyond the main effect predictions that the high or low quality of the roles an individual holds affects his or her psychological well-being, I predict that role quality moderates the relationship between under-reward in a particular role identity and psychological distress. Previous research (Barnett 1994; Barnett, Marshall and Pleck 1992) has shown that the quality of non-worker roles can act as a moderator of the relationship between the role quality in the worker role and psychological distress found similar outcomes. Barnett, Marshall and Pleck (1992) find that both marital-role and parental-role quality for men moderate the relationship between job-role quality and psychological distress. Barnett (1994) found that the quality of the marital and parental roles for women each buffered the workers from the negative mental health effects associated with a poor experience on the job. If an individual reports difficulty in fulfilling his or her total roles or stressful relationships in those roles, I expect the relationship between distributive injustice at work and psychological distress will be *stronger*. By the same reasoning, high quality roles should weaken the relationship between under-reward at

work and psychological distress. High quality roles are ones in which the relationship's high quality is beneficial to the individual and the individual does not report difficulty in fulfilling the total roles.

These predictions are based on the premise that the quality of roles outside the workplace can affect the relationship between the quality of the role in the workplace and psychological distress. In this study, I predict that the non-workplace variable of *quality of alternative role-identities* could be a moderating factor in the relationship between experiences of distributive injustice in the workplace and individual level depression and anxiety. Therefore:

P4: The quality of alternative roles moderates the relationship between distributive injustice in the workplace and psychological distress, such that having lower quality alternative roles results in a *stronger* relationship between distributive injustice and psychological distress.

CHAPTER 4

METHODS

Data

This research uses data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The HILDA Survey, which was first administered in 2001, is an ongoing nationally representative household-based annual panel survey that focuses on family and household formation, subjective well-being and health, income, and work.

In 2001, HILDA researchers conducted personal interviews with almost 14,000 Australians in approximately 7,700 households. The original household response rate for Wave 1 was 66% with an individual response in Wave 1 of 92% (Watson and Wooden 2004). Many of the variables used in this thesis came from a portion of the survey called the *Self Completion Questionnaire* (SCQ) which contains many attitudinal questions that respondents might feel uncomfortable answering in a face-to-face interview. The same respondents were interviewed annually and, thus far, HILDA has a 71.4% nine-wave sample retention rate. This thesis uses variables from Waves 7-9, gathered in 2007-2009. The wave-on-wave retention rates for the three waves I use in this thesis are 94.7% for Wave 7, 95.2% for Wave 8, and 96.2% for Wave 9 which are comparable to the response rates in other leading household panel studies such as the British Household Panel Survey (BHPS) and the German Socio-Economic Panel (GSOEP) (Watson and Wooden 2010).

The primary advantage to using data from HILDA is the availability of numerous important control variables pertinent to the effect of role-identities on the relationship between distributive injustice in the workplace and psychological distress. First, a total of 8 role-identities are available in the dataset, which is considerably more than most past literature has included. Most empirical studies testing multiple identities allow for the three roles of spouse, parent and worker (Barnett 1994; Gareis and Barnett 2002; Gove and Geerken 1977; Helson, Elliott and Leigh 1990; Marks and MacDermid 1996;

Marshall and Barnett 1993; Simon 1997) with some studies including up to five roles (Spreitzer, Snyder and Larson 1979) or six roles (Moen, Dempster-McClain and Williams 1992; Nordenmark 2004; Thoits 1986a). A notable exception is Reitzes and Mutran's (1994) study, that allowed for 12 roles. In pretests that allowed respondents to list as many identities as they chose to claim, one study (Brook, Garcia and Fleming 2008) found that the number of identities respondents listed ranged from 0 to 15 with a median of 6; only 13% of the respondents listed 12 or more. Menaghan (1989) found that very few individuals have *no* roles and that the majority have four to five roles which remain largely stable over time.

Another important reason to use HILDA is that the survey follows respondents over time, which enables me to control for psychological distress at a previous time point. It is likely that an individual's psychological well-being is affected by his or her previous psychological state (Aneshensel 1992; Mirowsky and Ross 1986). The longitudinal nature of the HILDA dataset allows these predictions to be better specified than past research.

Using data from HILDA may result in findings specific to the country of Australia. For example, part-time work is more common among women in Australia because workers can often retain their health insurance and retirement benefits when they switch from full-time to part-time work (Reynolds and Altraris 2007). This may explain why my sample of full time workers is 64% male. However, the many similarities between the two countries such as on the workplace policy issue of maternity leave (Baird 2003; Budig and England 2001) and historical parallels in workplace wage policies (for a detailed comparison see: Drago, Pirretti and Scutella 2007) leads me to expect the processes related to under-reward in the workplace, role-identities, and psychological distress should be relevant cross-nationally.

Dependent Variable

Psychological Distress

The dependent variable in this project is *psychological distress*, which is measured using a scale. In the HILDA survey, there are multiple variables that measure psychological distress that I combined into an index ($\alpha = .8851$). Each of these variables is preceded by the statement: "These questions

are about how you feel and how things have been with you during the past four weeks. How much of the time during the past four weeks ...": "did you feel full of life," "have you been a nervous person," "have you felt so down in the dumps nothing could cheer you up," etc. These questions are answered on a scale of one to six with 1: "all of the time;" 2: "most of the time;" 3: "a good bit of the time;" 4: "some of the time;" 5: "a little of the time" and 6: "none of the time." I recoded all variables so that higher numbers indicate higher levels of psychological distress.

Independent Variables

Distributive Injustice in the Workplace

The primary independent variable is *distributive injustice* which is measured as perceived fairness in pay distributions. One question from the HILDA survey asks respondents to agree or disagree with the statement "I get paid fairly for the things I do in my [main] job." The variable is coded so that higher numbers indicate higher levels of distributive injustice. Respondents indicate agreement with the statement on a scale of 1-7 with 1 being strongly agree and 7 being strongly disagree ($M=3.44$; $SD=1.62$).

Role Count

I measure the existence of seven roles in addition to full time worker: spouse, parent, caregiver, volunteer, active club member, sibling, and grandparent. All the individuals in my study have the role of full time worker, so the number of possible roles range from 1 (only full time worker) to 8 roles. The count of roles an individual holds is used as both a direct predictor of psychological distress and as a moderator of the relationship between distributive injustice and psychological distress. Over the next few paragraphs, I will explain the standards required for individuals to qualify as possessing each role.

Individuals were considered to be in the role of *spouse* if they are married or cohabitating with their romantic partners, which excludes those who are separated, divorced, widowed, and single. Both married and cohabitating individuals are considered to be in the spousal role since individuals who cohabit with their romantic partners enjoy similar benefits to their married counterparts including lower levels of depression than their uninvolved peers (Ross 1995; Simon and Barrett 2010), lower levels

of substance abuse (Bachman et al. 2002), and higher levels of life satisfaction (Uecker 2012). Due to data limitations, only heterosexual romantic partners are included. Sixty five percent of respondents are currently married or living with a romantic partner.

