

AGE AND PSYCHOLOGICAL CONTRACT BREACH
IN RELATION TO WORK OUTCOMES

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VRIJE UNIVERSITEIT

AGE AND PSYCHOLOGICAL CONTRACT BREACH IN RELATION TO WORK OUTCOMES

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Chapter 1

Introduction

1.1 Introduction

The proportion of older workers on the labor market is rapidly increasing. Whereas the mean age of the working population in the Netherlands was 38 years in 2001, this number has increased to 40 years in 2007 (Bruggink, 2008). The workforce is aging in the Netherlands as well as in other European countries and North-America (European Commission, 2006; Kanfer & Ackerman, 2004). On the one hand, the baby-boom generation (those who were born between 1946 and 1960) is now older than 50 years and approaches retirement. On the other hand, fertility rates have decreased (Euwals & Van Vuuren, 2005). In general, women get fewer children than before. Therefore, the workforce is constituted of a greater percentage of older workers. Finally, life expectancy has increased, through which people are living longer and healthier, which enhances their physical and cognitive abilities to work longer. According to the European Commission (2006), to retain the number of people on the labor market, people should work longer, that includes also working beyond official retirement age. This is already the case in the Netherlands with a growing number of post-retirement workers (Schut, 2008). As a consequence of the aging workforce, older workers will play an increasingly important role on the tight job market. However, many organizations are having difficulties in retaining and motivating older workers (Barnes-Farrell & Matthews, 2007; Kanfer & Ackerman, 2004).

Related to this, little is known about differences between younger and older workers in their psychological contracts with their organizations (Van der Heijden, Schalk, & Van Veldhoven, 2008). For instance, it is unclear how younger people differ in their perceptions of employer obligations from older workers, and how reactions to organizational treatment differ with age (Turnley & Feldman, 1999). It is plausible that younger workers will have different expectations from their employers and perceive different employer obligations than older workers (Schein, 1978; Van der Heijden et al., 2008). Moreover, older workers are expected to show different reactions from younger workers to situations where the employer fails to fulfill its obligations (Farr & Ringseis, 2002; Zhao, Wayne, Glibkowski, & Bravo, 2007). However, these propositions have not been empirically investigated thus far. Therefore, the current thesis focuses on the role of age in the relationships between employees and their organizations (Van der Heijden et al., 2008) by investigating psychological contracts of employees with their organizations (Rousseau, 1995). The psychological contract describes the mutual obligations between the employee and the organization. In case the employer does not fulfill its obligations, employees perceive contract breach (Conway & Briner, 2005). Until now,

very few studies have been conducted on the role of age in psychological contracts, and how age modifies the relations between contract breaches and work outcomes.

This thesis therefore aims to examine the moderating influence of age in the relations between contract breach and affective as well as behavioral outcomes. First, by meta-analyzing studies on the relations between contract breach and job attitudes, an overview of psychological contract research is given. Through this overview of the current state of psychological contract research, four unresolved issues are identified that will be investigated in this thesis. The four issues are specifications within the context of the main topic of the thesis (relations between age and the psychological contract) and concern: 1) how age influences the relations between psychological contract breach and work outcomes, 2) how age is related to psychological contract content, 3) whether reciprocity in psychological contracts differ with age, and 4) how interactions between long-term relationships and short-term relationships between employee and organization differ with age. First the main concepts psychological contracts and age are discussed, and subsequently the four unresolved issues of previous research are addressed.

1.2 The Psychological Contract

The psychological contract was conceptualized by Rousseau (1995, p.9) as “individual beliefs, shaped by the organization, regarding terms of an exchange agreement between individuals and their organization.” Terms of an individual’s psychological contract include that person’s understandings of his or her own as well as the employer’s obligations (Dabos & Rousseau, 2004; Rousseau, 1995). The psychological contract has been subject to debate (e.g. Arnold, 1996; Guest, 1998a,b; Rousseau, 1998). For instance, it has been debated whether the psychological contract is about obligations, expectations, beliefs, promises, or perceptions (Guest, 1998a). To provide conceptual clarity in this thesis, we follow the conceptualization of Rousseau (1995), which was further developed by Conway and Briner (2005). Conway and Briner (2005), in their book on the psychological contract, list nine crucial elements of the psychological contract, which are followed throughout this thesis. The nine elements are:

- The psychological contract consists of employees’ *beliefs* about
- promises and obligations.
- The psychological contract consists of both implicit and explicit obligations.
- The psychological contract is subjective in nature; that is, it exists in the ‘eye of the beholder’. This means that the psychological contract is investigated as it is perceived by employees.

- The psychological contract is based on *perceived* agreement rather than actual agreement between employee and organization.
- The psychological contract is about *exchange* between two parties.
- The psychological contract is the *entire* set of beliefs regarding the exchange relationships, and therefore much broader than a legal or employment contract.
- The psychological contract is an *ongoing* exchange, which is characterized by repeated cycles of each party fulfilling promises to one another.
- There are two parties involved: the employee and the organization.
- The psychological contract is shaped by the organization. This means that even though employees may have expectations stemming from previous jobs, the beliefs constituting the psychological contract must originate from or shaped by the current organization.

1.2.1 Fulfillment, Breach, and Violation

Psychological contract breach occurs when the employee perceives that the organization has failed to meet its obligations towards the employee (Conway & Briner, 2005; Rousseau, 1995). Breach is a cognitive experience where employees form judgments regarding the level of psychological contract fulfillment. Contract fulfillment is the opposite of contract breach; a fulfilled psychological contract indicates absence of contract breach. Morrison and Robinson (1997) further distinguished cognitions of contract breach from affective feelings of contract violation. Psychological contract violation refers to the emotional and affective state following the belief that the organization has failed to fulfill the psychological contract (Morrison & Robinson, 1997). These include feelings of frustration, anger, and betrayal (Robinson & Morrison, 2000). Breach and violation are correlated but previous studies have shown statistical evidence for the conceptual distinction (Robinson & Morrison, 2000; Zhao et al., 2007). Contract breach and violation both have a negative influence on the work process. These negative influences can result in an increase of the number of leaving employees, a higher staff absence and a reduced loyalty to the organization (Turnley & Feldman, 2000). However, recently authors have proposed that these relations are influenced by demographic differences such as age (Farr & Ringseis, 2002). In the following section, the concept of age is discusses in greater detail.

1.3 The Concept of Age

According to lifespan theory, human development is associated with both gains and losses (Baltes & Baltes, 1990; Carstensen, Isaacowitz, & Charles, 1999; Ebner, Freund, & Baltes, 2006). More specifically, as people grow older, their health and biological abilities generally decrease, whereas knowledge and experience will generally increase (Kanfer & Ackerman, 2004). In fact, age is a proxy for several changes people experience throughout their lives (Kooij, De Lange, Jansen, & Dikkers, 2008; Sterns & Miklos, 1995). For instance, age is related to time spent within the organization and with increasing age, people reach different life stages. The current thesis focuses on the role of chronological age, and psychological consequences of aging (e.g., change in life goals one pursues) on the psychological contract are investigated.