Individuals were considered to be in the role of *parent* if they had parenting responsibilities for any child under the age of 17. Measuring parent in this way captures the full expression of the parental role, since parents with grown children likely spend less time in the role than those with young children. Thirty eight percent of respondents are parents.

Individuals were considered to be in the roles of *volunteer* if they spent at least one hour per week volunteering and *adult caregiver* if they spent at least one hour per week caring for a disabled spouse, parent, parent-in-law or other adult relative. The majority of respondents (79%) indicated that no hours in a given week were dedicated to volunteer work and those few (<1%) who volunteered less than 1 hour per week were collapsed into the category of people who do not qualify as volunteers. The division for caregiver was even more striking with over 91% of respondents indicating no hours of caregiving per week and .001% in a caregiving role less than 1 hour per week. Overall, 15% of individuals indicated that they volunteered at least one hour per week and 6.75% of individuals indicated that they were caring for a disabled or elderly relative at least one hour per week.

Individuals were considered to be in the role of *club member* if they indicated that they were currently an active member of a sporting, hobby or community-based club or association. Thirty eight percent of individuals indicated that they were members of at least one club.

Individuals were considered to be in the role of *sibling*¹ if they had contact with at least one sibling in person, through the telephone, by email, or by letter at least once per month. Thirty seven percent of respondents in this sample have contact with a sibling at least once per month.

¹For the roles of *sibling* and *grandparent*, I drew from questions in Wave 8. Because information about these roles was not present in the wave of data where my dependent variable is present, I am making the assumption that this role will remain active or inactive over the timespan of one year. While this

Individuals were considered to be in the role of *grandparent* if they see their grandchildren once a month or more. Twenty percent of the respondents in the full sample are in the role of *grandparent*.

The variable *role count* is determined by the number of roles an individual holds. The average number of roles held is 3.41 (SD=1.25). Due to the skewed nature of the role count variable, I combined the few people who had 7 or 8 roles into a category of “6 or more.” Role count will be used as both a primary independent variable to predict psychological distress and as an interaction term to see if the count of role-identities moderates the relationship between distributive injustice and psychological distress.

Role Quality

The quality of the role is measured for two roles, *spouse* and *parent*. For the quality of the spousal role, I use six variables to construct a scale (alpha of .8948; M= 4.29; SD=.715). Respondents were asked questions such as “How well does your spouse meet your needs?” and “How good is your relationship compared to most?” with 1 indicating low quality relationships and 5 indicating high quality relationships.

The individual’s perception of his or her (in)ability to fulfill role demands associated with the parental role is operationalized by a 4-item scale of parental role fulfillment (alpha =.784; M= 4.78; SD=1.25). The scale consists of respondents’ agreement with the statements “Being a parent is harder than I thought it would be” and “I often feel tired, worn out or exhausted from meeting the needs of my children” and “I feel trapped by my responsibilities as a parent” and “I find that taking care of my children is much more work than pleasure.” These questions are measured on a scale of 1 to 7 and have

does introduce some noise into my analyses, I argue that the roles of sibling and grandparent are particularly hard to exit. While grandparents or siblings *could* potentially become less involved in the lives of their family members or could have those relationships created or severed by births or deaths in the family, these two roles are much more stable than, for example, the role of volunteer.

been recoded so that higher numbers indicate strong disagreement with the above statements, which signifies a greater degree of positive role fulfillment.

Additional Control Variables

Personal Characteristics

Psychological distress at a previous time point will be used to control for enduring symptoms of psychological distress that are likely not attributable to current circumstances such as under-reward in the workplace. This scale is measured using identical questions to the dependent variable, but at one year prior to the present wave of data (M=2.49; SD=.757). *Social support* is a scale of 9 variables ranging from 1 to 7 recoded so that higher numbers indicate more social support (M=5.47 SD=.916). Respondents were asked to agree or disagree with statements such as, “There is someone who can always cheer me up when I’m down” and “When I need someone to help me out, I can usually find someone” and “People don't come to visit me as often as I would like.”

Workplace Characteristics

In order to control for workplace characteristics, I use variables that ask respondents about their main job. I use a scale representing *paid leave*, which includes both paid vacation and paid sick leave, and shows that 89% of the respondents in this sample are provided with both paid vacation and paid sick leave. I use a variable that controls for the *number of years the respondent has worked* at his or her current place of business (M=7.49, SD=8.8). I use a dichotomous variable that indicates whether the respondent *supervises* the work of others (M=.54, SD=.5). Finally, I use four variables, scaled 0=totally dissatisfied to 10=totally satisfied, to report the satisfaction a respondent has with: the *hours he or she works* (M=7; SD=1.96), the *flexibility to balance work and non-work commitments* (M=7.22; SD= 2.26), the *work itself* (M=7.59; SD=1.74), and *job security* (M=7.97; SD=2).

Demographics

Age is measured in years (M=39.7 SD=12.5) and a squared term for age is also included to check for a curvilinear relationship. *Gender* is a dichotomous variable with 1= female and 0= male (this sample

is 36% female). The educational system in Australia differs from that in the US with many students electing to work apprenticeships instead of complete a final year of secondary education. For this study, I will follow the precedent of previous researchers (i.e. Reynolds and Aletraris 2006) and construct a dummy variable to identify respondents who have at least a *bachelor's degree* (1 = college degree; 39% of this sample has at least a college degree). *Household Income* is a logged interval ratio variable that covers the gross wages and salary for the financial year (M=11.3; SD=.725).

Hypotheses

Now that I have identified the variables I will use in my analyses, I can more formally state my propositions as hypotheses. The first hypothesis I will test is influenced by the perspective of Role Strain and predicts,

H1a: Role count is positively related to psychological distress.

Also influenced by Role Strain, the following prediction addresses the moderating effect of the number of roles an individual holds,

H2a: The more roles an individual holds, the *stronger* the relationship between distributive injustice and psychological distress.

From the perspective of Role Accumulation, which suggests that more roles are beneficial for an individual's psychological well-being, I present two alternative predictions:

H1b: Role count is negatively related to psychological distress.

H2b: The more roles an individual holds, the *weaker* the relationship between distributive injustice and psychological distress.

Past research (Thoits 1986a) suggests that there may be a curvilinear relationship between the number of roles an individual holds and his or her psychological distress. This research leads to the following predictions:

H1c: The relationship between the number of roles and psychological distress is curvilinear.

H2c: There will be a curvilinear effect of role count in moderating the relationship between distributive injustice and psychological distress.

I also propose three predictions related to the quality of roles. First, I hypothesize about the main effect of the quality of the spousal role on psychological distress,

H3a: Low quality relationships in the spousal role will be positively related to psychological distress.

Next, I make a prediction about the main effect of the fulfillment of the parental role on psychological distress,

H3b: Difficulty fulfilling the parental role will be positively related to psychological distress.

Finally, I predict that there will be an interaction effect for each of the quality variables on the relationship between distributive injustice and psychological distress such that having a higher quality relationship in the spousal role or difficulty fulfilling the parental role will result in a *weaker* relationship between distributive injustice and psychological distress. Stated formally:

H4a: The quality of the spousal role will moderate the relationship between under-reward in the workplace and psychological distress, such that reporting a higher quality spousal role will result in a *weaker* relationship between distributive injustice and psychological distress.

H4b: Fulfillment of the parental role will moderate the relationship between under-reward in the workplace and psychological distress, such that reporting higher fulfillment of the parental role will result in a *weaker* relationship between distributive injustice and psychological distress.

Analytical Strategy

I used ordinary least-squared regression methods (OLS) to examine the association between the number of alternative role-identities and the relationship between distributive injustice in the workplace and psychological distress. My goal is to assess both the main effects of the number of role-identities on psychological distress and the moderating effects of the count of role-identities on the relationship between distributive injustice and psychological distress to determine if multiple role-identities strengthens or weakens this association.

In order to reduce potential multicollinearity of independent variables, especially when interaction terms are included, I centered all relevant variables. By subtracting the mean from each value, I reduced the collinearity between the interaction terms and the variables used to create them.

A variance inflation factor is a diagnostic tool for assessing multicollinearity between independent variables in analyses. Generally, an acceptable tolerance of multicollinearity is above .40, which corresponds with a variance inflation factor below 2.50 (Allison 1999). All of the variance inflation factors for my models are within the acceptable range (lowest= 1.25 highest= 1.99) meaning that there was no threat of multicollinearity in my analyses.

For my analyses I used two-tailed tests of significance, which are the more conservative, rigorous, and appropriate test when I have non-directional hypotheses. However, some of my predictions have clear expectations for the direction of difference. In many of these directional hypotheses (e.g. spousal role quality is negatively associated with psychological distress), the more conservative two-tailed tests are significant. However, when using directional hypotheses, it is acceptable to use a one-tailed test of significance. For one analysis, the moderating effect of the quality of the spousal role on the relationship between distributive injustice and psychological distress, I will discuss the significance of the interaction at the .1 level.

In each of my analyses, I controlled for gender, income, age, education, psychological distress at a previous time point, and social support. I also control for job characteristics such as tenure with current employer and whether the respondent supervises the work of others, as well as for job entitlements such as paid vacation time, flexible hours, and sick leave. Additionally, because I am examining processes of justice in the workplace, I include variables indicating how satisfied the individual is in the workplace including satisfaction with: hours worked, job security, flexibility to balance work/non-work commitments, and satisfaction with work itself.

My sample consists of full time workers over the age of 18. Different regressions in my models have different Ns because not all questions are applicable to all respondents. For regressions related to the count of identities, the total sample size is 2,197 individuals. For regressions related to the quality of

the spouse role, the sample size is 1,540 individuals; for regressions related to the quality of the parental role, the sample size is 848 individuals.

CHAPTER 5

RESULTS

Role Count

The first step is to establish that the expected association between distributive injustice and psychological distress is present in the data. As expected, Model 1 in Table 1 shows that distributive injustice and psychological distress are significantly positively related ($p < .05$). Net of all other variables in the model, workers who feel they are not paid fairly for the work they complete will experience a higher level of psychological distress. Now that the central relationship between distributive injustice and psychological distress has been established, the next step is to explore the hypotheses that make predictions about factors that may moderate this relationship.

Hypothesis 1a, drawn from Role Strain, predicts that having more roles is positively related to psychological distress. Hypothesis 2a, drawn from Role Accumulation, predicts that having more roles is negatively related to psychological distress so that holding more roles is associated with lower levels of distress.

In a bivariate regression (not shown, analysis available upon request) with psychological distress as the outcome variable and only using a variable of role count, the number of identities an individual holds is negatively related to psychological distress ($p < .01$). Each additional role an individual holds is associated with slightly less psychological distress. This provides support for the Role Accumulation perspective because having more roles is associated with lower levels of distress.

However, the relationship between role count and psychological distress is no longer significant in the multivariate model. This means that I fail to find support for either Hypothesis 1a or Hypothesis 2a. The two strongest predictors of psychological distress are *previous psychological distress* ($p < .001$), which is positively associated with current psychological distress, and *social support* ($p < .001$) which is negatively associated with psychological distress. Instead, under-reward in the workplace ($p < .05$),

psychological distress at a previous time point ($p < .001$), and being a female ($p < .001$) are all positively related to psychological distress. Satisfaction with the hours worked ($p < .001$), satisfaction with the work itself ($p = .001$), and having a high level of social support ($p < .001$) are all negatively related to psychological distress. This model explains 54% of the variance in psychological distress.

Table 1: Ordinary Least Squares Regression Presenting Coefficients of a Scale of Psychological Distress on Role Count and Control Variables

Descriptions of Variables	Model 1	Model 2	Model 3	Model 4
Primary Independent Variables				
Perceptions of under-reward in the workplace	0.015*	0.015*	0.015*	0.005
Count of Role Identities	-	0.011	0.000	0.011
Count of Role Identities Squared	-	-	0.001	-
Interaction of Count of Role Identities and being under rewarded in the workplace	-	-	-	0.003
Demographics				
Female	0.094***	0.097***	0.097***	0.096***
Yearly Household Income (wages and salaries), logged	0.020	0.019	0.019	0.019
Age, centered	-0.002	-0.003	-0.002	-0.001
Age, centered, squared	-0.000	-0.000	-0.000	-0.000
College Degree	0.036	0.034	0.034	0.034
Psychological Distress at previous time point	0.537***	0.538***	0.538***	0.538***
Social Support	-0.192***	-0.193***	-0.193***	-0.193***
Workplace Characteristics				
Paid Leave (sick and/or vacation) Provided	0.023	0.023	0.023	0.023
Satisfaction with hours worked	-0.034***	-0.034***	-0.034***	-0.034***
Satisfaction with flexibility to balance work and non-work commitments	0.011	0.011	0.011	0.011
Satisfaction with the work itself	-0.023**	-0.023***	-0.023***	-0.023***
Satisfaction with job security	-0.006	-0.006	-0.006	-0.006
Supervises work of others	-0.005	-0.005	-0.005	-0.005
Tenure with Employer	-0.001	-0.001	-0.001	-0.001
Constant	2.226***	2.218***	2.230***	2.219***
Adjusted R ²	0.550	0.550	0.550	0.550
N	2197	2197	2197	2197

legend: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Some literature (e.g. Thoits 1992) suggests that there may be a curvilinear relationship between the count of the number of role-identities an individual holds and psychological distress. Based on these ideas, Hypotheses 3a predicts that there will be a curvilinear relationship between the count of roles and psychological distress such that the more roles an individual holds the less psychological distress

that an individual will report, up to a point. The idea is that additional roles could be beneficial to mental health, but then too many identities could overload the individual and increase psychological distress. As before, a bivariate analysis (not shown, analysis available upon request) reveals there is a U-shaped curvilinear relationship between the count of role-identities and psychological distress. The squared term for role-identities is significantly and negatively associated with psychological distress suggesting that role-identities are beneficial for mental health and but too many role-identities may become overwhelming ($p < .01$).