Two dominant theories in the field of research on adult development are integrated in the current thesis: selective optimization with compensation theory (SOC; Baltes & Baltes, 1990; Baltes, Staudinger, & Linbenberger, 1999), and socioemotional selectivity theory (SST; Carstensen, Fung, & Charles, 2003; Carstensen et al., 1999; Löckenhoff & Carstensen, 2004). SOC proposes that the aging process is characterized by losses as well as gains (Baltes et al., 1999). While biological abilities decrease, knowledge and experience increase. Due to these changes, people change the goals they pursue in life. While younger people have a long and unknown future, they focus on maximizing growth (Ebner et al., 2006). Older people, because of decreasing biological abilities, focus on prevention of losses and maintenance of current functioning. Thus, younger people prepare for a long and unknown future by seeking out learning opportunities and maximization of growth, whereas older people are more concerned with their present level of functioning, and hence focus on existing relationships with others, and maintenance of the current status and well-being.

According to SST, when people become older, the feeling that ‘time is running out’ becomes more salient. Older people describe their future as limited, and they realize that they have not much time left to pursue their goals (Carstensen et al., 1999). While younger people have the feeling that they have an unlimited future, older people increasingly focus on the present. As a consequence, older people tend to prioritize existing relationships over establishing new relationships with other people. Their goals become increasingly emotional-driven whereas the goals of younger people are primarily knowledge-driven (Löckenhoff & Carstensen, 2004).

Furthermore, SST proposes that older people are better in regulating their emotions (Carstensen et al., 2003). Due to their experience in life and better adaptive problem-solving

skills, older people are quicker in returning to positive moods after negative events than younger people. Moreover, older adults have greater emotional control (Löckenhoff & Carstensen, 2004).

Until now, very few studies have focused on the differences between younger and older employees in their psychological contracts. In fact, many of the studies on psychological contracts have been carried out among MBA-graduates (Turnley & Feldman, 2000), and therefore cannot be generalized to the whole working population or to older workers. It is likely that the content of psychological contracts and the process that underlie how psychological contracts influence attitudes and behaviors (i.e., reactions to contract breaches) differ with age. The abovementioned theoretical insights from lifespan psychological theories are used to explain these age-related differences in psychological contracts.

1.4 Key Issues of the Thesis

The current thesis addresses four key issues regarding research on the role of age within psychological contracts of employees with their organizations. Below, each of the key issues is discussed in greater detail and subsequently, a number of methodological issues in psychological contract research will be addressed, referring to longitudinal research and the inclusion of older workers in studies.

1.4.1 The Influence of Age on the Relations between Contract Breach and Work Outcomes

Previous research has shown that psychological contract breach is related to a number of work outcomes, including affects, job attitudes, and work behaviors (Zhao et al., 2007). These relations have been explained by social exchange theory (Blau, 1964) and affective events theory (Weiss & Cropanzano, 1996). According to social exchange theory, people engage in interactions with other people because they are motivated by expectations of receiving inducements in return from the other party (Blau, 1964; Gouldner, 1960). Social exchange involves series of interactions (such as incentives from the employer and contributions from the employee) between two parties (Cropanzano & Mitchell, 2005). Each party acts according to the norm that the other party will reciprocate such actions, creating mutual obligations over time. If one party does not reciprocate, an imbalance is perceived between the contributions of the two parties (Cropanzano & Mitchell, 2005). If employees perceive that their employer has not reciprocated their contributions, they will respond with emotional reactions such as anger and frustration. Furthermore, they may restore the balance in social exchanges by lowering their trust, job satisfaction, and commitment (Taylor & Tekleab, 2004). According to

Taylor and Tekleab (2004), social exchanges and reciprocity play a critical role in the psychological contract. Not receiving anything in return for contributions to the organization will therefore be perceived as a negative event. Affective events theory (Weiss & Cropanzano, 1996) explains why negative events relate to attitudes and behaviors.

According to affective events theory, people respond to events that happen at the workplace (Weiss & Cropanzano, 1996). Negative events, such as psychological contract breach, elicit affective reactions, including feelings of frustration and anger, which color the one's job attitudes. Negative events have an impact on job attitudes and behaviors through the negative emotions they elicit that influence perceptions one has of the job. In line with affective events theory, contract breaches lead to changes in job attitudes (e.g., job satisfaction, organizational commitment), behavioral intentions (e.g., intention to leave the organization), and behaviors (e.g. performance; Weiss & Cropanzano, 1996). Previous studies have shown that psychological contract breach is indeed related to decreased trust (Robinson, 1996), job satisfaction (Bunderson, 2001), and affective commitment (Coyle-Shapiro & Kessler, 2000). However, these relations are assumed to be contingent; researchers have pointed to individual differences, including employee age, as possible moderators of these relationships (Zhao et al., 2007; Turnley & Feldman, 1999). To explain why older workers differ from younger workers in their reactions to psychological contract breaches, theoretical insights from lifespan psychology are used.

Applied to the employment situation, selective optimization theory (Baltes & Baltes, 1990; Ebner et al., 2006) and socioemotional selectivity theory (Carstensen et al., 1999) provide for explanations of relations between age and attitudes and behaviors at the workplace. Since older workers pursue different goals in their work than younger workers, they may establish a different psychological contract with their organizations than younger workers. Younger workers will primarily seek for economic gains and developmental opportunities that enhance learning and growth in their organization and career. Older workers, however, will focus primarily on maintaining their current status and their socio-emotional relationship with the organization (Carstensen et al., 1999).

Negative events, such as psychological contract breaches, are expected to have different effects on outcomes for younger workers than for older workers (Weiss & Cropanzano, 1996). Due to their better emotion regulation and their increased focus on their relationships with the organization, as assumed by socioemotional selectivity theory, older workers are expected to react less intensely to contract breaches than younger workers (Carstensen et al., 1999,

2003). Therefore first key issue that will be addressed is whether reactions to psychological contract breaches differ between younger and older workers.