With this preliminary association in mind, Model 3 in Table 1 adds a squared count of role-identities to the other factors from the previous model. In the multivariate model, the count of role-identities is no longer significant ($p = .645$). Thus, I fail to find support for Hypothesis 3a.

Hypotheses 1b, 2b, and 3b move past main effects to focus on the moderating effect of the number of roles an individual holds outside the workplace on the relationship between under-reward in the workplace and psychological distress. Hypothesis 1b, drawn from Role Strain, predicts that having more roles will be associated with a *stronger* relationship between distributive injustice and psychological distress. This means the strain from being under rewarded in the workplace will be felt more strongly for people with more role-identities. Hypothesis 2b, drawn from Role Accumulation, predicts that having more roles will be associated with a *weaker* relationship between distributive injustice and psychological distress. According to this hypothesis, the strain from being under rewarded in the workplace will be felt less strongly for people who have more role-identities.

In order to test these competing hypotheses, I introduce the centered interaction term between the number of role-identities and under-reward in the workplace to the full set of relevant variables (see Model 4 in Table 1). The interaction term is not significant ($p = .625$) meaning that, in this data set and while controlling for a range of other variables, there is no moderating effect of roles outside the workplace on the strain felt from distributive injustice in the workplace.

In keeping with predictions about the curvilinear relationship between role count and psychological distress, in Hypothesis 3B, I make a non-linear moderating prediction of role count on the relationship between under-reward in the workplace and psychological distress. Using this research on a curvilinear relationship between the number of alternate roles and psychological distress, I predict that, up to a given point, more roles will weaken the relationship between distributive injustice and psychological distress. In both bivariate and multivariate analyses (not shown, available upon request), the count of role identities is not a significant predictor of psychological distress ($p=.952$). Thus, I fail to find support for Hypothesis 3b.

Across the 4 models testing the main and moderating effect of role count on psychological distress, particular control variables are consistently significant. Two demographic characteristics are significantly associated with psychological distress in all models. Being *female* is associated with higher psychological distress ($p<.001$). *Age* has a significant negative relationship with psychological distress ($p<.01$).

Three workplace characteristics are significantly and negatively associated with psychological distress. Satisfaction with the *work hours* is negatively associated with psychological distress ($p<.001$). How satisfied the individual is with the *work itself* is also negatively related to the outcome variable ($p<.001$). As mentioned previously, being *paid unfairly* in the workplace is positively related to psychological distress ($p<.05$).

Throughout the analyses, the two best predictors of psychological distress are *social support*, which predicts 4% of the total variance (full Model 4 adjusted $R^2 = .5430$; without *social support* adjusted $R^2 = .5033$) and *previous psychological distress*, which predicts 23% of the total variance (full Model 4 adjusted $R^2 = .5430$; without *previous psychological distress* adjusted $R^2 = .3095$). Reporting *previous psychological distress* has a significant positive relationship with psychological distress at the present time point ($p<.001$). Reporting high levels of *social support* is negatively associated with experiencing

psychological distress so that for an increase of one unit in social support the individual will report a .20 unit decrease on the scale of psychological distress ($p < .001$).

Role Quality

Spouse

Hypothesis 4a predicts that a low level of satisfaction in the spousal role is associated with higher psychological distress. I find support for this hypothesis. Model 1 in Table 2 shows that the quality of the spousal role is negatively associated with psychological distress while holding a range of demographic and workplace characteristics constant. For a one unit increase in satisfaction with the spousal relationship, an individual will report a .06 unit decrease on the scale of psychological distress ($p < .01$).

Table 2: Ordinary Least Squares Regression Presenting Coefficients of a Scale of Psychological Distress on Spousal Role Quality and Control Variables

Descriptions of Variables		Model 1	Model 2
Primary Independent Variables			
	Perceptions of under-reward in the workplace	0.014*	0.013
	Spousal role quality	-0.059**	-0.058**
	Spousal role quality x under-reward in the workplace	-	0.019 [†]
Demographics			
	Role Count	0.008	0.009
	Female	0.098***	0.098***
	Yearly household income (wages and salaries), logged	0.018	0.019
	Age	-0.004**	-0.004**
	Age, squared	0.000	0.000
	College degree	0.046	0.045
	Psychological distress at previous time point	0.532***	0.531***
	Social support	-0.172***	-0.174***
Workplace Characteristics			
	Paid leave (sick and/or vacation) provided	-0.019	-0.021
	Satisfaction with hours worked	-0.032***	-0.033***
	Satisfaction with flexibility to balance work and non-work commitments	0.005	0.005
	Satisfaction with the work itself	-0.020*	-0.020*
	Satisfaction with job security	-0.005	-0.006
	Supervises work of others	0.012	0.011
	Tenure with employer	-0.002	-0.002
	Constant	2.492***	2.494***
	Adjusted R ²	0.547	0.548
	N	1540	1540

legend: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; [†] $p < 0.01$

Hypotheses 5a predicts that the quality spousal role will moderate the relationship between distributive injustice and psychological distress such that reporting a lower quality spousal role will result in a *stronger* relationship between distributive injustice and psychological distress. The interaction in Table 2 Model 2 of the quality of the spouse role and being under rewarded in the workplace on psychological distress approaches significance ($p=0.075$). The coefficient is positive suggesting that, were it significant, there is a moderating effect between the quality of the spouse role and distributive injustice. I fail to find support for Hypothesis 5a. Further, these analyses suggest that a high quality relationship may have the opposite moderating effect. The presence of a *high* quality spousal relationship strengthens the positive effect of distributive injustice on psychological distress. There is a marginally significant moderating effect of the quality of the spousal role and distributive injustice and psychological distress, but it is in the opposite direction than I expected.

In the figure below, the steeper line with diamonds represents people who reported the highest possible quality of the spousal relationship (5 on a scale of 1-5; 23% of the sample reported the highest possible quality) and indicates that having a higher quality spousal relationship strengthens the relationship between under-reward at work and psychological distress. The less steep line with squares represents people who reported a lower quality spousal relationship. Although the scale technically allows for "1" to indicate the lowest quality relationship, less than 1% of people reported scores in this range. For this figure, a score of "3" is used to indicate lower quality spousal relationship as almost 7% of the sample reported a lower quality relationship in this range.