1.4.2 *The Relation of Age with Psychological Contract Content*

Next to a moderating effect of age, researchers have also pointed to direct effects of age on perceptions of the psychological contract. Many researchers have investigated the psychological contract as a single construct and have suggested that employees have a psychological contract with their organization that is one-dimensional (Zhao et al., 2007). However, when we want to investigate age-related differences in the content of the psychological contract, multiple dimensions of the contract should be distinguished (Schalk, 2004; Van der Heijden et al., 2008). Recently, researchers have showed that the psychological contract indeed is multidimensional (De Vos, Buyens, & Schalk, 2003, 2005). For instance, Rousseau (1995) introduced specific contract types, including transactional and relational contracts. These contract types describe the nature of the contract; however, they do not specify the content of the contract, that is, which specific mutual obligations are exchanged between the employer and the employee (Bowen & Ostroff, 2004). A review of De Vos and colleagues (2005) showed that five dimensions are prevalent in classifications of psychological contract content namely *career development*, *job content*, *financial rewards*, *social atmosphere*, and *respect for private life*. However, these classifications are criticized for being empirically driven rather than theory-based (Guest, 1998; Taylor & Tekleab, 2004). Therefore, in the present thesis psychological contract content is distinguished based on existing theoretical perspectives (Bowen & Ostroff, 2004; Foa, 1971). Based on this, a number of theory-based psychological contract dimensions are distinguished. Using lifespan psychology, a distinction is made between socio-emotional employer obligations and developmental employer obligations (Chapter 3; Ebner et al., 2006; Freund, 2006). Furthermore, in his classification of resources people exchange in social interactions, Foa (1971) distinguished six types of resources, which are in this thesis combined into several types of employer and employee obligations. Based on insights from lifespan psychology, these obligations are assumed to differ in saliency for younger and older workers (Ebner et al., 2006; Freund, 2006). The key issue that will be addressed is: which contract dimensions can be theoretically distinguished within the psychological contract and how is age related to these dimensions?

1.4.3 Age Differences in Reciprocity: Employer and Employee Obligations in the Psychological Contract

The third key issue of the thesis concerns investigation of reciprocity within the psychological contract. As Rousseau (1995) mentioned, the psychological contract is about the mutual obligations between the employer and employee. Although many studies focus on employer obligations and fulfillment (Zhao et al., 2007), researchers have stressed the importance of reciprocity in psychological contracts, where employer and employee obligations are assumed to be interrelated. Researchers have indeed found positive relations between fulfillment of employer obligations and felt employee obligations (Coyle-Shapiro & Kessler, 2002; Dabos & Rousseau, 2004). However, there have been no studies conducted on age differences in the relations between employer side of the contract and employee side of the contract. It can be argued that older workers' felt obligations towards the organization are enhanced by different organizational inducements than younger workers' felt obligations (Ebner et al., 2006; Freund, 2006). Therefore, the third key issue concerns age differences in the reciprocal nature of the psychological contract. More specifically, it is investigated how age influence the relationships between employer side of the psychological contract and employee side of the psychological contract.

1.4.4 Age Differences in Long Term Relationships vs. Short Term Relationships

Employees may have a long-term relationship with the organization that is based on trust (Dirks & Ferrin, 2002) and high social exchanges (Shore, Tetrick, Lynch, & Barksdale, 2006). Trust and social exchange relationship refer to a long-term relationship between the employee and the organization because it takes time to develop, and therefore is relatively stable over time (Shore et al., 2006).

Psychological contract breaches refer to specific events where the organization fails to fulfill the psychological contract with the employee (Morrison & Robinson, 1997). Contract breach is a disruption in the long-term relationship an employee has with his or her organization. Previous research has shown that contract breaches interact with how the employee perceives the long-term relationship with the organization (Robinson, 1996). For instance, employees with high trust in the organization are more likely to subscribe contract breaches to factors outside the organization's responsibility rather than to deliberate action of the organization (Robinson, 1996). Therefore, it is important not only to take specific events that happen between employee and organization into account, but also how the long-term relationship between employee and organization interact with these events.

Moreover, it is argued that the long-term relationship with the organization is more important for older workers (Carstensen et al., 1999; Rousseau & Parks, 1993). However, there has not been any investigation on whether age and the long-term relationship one has with the organization modify the relationships of short-term events, and in particular contract breaches, with work outcomes. The current thesis investigates these possible attenuating and accentuating effects of the long-term relationship, and also how these buffer effects may differ between younger and older workers. The key issue that will be addressed is how the long-term relationship with the organization interact with contract breaches (as short-term events) in predicting work outcomes, and whether this differs between younger and older workers. Table 1 presents the four key issues of the thesis, the research questions, hypotheses, and chapters in which the key issues will be addressed.

1.4.5 Additional Issues of this Thesis

Next to the four key issues in this thesis, there are two other, primarily, methodological issues that will be addressed in this thesis. These are paucity of longitudinal research and the inclusion of older workers in psychological contract studies (Taylor & Tekleab, 2004; Van der Heijden et al., 2008). Researchers have criticized that there are very few longitudinal studies on psychological contracts (Conway & Briner, 2005; Zhao et al., 2007), because most studies are conducted using a cross-sectional design. Therefore, causal inferences are hard to make with respect to the relations between psychological contracts and outcomes. For instance, it might be that previously held beliefs regarding psychological contract obligations influence how contract breach are evaluated (Morrison & Robinson, 1997; Zhao, 2005).

Theoretically, employer obligations precede employer fulfillment. Employers make promises to their employees, which they may fulfill (or break) later in time. Contract breaches have effects on work outcomes later in time (e.g., one year later), but previously held beliefs about the employer as well may influence contract breaches evaluations (Morrison & Robinson, 1997; Robinson, 1996). For instance, the level of promised obligations by the employer may affect to which extent contract breaches are evaluated as deliberate intention of the employer, or as something happened beyond the influence of the employer (Conway & Briner, 2005). The question is to which extent these effects occur within a longitudinal context. Therefore, longitudinal research is needed to investigate how psychological contracts influence work attitudes and behaviors across time. This thesis incorporates two longitudinal field studies as well as a meta-analysis including longitudinal studies (Chapter 2, 3, and 5).

The second methodological issue is the scarcity of older workers in previous studies on psychological contracts. Most studies on psychological contracts have been conducted among MBA-students, who are on average young people (Turnley & Feldman, 2000). Consequently, it is not clear whether psychological contracts are experienced equally among younger workers and older workers. In other words, research is needed among a large age range, in order to compare the processes that lead from psychological contract evaluations to work attitudes and behaviors among workers of different ages. This thesis responds to the lack of research among older workers, by meta-analyzing current research (Chapter 2), by including studies among a representative sample of the Dutch working population (Chapter 5), and by investigating both pre-retirement (younger than 65 years of age) and post-retirement workers (65 years and older; Chapter 4).

1.5 Thesis Outline

The four key issues will be investigated in chapters 2 to 6. In chapter 2, a meta-analysis is conducted on the moderating role of employee age on the relations between psychological contract breach and three job attitudes: trust in the employer, job satisfaction, and affective commitment. In line with previous studies, it is expected that psychological contract breach is negatively related to job attitudes; when employers do not fulfill their obligations, employees respond by lowering their trust, satisfaction and commitment. However, based on lifespan psychology, it was expected that age would moderate these relations. Older workers have a greater focus on their relationship with the organization, and are better in regulating emotions after negative events (Carstensen et al., 1999, 2003), and therefore are expected to react less intensely to contract breaches than younger workers. By means of a meta-analysis of 60 studies, the hypotheses are tested.