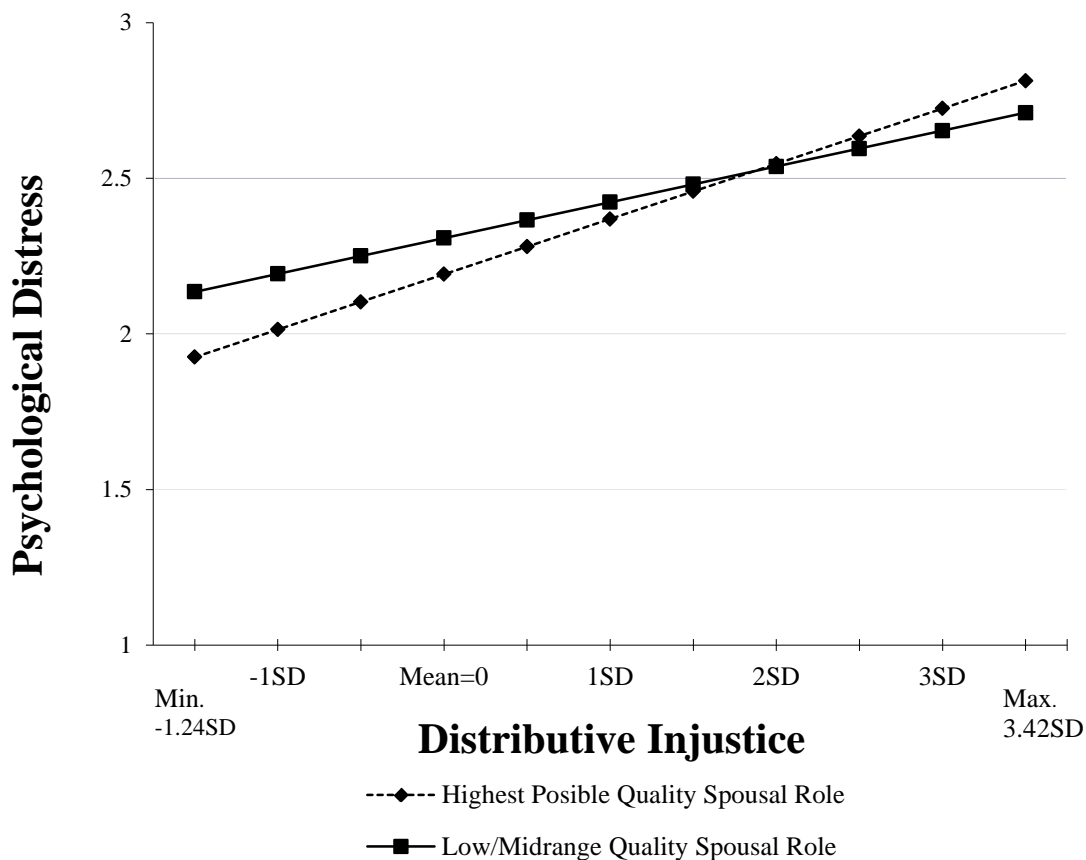


Figure 1: Effect of Spousal Role Quality on the Relationship Between Distributive Injustice and Psychological Distress

Parent

Hypothesis 4b predicts that difficulty fulfilling the parental role is positively associated with psychological distress. I find support for this hypothesis. Model 1 in Table 3 shows that successful fulfillment of the parental role is negatively associated with psychological distress ($p < .001$). For every one unit increase in the perceived ability to fulfill the parental role, an individual reports a .06 unit decrease on the scale of psychological distress.

Hypothesis 5b moves past the direct effects of role quality on psychological distress to suggest that the relationship between distributive injustice in the workplace and psychological distress (shown in Table 1 Model 1) will be *stronger* for individuals who report low levels of parental role fulfillment. The second Model in Table 3 shows that the fulfillment of the parental role does not have a moderating

effect on the relationship between distributive injustice and psychological distress. The interaction term (Fulfillment of Parental Role x Distributive Injustice) is not significant ($p=0.653$). I fail to find support for Hypothesis 5b.

Table 3: Ordinary Least Squares Regression Presenting Coefficients of a Scale of Psychological Distress on Parental Fulfillment and Control Variables

Descriptions of Variables	Model 1	Model 2
Primary Independent Variables		
Perceptions of under-reward in the workplace, centered	0.017	0.017
Parental Role Fulfillment	-0.063***	-0.062***
Interaction of Parental Role Fulfillment and being under rewarded in the workplace, centered	-	0.004
Demographics		
Count of Role-identities	0.013	0.013
Female	0.068	0.069
Yearly Household Income (wages and salaries), logged	0.050	0.049
Age, centered	-0.026	-0.025
Age, centered, squared	-0.006**	-0.006**
College Degree	0.020	0.020
Psychological Distress at previous time point	0.507***	0.507***
Social Support	-0.176***	-0.176***
Workplace Characteristics		
Paid Leave (sick and/or vacation) Provided	-0.088*	-0.088*
Satisfaction with hours worked	-0.032***	-0.032**
Satisfaction with flexibility to balance work and non-work commitments	0.017	0.016
Satisfaction with the work itself	-0.031**	-0.031**
Satisfaction with job security	-0.002	-0.002
Supervises work of others	0.061	0.062
Tenure with Employer	-0.001	-0.000
Constant	2.283***	2.288***
Adjusted R ²	0.568	0.568
N	848	848

legend: * $p<0.05$; ** $p<0.01$; *** $p<0.001$

In all models concerning role quality, particular control variables were consistently significant. In the analyses on the spousal role, *spousal role quality* ($p<.01$), *social support* ($p<.001$), *age* ($p<.01$), *satisfaction with hours worked* ($p<.001$), and *work itself* ($p<.05$) were all negatively associated with psychological distress. Being *female* ($p<.001$) and reporting *psychological distress at a previous time point* ($p<.001$) were both positively related to psychological distress.

In the analyses concerning parental role fulfillment, *fulfillment of the parental role* ($p < .001$) was negatively associated with psychological distress in addition to *social support* ($p < .001$), *age* ($p < .01$), *paid leave* ($p < .05$), satisfaction with *work hours* ($p < .001$) and satisfaction with *the work itself* ($p < .01$). Reporting *psychological distress at a previous time point* ($p < .001$) is positively associated with psychological distress. Interestingly, in the analyses concerning parental role fulfillment, being *female* is no longer a significant predictor of psychological distress.

CHAPTER 6

DISCUSSION AND IMPLICATIONS

The purpose of this research was to determine if processes of identity might affect the known association between perceived distributive injustice and psychological distress. First, I establish in this sample that under-reward in the workplace is significantly associated with higher levels of psychological distress, as previous research has suggested (Brockner et al. 1994; Kalimo, Taris and Schaufeli 2003). In exploring if factors outside the workplace affect this relationship, I examined the effect of the number of role-identities on psychological distress. Competing predictions suggest that more role-identities could lead to higher (Role Strain) or lower (Role Accumulation) psychological distress. My findings give partial support to the Role Accumulation perspective that more roles are associated with lower psychological distress. While the count of the number of role-identities an individual holds is negatively associated with his or her level of psychological distress, other variables are stronger predictors. When I include *previous psychological distress* and *social support* in the analyses, the count of role-identities is no longer significantly associated with psychological distress. This suggests that while there is some association between the number of role-identities and an individual's mental health, previous psychological distress and social support account for more of the variance in current psychological distress.

Some past research suggests that there may be a curvilinear relationship between the number of role-identities an individual holds and his or her level of psychological distress (Thoits 1986a). My findings show that additional roles may indeed be helpful for mental health only to a point, after which too many identities could be overwhelming and increase psychological distress. As with the count of identities, this association holds true only when other predictors of psychological distress, such as *previous psychological distress* and *social support*, are not included in the model. When these factors

are present, there is no association between a squared count of role-identities and psychological distress.