In chapter 3 the associations between age and types of psychological contract are investigated by means of a longitudinal dataset of employees within a Dutch division of a multinational insurance company. In this chapter, it is proposed that younger workers value other resources than older workers. In general, younger workers primarily focus on acquisition of development, whereas older workers focus on maintenance of current status and functioning and their relationship with the organization (Ebner et al., 2006; Freund, 2006). In their psychological contracts with their organizations, workers seek employer obligations that fulfill their needs (Rousseau, 1995). Therefore, it is expected that developmental aspects in psychological contracts will have stronger effects among younger workers on work outcomes,

Table 1.1: Key Issues, Research Questions, Hypotheses, and Chapters in which the Key Issues are Addressed

Key Issue	Research Questions	Hypothesis	Design	Chapter
1. Relations Between Contract Breach and Work Outcomes	How does age modify the relations between psychological contract breach and work outcomes?	Age moderates the relation between psychological contract breach positively (h2, C2). The relations between socio-emotional psychological contract and work-related outcomes are stronger for older worker (h3, C3). The relations between developmental psychological contract and work-related outcomes are stronger for younger workers (h4, C3). Age moderates the relation between procedural justice and turnover, such that that the relation is stronger for younger workers (h2, C5).	Meta-analysis Cross-sectional field Study	2, 3, 5
2. Psychological Contract Content	How is age related to psychological contract dimensions?	Age is positively related to socio-emotional obligations (h1, C3) and negatively to developmental obligations (h2, C3).	Longitudinal field study	3
3. Reciprocity in Psychological Contracts	How does age influence the relation between employer side of the psychological contract and employee side of the psychological contract?	The relations between employer economic psychological contract and employee obligations are stronger for younger workers (h1, C4). The relations between employer social psychological contract and employee obligations are stronger for older workers (h2, C4).	Cross-sectional field study	4

Key Issue	Research Questions	Hypothesis	Design	Chapter
		The relations between employer developmental psychological contract and employee obligations are stronger for younger workers (h3, C4).		
4. Long Term Relation vs. Short Term Relation	How does the long-term relationship with the organization modify the relations between psychological contract breach and work outcomes? Does this differ between younger and older workers?	<p>Trust moderates the relation between procedural justice and turnover, such that that the relation is stronger for those with low trust (h3, C5).</p> <p>Trust and age moderate the relation between procedural justice and turnover, such that that the relation is non-significant for older workers with high trust and negative for younger workers and older workers with low trust (h4, C5).</p> <p>The relation between contract breach and work performance is negatively moderated by social exchange relationship (h2, C6), POS (h3, C6), and trust (h4, C6).</p>	<p>Cross-sectional field study</p> <p>Longitudinal field study</p>	5, 6

and socio-emotional aspects in psychological contracts will have stronger effects among older workers on work outcomes.

Chapter 4 investigates reciprocity in psychological contracts. Where chapters 2 and 3 are based on employee's attitudes and behaviors in relation to employer psychological contracts, the fourth chapter focuses on how employer psychological contracts are related to employee obligations. Previous studies have shown that employer obligations and fulfillments have a positive effect on perceptions of employee obligations, in line with the norm of reciprocity (Coyle-Shapiro & Kessler, 2002; Dabos & Rousseau, 2004). However, so far research has not investigated specific patterns of reciprocity between several types of employer and employee obligations. In this chapter, specific patterns in reciprocity are investigated as well as age-related differences in these patterns. In a sample of temporary workers with an age range of 22-79 years, it was tested whether younger workers react more strongly to economic and developmental contracts, and whether older workers react more strongly to socio-emotional contracts with the organization.

The fifth chapter is a three-wave longitudinal large-scale study where the relations between a specific form of psychological contract breach, being procedural justice breach, and turnover are investigated. It is hypothesized that prior trust and age buffer the negative impact of procedural justice on turnover. Younger workers are expected to leave the organization when the procedures in the organizations are unfair. However, older workers have a greater tendency to focus on their existing relationship with the organization, and if they have a high level of trust in their employer, they are expected to ignore the unfair treatment, and remain with their organizations. The study is conducted among a largely representative sample of the Dutch working population of 1597 employees who filled out a questionnaire at three times, with time lags of one year.

Chapter 6 focuses on the interactions between long-term relationships between employee and organization and psychological contract breach. Whereas psychological contract breach refers to short-term events that happen at work, this may conflict with the long-term relationship one has with the organization. Employees engage in a social exchange relationship with their organization, receive support from their organization, and both parties build mutual trust. Researchers have argued that such a long-term relationship may buffer the negative effects of psychological contract breaches on work outcomes (Morrison & Robinson, 1997). However, this notion has received mixed support (Coyle-Shapiro, 2002; Restubog & Bordia, 2006). Researchers have also argued that contract breach is such a profound damage to the employment relationship, that especially those with strong relationships with their

organization may feel betrayed by their organization after a contract breach. Consequently they react with stronger decreases in work performance. This chapter investigates the moderating roles of social exchanges (social exchange relationship, perceived organizational support, and trust) on the relations between contract breach and work performance. The study is conducted among a sample of American service sector employees.

Chapter 7 discusses the findings of the thesis, and concludes how these findings have an impact on theory as well as practice. Managers and organizations are advised how to maintain the psychological contract with their employees, and how they can deal with the diverse age groups in their organizations. Moreover, future research suggestions are presented.

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Chapter 2

Psychological Contract Breach and Job Attitudes: A Meta-Analysis of Age as a Moderator

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Abstract

The aim of this study was to examine the influence of age in the relation between psychological contract breach and the development of job attitudes. Based on affective events, social exchange, and lifespan theory, we hypothesized that 1) psychological contract breach would be related negatively to job attitudes, and 2) that age would moderate these relations. The hypotheses were tested by means of a meta-analysis of $k = 60$ studies, using Weighted Least Squares estimation. Our results supported both hypotheses for the outcomes trust and organizational commitment. However, for job satisfaction the moderating influence of age was in the unexpected direction. The relations between contract breach and trust and organizational commitment were indeed stronger for younger workers, whereas the relation between contract breach and job satisfaction was stronger for older workers. The implications are discussed, and a research agenda is presented.

2.1 Introduction

The proportion of the workforce aged over 45 is increasing rapidly in North America and Europe (Caldwell, Farmer, & Fedor, 2008; European Commission, 2005; Kanfer & Ackerman, 2004). As a consequence, organizations will have to employ more older workers, and hence adapt organizational policies to the needs and abilities of older workers. It is therefore not surprising that age has become an important factor in organizational research (Greller & Stroh, 1995; Kanfer & Ackerman, 2004). However, little research has been conducted on the role of age in the employment relationship (Farr & Ringseis, 2002; Hall & Mirvis, 1995; Kanfer & Ackerman, 2004).