The central contribution of this paper is the prediction that role count will have a moderating effect on the relationship between distributive injustice and psychological distress. As the results show, however, there is no moderating effect of the number of role-identities on the relationship between being under rewarded in the workplace and psychological distress. Even in a limited model containing only the interaction effect and lower order terms, the interaction was not significant. Distributive injustice is such a strong factor in predicting psychological distress that the count of roles does not affect the association. This means, at least in this data set and using these measurements, the number of roles an individual holds does not affect the relationship between distributive injustice in the workplace and psychological distress.

There is a strong direct effect of the quality of a role on psychological distress. The satisfaction in the spousal role and the fulfillment in the parental role are both significantly and negatively associated with psychological distress. Higher levels of satisfaction and fulfillment in non-work roles are associated with lower psychological distress while controlling for demographic and workplace characteristic variables.

While there is no moderating effect of the fulfillment of the parental role on the association between being paid unfairly at work and psychological distress, the interaction of the quality of the spousal role and being under rewarded in the workplace approaches significance. Having a high quality spousal relationship strengthens the relationship between distributive injustice and psychological distress. This finding is directly at odds with my original prediction that having a good relationship with one's spouse would *weaken* the relationship between injustice and distress. However, an alternative explanation is that perhaps if the spousal relationship quality is poor, an individual does not have the capacity to be distressed by injustice at work because his or her most important relationship is

threatened. Conversely, if spousal relationship quality is high and the individual feels supported, secure, and heard at home, perhaps that worker can “afford” to be distressed by workplace factors such as under-reward. The positive coefficient is interesting because it is in the opposite direction from the social psychological prediction, but can perhaps be explained by literature that focuses on quality of relationships within the family. For example, Davila and Kashy (2009) study “secure base process,” which is the individual’s ability to use one’s partner as a safe haven and a secure base, as well as to serve those roles for one’s partner. Individuals who have a secure base with their partners (which was not directly measured in my use of Role Quality, but may be similar) may be able to evaluate their under-reward at work adequately, knowing they have a supportive partner at home.

Results in Context

Previous literature has explored the effect of the number of roles an individual holds on his or her level of psychological distress with conflicting outcomes (Ahrens and Ryff 2006; Marks 1977; Moen, Dempster-McClain and Williams 1992; Spreitzer, Snyder and Larson 1979). While many of these works tested the idea that multiple roles can have an impact on mental health, these authors were often missing important factors in their models. Spreitzer, Snyder, and Larson (1979) pitted role strain and role accumulation against each other and found support for role accumulation, but their use of only five roles may have precluded findings of individuals who are overwhelmed by too many roles. Moen, Dempster-McClain and Williams’ (1992) excellent study uses a longitudinal model that allows for up to 6 roles, but they were not able to control for social support which I found to be a significant predictor of psychological distress and has been shown to be related to mental health outcomes in past research (Thoits 1986b). Ahrens and Ryff (2005) examine the effect of 8 roles on psychological well-being but have a cross-sectional dataset which does not allow them to control for previous psychological well-being.

Importantly, I was able to go beyond these past analyses through the use of longitudinal data. Both the longitudinal and thorough nature of this dataset allows me to control for many factors that might affect psychological distress including previous psychological distress and social support, which previous research has shown to be strong predictors of psychological distress (Aneshensel 1992; Mirowsky and Ross 1986; Pearlin 1989; Thoits 1986b). When I use a less-than-fully specified model, I find support for the Role Accumulation perspective, but when I control for all relevant factors, the results do not show an association between number of roles and psychological distress.

Type of Role

Some literature suggests that perhaps it is the *type* of role, not the count or quality that affects psychological distress (Menaghan 1989; Reitzes and Mutran 1994). Voluntary roles might be sought out and held by people with lower psychological distress. Alternately, participating in voluntary roles might lower psychological distress. The rewarding action of volunteering might increase well-being through giving an individual a sense of purpose or meeting new friends through a club membership might increase an individual's social support which, in turn, increases psychological well-being. Family roles may not be as associated with psychological distress because, although exiting the role of club member might let people down, exiting the role of parent would be much more difficult. I explored this possibility by dividing roles into these categories (voluntary vs. non-voluntary, family vs. non-family) but did not find any significant differences based on the *type* of roles an individual holds. (Analyses available upon request.)

Limitations and Directions for Future Research

This paper has several limitations that should be addressed in future research. Some limitations were based on what variables were available in the data. First, I could not control for several factors that past literature suggests are important factors to hold constant. I would have liked to control for procedural injustice which other research suggests is important (Tepper 2001). Further, this is a

uniformly white sample in terms of race, and a more diverse sample may have uncovered racial differences. Second, while a strength of this paper was being able to identify 8 distinct roles, having a measure for more roles would always be better. Especially more varied and voluntary roles such as *neighbor* or *church member*. Third, the sample of full time workers over the age of 18 is not generalizable to a wider population, especially for those models about the quality of the parental role, when questions were only asked of people who had children and the sample size is greatly reduced. Finally, because the dataset only contains measures for the roles of spouse and parent, the role quality of the other 6 roles could not be assessed. Having role quality information for the remaining roles, including the role of full time worker, would have allowed me to conduct a more thorough test of this prediction and to hold role quality constant for all roles while exploring the effect of role count on the relationship between distributive injustice and psychological distress. It seems likely that if I could control for the quality of the roles, the count would be a significant moderator of under-reward on psychological distress. Holding the quality of the roles constant would allow me to see if and how the number of roles an individual holds moderates the relationship between injustice and distress.

Conclusion

The present study examined the influence of the number and the quality of role-identities on the relationship between under-reward in the workplace and psychological distress. The findings suggest that individuals with more roles tend to have lower psychological distress, but this association dissolves when other factors such as *previous psychological distress* and *social support* are included in the analysis. The number of roles held does not appear to have any moderating effect on the strong relationship between distributive injustice and psychological distress. Distributive injustice in the workplace is such a strong predictor of psychological distress that other factors, such as the number of alternative role-identities an individual holds, do not affect this relationship.

Role quality has a strong effect on psychological distress. Quality of the spousal role and fulfillment of the parental role are negatively associated with psychological distress such that higher quality roles are associated with better mental health. The moderating effect of the quality of the spousal role on the relationship between under-reward and distress is significant when using a one-tailed test, though in the opposite direction I had originally predicted. Having a high quality spousal relationship strengthens the relationship between distributive injustice and psychological distress. Parental role quality was not found to moderate the relationship between under-reward at work and psychological distress; in fact, distributive injustice became non-significant when I controlled for parental role quality. Future work that can examine the quality of more roles will uncover further understanding about how processes of identity affect the relationship between distributive injustice and psychological distress.