An important constitutive element of the employment relationship is the psychological contract between employees and their organizations (Rousseau, 1995). It has been suggested that psychological contracts affect job attitudes (such as job satisfaction) differently for older workers than for younger workers (Farr & Ringseis, 2002). Because older people, in general, have better emotion regulation skills (Löckenhoff & Carstensen, 2004), and having build up more stable psychological contracts (Rousseau, 2001), they will react differently than younger people to fulfillment or breach of the psychological contract.

A recent meta-analysis revealed significant relations between psychological contract breach and work-related outcomes (Zhao, Wayne, Glibkowski, & Bravo, 2007), building on the affective event theory (Weiss & Cropanzano, 1996). Affective events theory proposes that events at the workplace shape emotions, which at their turn influence job attitudes and behaviors. Zhao et al. (2007) showed that there may be moderators in the relations between contract breach and outcomes, and examined as potential moderators two types of breach measure, namely type and content of contract breach. Researchers have also mentioned other moderators, such as the factor age (Farr & Ringseis, 2002). Farr and Ringseis (2002) stated that older workers may react differently to psychological contract breach than younger workers. Unfortunately, studies examining relations between psychological contracts and outcomes have not yet explicitly investigated the influence of the factor aging at work. Therefore, the current meta-analysis investigates the moderating role of age in the relations between psychological contracts and three job attitudes (trust, job satisfaction, and affective commitment). While previous meta-analytic studies have been criticized because they were often data-driven rather than theory-based (Hunter & Schmidt, 2004), this study employs a theoretical framework, based on earlier insights of affective events, social exchange, and lifespan theories of aging. To explain why events happening at the workplace (such as psychological contract breach) lead to attitudes and behaviors, affective events theory is

applied in the psychological contract framework (Weiss & Cropanzano, 1996; Zhao et al., 2007). Furthermore, we employ social exchange theory (Cropanzano & Mitchell, 2005) to explain why events may be evaluated as positive or negative by employees. Finally, we use lifespan psychology (Carstensen, Fung, & Charles, 1999; Carstensen, Isaacowitz, & Charles, 2003) to explain why older people react differently from younger people to psychological contract breach.

2.1.1 The Psychological Contract

Rousseau (1989, 1995) defined the psychological contract as the employees' beliefs concerning mutual obligations between the employee and the organization (see for a comprehensive review of the concept, Conway & Briner, 2005). When the organization does not fulfill its obligations, employees may experience psychological contract breach. Contract breach is defined as the cognitions of an employee that the organization has failed to deliver its obligations (Morrison & Robinson, 1997). An affective reaction may follow, including feelings of anger and betrayal (i.e. contract violation; Robinson & Morrison, 2000). The current study follows this distinction between breach and violation, as made by Morrison and Robinson (1997). Breach refers to the cognition that the organization has failed to fulfill its obligations, whereas feelings of violations refer to the affects following breach.

2.1.2 Effects of Psychological Contracts on Job Attitudes

Previous research on psychological contracts has indicated that contract breach has a profound impact on job attitudes (Conway & Briner, 2005; Zhao et al., 2007). Studying job attitudes is important because they are predictors of key behaviors as job performance and withdrawal (Harrison, Newman, & Roth, 2006). When organizations break psychological contracts, employees' trust in their organization is harmed. Furthermore, organizational failure to deliver its obligations is also associated with a decrease of job satisfaction and commitment to the organization. Zhao et al. (2007), in their recent meta-analysis on the relations between psychological contract breach and outcomes, employed affective events theory to explain the relations between psychological contracts and attitudes and behaviors. According to affective events theory, a negative event at the workplace causes negative emotional reactions, such as anger or frustration (Morrison & Robinson, 1997; Weiss & Cropanzano, 1996). These emotions color the cognitive evaluations of one's job, in such a way that experience of negative emotions will cause more negative job attitudes (Thoresen, Kaplan, Barsky, Warren, & de Chermont, 2003). Previous research has confirmed this link between negative emotions

and job attitudes by showing that negative emotions are related to decreases in trust (Dunn & Schweitzer, 2005), job satisfaction (Judge & Ilies, 2004), and commitment (Thoresen et al., 2003). On the other hand, positive emotions will color evaluations of the job in a positive way, such that people experience higher trust, satisfaction, and commitment. Zhao et al. (2007) argue that in particular psychological contract breach is perceived as such a negative event. Thus, contract breach leads to affective reactions, which in turn contribute to the establishment of job attitudes. However, it is not always clear why and how employees come to perceive something as a negative event. Social exchange theory provides an explanatory framework of the processes that lead employees to perceive a negative event, and hence, psychological contract breach.

According to social exchange theory, people engage in interactions with other people because they are motivated by the expectations of receiving inducements in return from the other party (Blau, 1964; Gouldner, 1960). Social exchange involves series of interactions (such as incentives from the employer and contributions from the employee) between two parties (Cropanzano & Mitchell, 2005). Each party acts according to the norm that the other party will reciprocate such actions, creating mutual obligations over time. If one party does not reciprocate, an imbalance is created between the contributions of the two parties (Cropanzano & Mitchell, 2005). If employees perceive that their employer has not reciprocated their contributions, they will respond with emotional reactions such as anger and frustration, in line with affective events theory. Furthermore, they may restore the balance in social exchanges by lowering their trust, job satisfaction, and commitment (Taylor & Tekleab, 2004). According to Taylor and Tekleab (2004), social exchanges and reciprocity play a critical role in the psychological contract because mutual obligations, as social exchanges, form a psychological contract. Shore and Barksdale (1998) found that imbalances between employee and employer obligations resulted in a lower affective commitment than in a balanced situation, especially when it involved mutually high obligations.

Not receiving anything in return for contributions to the organization will therefore be perceived as a negative event. Subsequently, and in accordance with affective events theory (Blau, 1964; Taylor & Tekleab, 2004), contract breach as an imbalance in social exchange will affect job attitudes. As a result, employees respond to contract breach by lowering their trust, job satisfaction, and commitment to the organization. To explain why older workers react differently to contract breach than younger workers, we employ relevant insights of previous lifespan psychological theories (e.g., Carstensen et al., 1999, 2003; Kanfer & Ackerman, 2004).

2.1.3 The Moderating Role of Age between Contract Breach and Job Attitudes

Although dispositional differences were mentioned as moderators in affective events theory, until now they have been scarcely tested empirically. Moreover, there are no studies that focused on how the relations between psychological contracts and job attitudes change over the lifespan (Guest, 2004; Schalk, 2004).

According to lifespan theory, aging is generally associated with both gains and losses (Baltes & Baltes, 1990; Kanfer & Ackerman, 2004). When people grow older health and biological abilities decrease, whereas knowledge and experience will generally increase. Moreover, previous research has shown that as people grow older, their future time perspective decrease and the feeling that time is running out becomes more salient (Lang & Carstensen, 2002). A number of age-related mechanisms that are of influence on the relations between psychological contracts and job attitudes is addressed.