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Appendix A: Table of Propositions

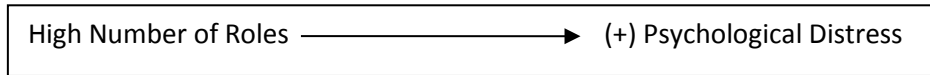
P1a:	In accordance with Role Strain, the number of roles is positively related to psychological distress.
P1b:	In accordance with Role Accumulation, the number of roles is negatively related to psychological distress.
P1c:	There is a curvilinear relationship between the count of roles and psychological distress.
P2a:	In accordance with Role Strain, the number of roles moderates the relationship between distributive injustice and psychological distress, such that having more roles results in a <i>stronger</i> relationship between distributive injustice and psychological distress.
P2b:	In accordance with Role Accumulation, the number of roles moderates the relationship between distributive injustice and psychological distress, such that having more roles results in a <i>weaker</i> relationship between distributive injustice and psychological distress.
P2c:	Role count moderates the relationship between distributive injustice and psychological distress, such that up to a given point, more roles weaken the relationship between distributive injustice and psychological distress.
P3:	Satisfaction in and fulfillment of alternative roles is negatively associated with psychological distress.
P4:	The quality of alternative roles moderates the relationship between distributive injustice in the workplace and psychological distress, such that having lower quality alternative roles results in a <i>stronger</i> relationship between distributive injustice and psychological distress.

Appendix B: Table of Hypotheses

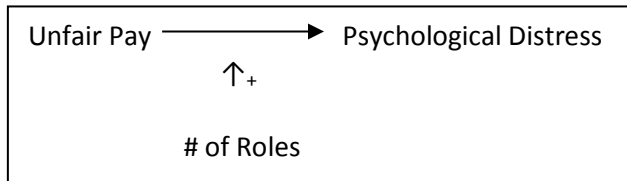
H1a:	Role count is positively related to psychological distress.
H1b:	Role count is negatively related to psychological distress.
H1c:	The relationship between the number of roles and psychological distress is curvilinear.
H2a:	The more roles an individual holds, the <i>stronger</i> the relationship between distributive injustice and psychological distress.
H2b:	The more roles an individual holds, the weaker the relationship between distributive injustice and psychological distress.
H2c:	There will be a curvilinear effect of role count in moderating the relationship between distributive injustice and psychological distress.
H3a:	Low quality relationships in the spousal role will be positively related to psychological distress.
H3b:	Difficulty fulfilling the parental role will be positively related to psychological distress.
H4a:	The quality of the spousal role will moderate the relationship between under-reward in the workplace and psychological distress, such that reporting a higher quality spousal role will result in a <i>weaker</i> relationship between distributive injustice and psychological distress.
H4b:	Fulfillment of the parental role will moderate the relationship between under-reward in the workplace and psychological distress, such that reporting higher fulfillment of the parental role will result in a <i>weaker</i> relationship between distributive injustice and psychological distress.

Appendix C: Model of Predictions

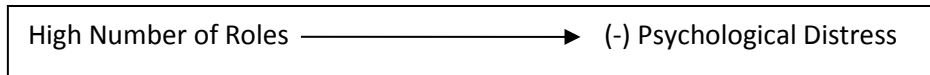
Role Strain (Direct Effect):



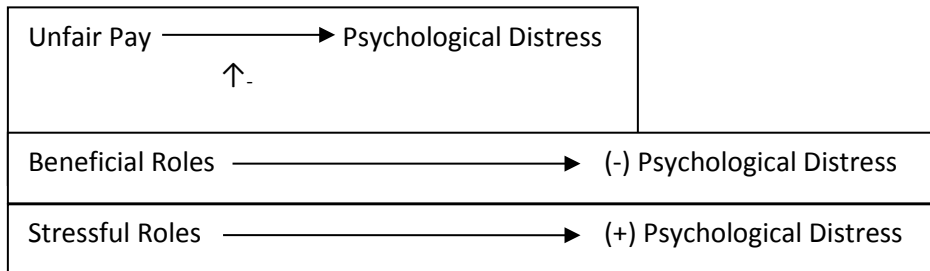
Role Strain (Interaction):



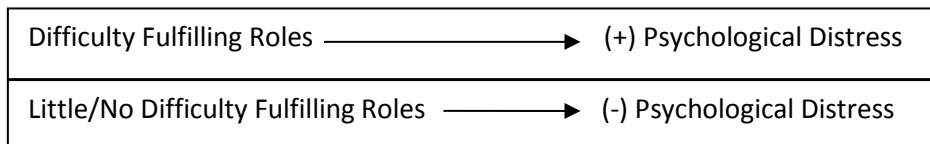
Role Accumulation (Direct Effect):



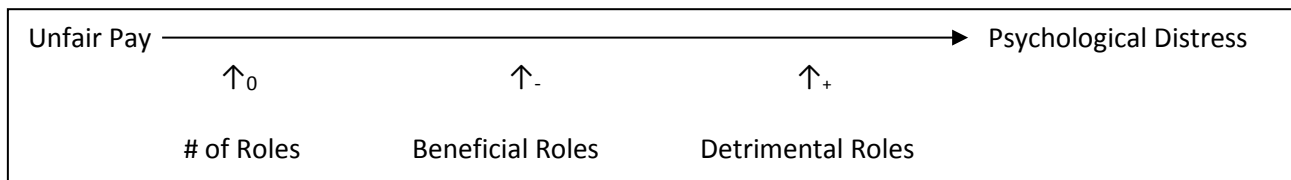
Role Accumulation/Strain (Interaction):



Role Fulfillment (Direct Effect):



Role Quality/Fulfillment (Interaction):



Appendix D: Descriptives of Variables

Primary Variables	Phrasing	N	M	SD	Min	Max
DV: Scale of Psychological Distress	These questions are about how you feel and how things have been with you <u>during the past 4 weeks</u> . For each question, please give one answer that comes closest to the way you have been feeling. How much of the time during the <u>past 4 weeks</u> :	Alpha= .8851				
		4,789	2.48	.73	1	5.9
IV: Distributive Injustice	I get paid fairly for the things I do in my job. 1-Strongly Agree 7-Strongly Disagree	4,775	3.44	1.62	1	7
ID Count	Count of the number of identities an individual holds 8 possible options, all have at least one role: <i>full time worker, spouse, parent, caregiver, volunteer, club member, sibling, grandparent</i>	3,268	3.24	1.26	1	6
ID Count Squared	Count of the number of identities an individual holds, squared	3,268	12.1	8.85	1	49
Role-identities x Paid Unfairly	Interaction of the Number of Role-identities and Distributive Injustice in the Workplace	3,186	11.1	6.92	1	42
Role Quality of Spouse x Paid Unfairly	Interaction of the Quality of the Spousal Role and Distributive Injustice in the Workplace	3,345	-.102	1.15	-12	8
Role Fulfillment of Parent x Paid Unfairly	Interaction of the Fulfillment of the Parental Role and Distributive Injustice in the Workplace	1,829	-.231	2.06	-13	9.2
Demographics	Phrasing	N	M	SD	Min	Max
Female	Demographic: Gender (1=Female)	5,743	.364	.481	0	1
Income	Demographic: Household financial year gross wages and salary for all jobs, imputed and weighted top code.	5,562	1038 03	618 74	180	367,4 80
Logged Income	Logged income variable	5,562	11.3	.725	5.19	12.8
Age	Demographic: Age, restricted to respondents above 18 Average age is 39.7; Median age is 40	5,743	39.7	12.5	18	87
Age Squared	Squared age variable	5,743	1732	1028	324	7569
College Degree	Dichotomous: 1= college degree	5,726	.39	.488	0	1
Psychological Distress at a Previous Wave	Same 9-item scale as the DV (asking about last four weeks) asked one year earlier.	Alpha= .8895				
		4,437	2.49	.757	1	6
Social Support	9-item scale asking about respondents' level of social support (higher numbers indicate more social support)	Alpha=.807				
		4,829	5.475	.916	1.5	7
Workplace Characteristics	Phrasing	N	M	SD	Min	Max
Paid Leave	Scale made from <i>paidvacay</i> and <i>paidsick</i> (alpha = .981) 0=neither, 1 = either vacation or sick leave, 2= both	4,836	1.78	.617	0	2
Tenure with Employer	How long have you worked for your current employer/in your current business? (years)	5,742	7.49	8.8	0	70
Supervisory Role	Do you normally supervise the work of other employees? 1=yes	5,743	.54	.50	0	1