According to Carstensen et al. (1999), the perception of approaching retirement may be characterized by an effort of making experiences more positive. Younger workers may be less concerned with how their employment relationship ends, since they may have opportunities to work in other organizations, than older workers who tend to have fewer options for job transfer (Hedge, Borman, & Lammlein, 2006). Moreover, a perception of older workers, that their current employer will be their last, makes them feel more positive about the employer (Carstensen et al., 1999, 2003). Longitudinal research supports this idea of ‘emotional selectivity’ by finding that older people report less negative affectivity than younger people, whereas positive affectivity remains stable across the lifespan (Charles, Reynolds, & Gatz, 2001).

Moreover, there is accumulating evidence that older people become better in regulating their emotions after negative events than younger people (Carstensen et al., 2003; Löckenhoff & Carstensen, 2004). An explanation for this is that older and more experienced workers have relatively more stable psychological contracts (Rousseau, 2001). Psychological contracts form mental models, or abstractions of complex concepts such as employment relationships, to help understand and make sense of the world employees live in (Rousseau, 2001). Over time, employees develop an increasingly stable psychological contract, which is more resistant to change than those of younger and more inexperienced workers. Changes in the employment situation, such as contract breaches, may have a more intense impact on young people given their less stable mental models of their psychological contract than older workers (Rousseau, 2001).

Finally, older workers may have different types of psychological contracts than younger workers (Anderson & Schalk, 1998; Schalk, 2004). As a consequence of environmental and personal changes, psychological contracts will develop and change over time (De Vos, Buyens, & Schalk, 2003). Young people often enter the workforce with high expectations, but after time they adapt their expectations according to reality (De Vos et al., 2003; Thomas & Anderson, 1998). Older workers may have more realistic expectations about what to receive than younger workers (Thomas & Anderson, 1998). Therefore, a psychological contract breach may be less harmful to older workers than to younger workers.

In sum, according to social exchange theory, organizational failure to reciprocate employee contributions may be perceived as a negative event (Cropanzano & Mitchell, 2005). Affective events theory shows that negative events at the workplace are related to decreases in trust, job satisfaction, and commitment (Zhao et al., 2007). Finally, lifespan psychology explains that older workers are more focused on positive experiences, have better emotion regulation, and have more realistic expectations than younger workers (Carstensen et al., 1999). Therefore, older workers may react less intense to psychological contract breach than younger workers.

It is expected that contract breach will be related negatively to trust, job satisfaction, and commitment. This expectation is based on findings of a recent meta-analysis of Zhao et al. (2007). Moreover, it is expected that older people's attitudes will be less affected by contract breaches than younger people. More specifically, in this study we will address the following hypotheses:

H1: Psychological contract breach relates negatively to trust, job satisfaction, and commitment.

H2: Age moderates the relations between psychological contract breach and job attitudes, such that the attitudes of older workers are less affected by contract breach.

2.2 Method

2.2.1 Search Strategy

To find relevant articles about psychological contracts, several search strategies were conducted. First, the ABI-Inform, Psycinfo, and Medline databases (1989-2007) were searched using key-terms such as psychological contract(s), contract breach, and contract fulfillment, added by the outcomes contract trust, job satisfaction, and organizational commitment. Databases were searched after 1989 (the year Rousseau redefined the psychological contract; Rousseau, 1989). In addition, the reference lists of several review and other articles about the psychological contract were scrutinized (e.g., Anderson & Schalk, 1998; Shore et al., 2004), as

well as the reference lists from articles which were obtained from the database searches. Furthermore, electronic searches were conducted among a wide range of journals, including the *Journal of Vocational Behavior*, *Journal of Applied Psychology*, and *Academy of Management Journal*.

Speakers at the Annual Academy of Management Conferences (1999 to 2006) as well as the Society of Industrial and Organizational Psychology conferences (SIOP; 1999-2007) who presented papers about psychological contracts were emailed and asked to send their papers. To obtain as many unpublished studies as possible and to avoid publication bias (Hunter & Schmidt, 2004), authors of the published articles were mailed and asked whether they had, or knew of, relevant unpublished studies. In total, these searches uncovered 352 articles and studies on psychological contracts. Only studies including employees working in organizations were taken into account since the psychological contract describes mutual obligations between employees and their organizations (Rousseau, 1995). There were also a number of studies conducted with samples of students working in organizations (e.g. Robinson & Rousseau, 1994). Provided these studies focused on their psychological contracts with their employers, these studies were included in the meta-analysis. Subsequently, theoretical papers, qualitative studies, studies which were not in English or Dutch, and studies that did not investigate the variables relevant to the current study were rejected.

An assumption in meta-analysis is that samples are independent (Hunter & Schmidt, 2004). Where more than one article had been published using the same respondent database, and investigated the same relationships, only the most recent publication was used for the analysis. The final dataset consisted of 60 studies, with 62 samples.

2.2.2 Measures

Where researchers had measured contract breach but labeled it as a contract violation, we treated it as a psychological contract breach. Further, many researchers have measured fulfillment (by asking employees to what extent organizations have fulfilled their obligations). In line with the method suggested by Zhao et al. (2007), the signs of the correlations between fulfillment job attitudes were reversed to indicate psychological contract breach. In studies where fulfillment of a number of obligations were reported rather than a single measure of fulfillment (e.g. Cassar, 2001), the correlations were averaged. Organizational commitment was operationalized as affective organizational commitment (Allen & Meyer, 1993).

2.2.3 Statistical Procedure

The first hypothesis was tested with the formulas of Hunter and Schmidt (2004) and the statistical software of Schmidt and Le (2004). To investigate the second hypothesis, the correlations between contract breach and outcomes were regressed on the mean age of the studies, using Weighted Least Squares estimation (WLS; Steel & Kammeyer-Mueller, 2002; see also Wright & Bonett, 2002). We applied the Fisher Z-transformation to all correlations, in order to investigate the moderating effect of age. The weights were set to $(n_j - 3 \alpha_{xj} \alpha_{yj})$, where n_j is the sample size in sample j , α_{xj} is the reliability of psychological contract breach in sample j , and α_{yj} is the reliability of the outcome measure in sample j , in order to correct for unreliability of the measures (Hunter & Schmidt, 2004). Whenever the reliability of a study was not reported, it was replaced by the mean of the other available reliabilities of the particular correlation. The second hypothesis was tested using SPSS.

Moderator analysis in meta-analysis is mostly conducted using dichotomous or categorical moderators (Steel & Kammeyer-Mueller, 2002). The present meta-analysis, using Weighted Least Squares (WLS) estimation, enables us to test for age as a continuous moderator. Moreover, by using weights in the analyses, we can also correct for differences between samples sizes, as well as unreliability in the variables measured (Hunter & Schmidt, 2004).