Satisfaction with:						
Hours Worked	How satisfied are you with the hours you work?	5,740	7.07	1.96	0	10
Flexibility at Job	How satisfied are you with your flexibility to balance work and non-work commitments?	5,736	7.22	2.26	0	10
The Work Itself	How satisfied are you with the work itself?	5,740	7.59	1.74	0	10
Job Security	How satisfied are you with your job security?	5,731	7.97	2.00	0	10
Role Quality	Phrasing	N	M	SD	Min	Max
Quality of Spousal Role	Scale of 6 variables (<i>goodcompared9, meetneeds9, muchlove9, metexpect9, wishnot9, problems9</i>) for spousal role quality.	Alpha = .8948				
		3,439	4.29	.715	1	5
Fulfillment of Parental Role	Created a scale using the 4 variables (<i>parenthard, parenttrap, morework, parenttired</i>) pertaining to the fulfillment of the role of parent	Alpha = .784				
		1,866	4.78	1.25	1	7
Roles	Phrasing	N	%	SD	Min	Max
Spouse	Yes: Married; never married but living with someone in a relationship No: Separated, but not divorced; divorced; widowed; never married and not living with someone in a relationship	5,736	64.5	.479	0	1
Parent	Do you have parenting responsibilities for any children under the age of 17?	4,861	38.4	.49	0	1
Caregiver	How much time to you spend on each of the following activities in a typical week? Caring for a disabled spouse or disabled adult relative, or caring for elderly parents or parents-in-law.	4,208	6.75	.279	0	1
Volunteer	How much time to you spend on each of the following activities in a typical week? Volunteer or charity work (for example, canteen work at the local school, unpaid work for a community club or organization)	4,273	15.2	.359	0	1
Club Member	Are you currently an active member of a sporting, hobby or community-based club or association?	4,855	37.7	.485	0	1
Sibling	Must have contact with one sibling in person or by phone, email, letter at least once per month.	5,743	36.5	.481	0	1
Grandparent	Do you see at least one of your grandchildren at least once a month? *See note on separate sheet.	4,624	20.2	.40	0	1
Full Time Worker	Hours usually worked per week: 1= 35 hours or more (full time) 0 = 34 hours or less (part time)	5,743	100	0	1	1

Psychological Distress Items	Phrasing	N	M	SD	Min	Max
<i>(fulloflife)</i>	How much of the time do you feel full of life?	4,866	2.77	1.07	1	6
<i>(nervous)</i>	Have you been a nervous person?	4,866	1.89	.984	1	6
<i>(dumps)</i>	Have you felt so down in the dumps that nothing could cheer you up?	4,858	1.49	.856	1	6
<i>(calmpeace)</i>	Have you felt calm and peaceful?	4,866	2.95	1.13	1	6
<i>(energy)</i>	Did you have a lot of energy?	4,860	3.01	1.10	1	6
<i>(down)</i>	Have you felt down?	4,858	1.99	.941	1	6
<i>(wornout)</i>	Did you feel worn out?	4,857	2.68	1.06	1	6
<i>(happy)</i>	Have you been a happy person?	4,861	2.51	.966	1	6
<i>(tired)</i>	Did you feel tired?	4,864	2.99	1.07	1	6
Social Support Items	Phrasing	N	M	SD	Min	Max
<i>(cheerup)</i>	There is someone who can always cheer me up when I'm down	4856	5.37	1.62	1	7
<i>(lottafriends)</i>	I seem to have a lot of friends	4859	4.53	1.57	1	7
<i>(leantimes)</i>	I have no one to lean on in times of trouble	4854	5.91	1.50	1	7
<i>(needhelp)</i>	I often need help from other people but can't get it	4861	5.86	1.41	1	7
<i>(enjoytime)</i>	I enjoy the time I spend with the people who are important to me	4856	6.29	1.01	1	7
<i>(pplvisit)</i>	People don't come to visit me as often as I would like	4865	4.50	1.72	1	7
<i>(helpme)</i>	When I need someone to help me out, I can usually find someone	4861	5.68	1.35	1	7
<i>(ppltalk)</i>	When something's on my mind just talking with the people I know can make me feel better	4861	5.63	1.37	1	7
<i>(lonely)</i>	I often feel very lonely	4859	5.59	1.60	1	7

Appendix E

HILDA Descriptives:

	Wave 7	Wave 8	Wave 9
Previous Wave Retention (%) ¹	94.7	95.2	— ⁴
Number of Households	7,063	7,066	— ⁴
Persons Interviewed ²	12,789	12,785	— ⁴
Household Income: Mean ³	\$69,033	\$72,706	— ⁴
Household Income: Median ³	\$59,925	\$63,179	— ⁴
% Female	51.52	51.52	51.20
% Parents	32.4	32.1	31.6
% Married	51.2	51.4	50.0

- 1) Previous-wave retention – the percentage of respondents in the previous wave in-scope in the current wave who were interviewed.
- 2) Around 4,500 people in each wave are “non-responding persons” from a household with at least one responding person. This accounts for most of the discrepancy between the total N for each Wave (around 17,500) and the N for persons interviewed (around 12,800)
- 3) Household annual disposable incomes in December 2008 prices
- 4) Information about retention, households and income from Wilkins, Roger, Diana Warren, Markus Hahn and Brendan Houg (2011). "Families, Incomes and Jobs, Volume 6: A Statistical Report on Waves 1 to 8 of the Household, Income and Labour Dynamics in Australia Survey." The statistical report that includes Wave 9 is not yet available.

Endnotes:

- 1) For the roles of *sibling* and *grandparent*, I drew from questions in Wave 8. Because information about these roles was not present in the wave of data where my dependent variable is present, I am making the assumption that this role will remain active or inactive over the timespan of one year. While this does introduce some noise into my analyses, I argue that the roles of sibling and grandparent are particularly hard to exit. While grandparents or siblings *could* potentially become less involved in the lives of their family members or could have those relationships created or severed by births or deaths in the family, these two roles are much more stable than, for example, the role of volunteer.