Researchers have argued that the effects of employee age on job attitudes may be correlated with effects of time spent within the organization (De Lange et al., 2006; Wright & Bonett, 2002). Cohen (1993) showed the importance of separating age from tenure effects. His meta-analysis on the relations between age, tenure and organizational commitment showed that effects of tenure may be attributed to job and organizational factors, whereas effects of age may be due to external factors. To disentangle age from organizational tenure effects, we will analyze the influence of age and organizational tenure separately, as well as age and organizational tenure simultaneously. Age effects should exist after adding organizational tenure as a moderator in the relation between psychological contract breach and job attitudes (see also Wright & Bonett, 2002). However, due to a small number of available studies, we could not estimate the influence of age and tenure simultaneously as moderators in the relation between breach and trust. Sample characteristics, average age, average tenure, sample size, reliability of psychological contract breach, and the correlations between psychological contract breach and the job attitudes, and their reliabilities are listed in Table 2.1.

Table 2.1: Sample characteristics, average age and tenure, sample size, reliability of contract breach, and Pearson correlations of contract breach with outcomes, and reliabilities of the outcomes

	Authors	Sample	Age	Tenure	N	R _{xx} Breach	Trust		Satisfaction		Commitment	
							<i>r</i>	<i>r_{yy}</i>	<i>r</i>	<i>r_{yy}</i>	<i>r</i>	<i>r_{yy}</i>
1	Agee (2000)	US university employees	--	--	121	.85	-.75	.93	-.74	.84	-.64	.91
2	Bunderson (2001)	US hospital clinicians	45.5	9	167	.76			-.08	.78	-.07	.83
3	Carbery et al. (2003)	Irish hotel managers	30	--	89	.94			-.60	.80	-.48	.59
4	Carvalho et al. (2007)	Portuguese police officers	32	8.7	209	.88			-.28	.75		
5	Cassar (2000)	Maltese public service employees	42	21	132	--	-.17	.71	-.11	.87	-.12	.81
6	Castaing (2005)	French civil service employees	45	18.9	754	.83					-.22	.91
7	Cavanough & Noe (1999)	US managers and professionals	38	--	136	--			-.72	.74		
8	Cheung (2005)	Chinese part-time service employees	33	1	200	.88					-.34	.78
9	Cheung & Chiu (2005)	Chinese manufactory employees	18	1.2	354	.85					-.28	.74
10	Chrobot-Mason (2003)	Minority employees at US university	--	--	88	.88	-.68	.95	-.57	.87	-.50	.85
11	Claes et al. (2002)	Flemish workers	36.52	9.46	596	.86			-.31	.85	-.25	.77
12	Conway & Briner (2002)	S1: UK bank employees	29	6.14	1608	.74			-.51	.83	-.28	.81
		S2: UK supermarket employees	26	2.42	366	.81			-.50	.83	-.36	.78
13	Coyle-Shapiro (2002)	UK public service employees	42.92	10.51	480	.74	-.38	.90				
14	Coyle-Shapiro & Kessler (2000)	UK public service employees	42.4	7.6	6953	.80			-.43	.88	-.27	.90
15	Coyle-Shapiro & Morrow (2006)	European contracted employees	--	6.83	99	.96					-.55	.91
16	De Cuyper & De Witte (2006)	Belgian employees	37	--	538	.80			-.42	.84	-.38	.78

17	De Witte & Van Hecke (2002)	Range of Flemish employees	34	8.14	226	.66			-.41	.78		
18	Deery et al. (2006)	Australian service employees	35.45	7.42	480	.82	-.60	.76				
19	Dulac et al. (2006)	Large Belgian organizations	28	9	159	.89	-.49	.90			-.38	.88
20	Freese et al. (1999)	Dutch home care organization	39.6	8.3	119	.92					-.26	.82
21	Gakovic & Tetrick (2003a)	US university students working in organizations	28	1.82	601	.92					-.47	.83
22	Gakovic & Tetrick (2003b)	US employees from financial corporation	--	--	161	.77			-.55	.74		
23	George (2003)	US research laboratory, computer manufacturer, consumer product retailer	36.2	5.69	256	.84	-.69	.89			-.60	.81
24	Granrose & Baccili (2006)	US aerospace employees	43.35	13.5	145	.79					-.10	.89
25	Gregory et al. (2007)	Canadian nurses	37.4	--	343	.70			-.46	.80	-.55	.92
26	Guest & Clinton (2006)	UK, range of occupations	37	5	642	--	-.62	.91	-.50	.83	-.45	.69
27	Guzzo et al. (1994)	US expatriate managers	42.76	12.63	148	.91					-.27	.86
28	Huiskamp & Schalk (2002)	Range of Dutch occupations	38	9.6	1331	.83					-.30	.82
29	Johnson & O'Leary-Kelly (2003)	US bank employees	35.8	4.37	103	.94			-.59	.88	-.52	.87
30	Kickul (2001)	US MBA-students	29.41	3.86	151	.78					-.28	.85
31	Kickul & Lester (2001)	US MBA students	31.73	3.29	183	.82			-.56	--		
32	Kickul et al. (2004)	Hong Kong bank employees and US MBA-students	33.34	4.83	136	.91			-.35	.86	-.29	.85

	Authors	Sample	Age	Tenure	N	R _{xx} Breach	Trust		Satisfaction		Commitment	
							<i>r</i>	<i>r_{yy}</i>	<i>r</i>	<i>r_{yy}</i>	<i>r</i>	<i>r_{yy}</i>
33	Kickul et al. (2002)	US MBA students, working in changing organizations	33.43	4.22	246	.90			-.45	.86		
34	Kickul & Zaper (2000)	US MBA-students	32.05	5.14	260	.90					-.27	.70
35	Knights & Kennedy (2005)	Australian government employees	47.54	15.44	251	.84			-.77	.87	-.67	.90
36	Lambert et al. (2003)	Student employees	20.5	2..5	213	.70			-.24	.90		
37	Larwood et al. (1998)	US range of occupations	36.2	--	259	.75			-.49	.67		
38	Lee (2005)	IT Singapore expatriates	36.3	--	302	.75			-.12	.90		
39	Lemire & Rouillard (2005)	Canadian civil servants	44.23	12.45	132	--					-.45	.81
40	Lester & Kickul (2001)	US MBA students	27.6	3.4	268	--			-.21	.86		
41	Lester et al. (2002)	US MBA students	32.27	4.34	134	.89					-.60	.87
42	Lo & Aryee (2003)	Chinese MBA-students	--	6.56	152	.86	-.56	.87				
43	Montes & Irving (2005)	US students in work team	20.5	.00	293	.77			-.36	.90		
44	Raja et al. (2004)	Higher level employees in Pakistan	38.81	12.25	197	.79			-.30	.75	-.49	.82
45	Restubog et al. (2006)	Philippines IT employees	--	--	137	.87					-.64	.82
46	Robinson (1995)	US MBA Alumni	30	6.29	126	.85			-.44	.94	-.54	.84
47	Robinson (1996)	US MBA Alumni	--	--	125	.78	-.29	.87				
48	Robinson & Rousseau (1994)	US MBA Alumni	--	--	96	--	-.61	.93	-.61	.92		
49	Rybnikova (2006)	German interim managers	55	--	133	.73			-.32	.69		

50	Shih & Chen (2006)	Taiwanese MBA-graduates	36.6	9.7	485	.87			-.31	.92		
51	Sturges et al. (2005)	UK employees from media company	32.5	2.42	151	.91					-.36	.83
52	Sutton & Griffin (2004)	Australian new professionals	23.2	.75	235	.71			-.57	.84		
53	Tallman (2001)	US new hires in organizations	--	--	63	--	-.44	.62	-.45	.78	-.56	.80
54	Tekleab et al. (2005)	US university employees	47	13.4	191	.83			-.37	.68		
55	Tekleab & Taylor (2003)	US university employees	45	--	130	.81			-.34	.75		
56	Ten Brink et al. (1999)	Dutch employees health care	--	--	527	.93	-.54	.84			-.31	.60
57	Ten Brink et al. (2002)	S1: Dutch rural company	39	--	762	.95	-.58	.77			-.46	.85
		S2: Dutch public sector employees	42	--	74	.84	-.41	.86			-.33	.83
58	Thompson & Heron (2005)	UK, 6 high-technology firms	34.26	7.89	429	.86					-.42	.82
59	Turnley & Feldman (2000)	US managers	35.07	7.41	804	.83			-.56	.70		
60	Yeh (2006)	Taiwanese hospital nurses	27.5	4.5	364	.70					-.30	.83

2.3 Results

2.3.1 Description of the Selected Studies

Of the selected studies, 75% were conducted among employees in organizations, 17% among MBA students (including questions referring to their jobs), and the remaining 8% were conducted among managers. The mean age, weighted by sample size, was 36.15 years (the mean ages of the various studies ranged from 18 to 55 years). Of the total sample, 58% were female. Table 2.1 shows that the correlations between contract breach and trust ranged from -.75 to -.17, the correlation with satisfaction from -.77 to -.08, and with commitment from -.67 to -.07, indicating considerable variation between studies. Therefore it is likely that the relationships are moderated by specific characteristics of the studies (Hunter & Schmidt, 2004).

Reliabilities of the psychological contract breach measures ranged from .66 to .96, the reliability of the trust measures from .62 to .93, of the job satisfaction measure from .67 to .94, and the affective commitment measure from .59 to .92. Tables 2.2 and 2.3 show the results of the meta-analyses.

Table 2.2: Meta-analytic results of relationships between psychological contract breach and outcomes

Outcome						80% Credibility Interval		95% Confidence Interval		Var. expl.
	k	N	mean r	ρ	SD of ρ	Lower	Upper	Lower	Upper	
Trust	15	4800	-.52	-.61	.14	-.79	-.44	-.68	-.54	12.02
Job satisfaction	36	17333	-.43	-.52	.13	-.69	-.35	-.56	-.48	10.30
Commitment	39	19407	-.32	-.39	.12	-.54	-.24	-.43	-.35	14.42

Note. k= number of studies; N= population; mean r = mean uncorrected correlation; ρ = true score correlation; SD of ρ = standard deviation of true score correlation; Var. expl. = percentage of variance in correlations explained by artifacts

In Table 2.2, the following statistics are reported: the number of studies (k), the number of total respondents in the separate meta-analyses (N), the sample size weighted mean observed correlation (r), the true score correlation (ρ), the standard deviation (SD) in ρ , the 80% credibility interval of ρ , the 95% confidence interval of ρ , and the percentage of the variance explained by the artifacts (see Field, 2005; Hunter & Schmidt, 2004).

Table 2.3: Meta-analytic results of the moderating role of age in the relationships between psychological contract breach and job attitudes

	Correlation breach - trust		Correlation breach - job satisfaction		Correlation breach – affective commitment	
	β	SE	β	SE	β	SE
Age	.50***	.01	-.20*	.00	.23**	.00
Variance explained	.25		.04		.05	
No. of samples (N)	8 (2,985)		22 (12,708)		28 (15,756)	

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

2.3.2 H1: Contract Breach Relates Negatively to Job Attitudes

The first hypothesis was that psychological contract breach would be related negatively to trust, job satisfaction, and affective commitment. As can be observed from Table 2.2, psychological contract breach is found to be significantly related to trust (true score correlation $\rho = -.61$), job satisfaction ($\rho = -.52$), and affective commitment ($\rho = -.39$). None of the confidence intervals include zero, meaning that all correlations differ significantly from zero. Thus, the first hypothesis is supported. Psychological contract breach is related negatively to trust, job satisfaction, and affective commitment.

2.3.3 H2: Age Moderates the Relations between Contract Breach and Job Attitudes

The second hypothesis was that age moderates the relations between psychological contract breach and job attitudes, such that older workers are less affected by contract breach. As can be seen in Table 2.3, age moderated the relation between contract breach and trust ($\beta = .50, p < .001$). Since the correlation between breach and trust is negative (see Table 2.2), the positive beta indicates that the negative correlation becomes smaller for older workers, than for younger workers. The explained variance was $R^2 = .25$, indicating that 25% of the variance between the samples in the correlation between breach and trust can be attributed to the effects of age.

Age moderated the correlation between breach and job satisfaction ($\beta = -.20, p < .05$). However, the effect was the opposite of our hypothesis. Older people showed a stronger decrease in job satisfaction following contract breach than younger people. The explained variance was $R^2 = .04$.

Age moderated the negative relation between contract breach and affective commitment in the expected direction ($\beta = .23, p < .05$). The negative correlation between contract breach and affective commitment becomes smaller with age. The explained variance was $R^2 = .05$.

Thus, the second hypothesis was fully supported for the outcomes trust and commitment, but not supported for the job satisfaction outcome. The moderation of age in the relation between breach and job satisfaction was in the unexpected direction.

As was mentioned above, we performed the same analysis with organizational tenure as we did for age. Moreover, to test whether the age effect exists, we added organizational tenure to the effect of age on the contract breach-job attitudes relationship. Organizational tenure moderated the relation between contract breach and trust in the same direction ($\beta = .90, p < .001; k = 7; N = 2,301; R^2 = .80$). However, due to a too small number of studies age and tenure could not be combined in one analysis.

Organizational tenure did not moderate the relation between psychological contract breach and job satisfaction when tenure was separately analyzed ($\beta = .13; ns, k = 17; N = 13,029; R^2 = .02$). However, when age and tenure were both included in the analysis, age was a significant negative predictor ($\beta = -.43, p < .001; k = 17; N = 11,111$), whereas tenure was a significant positive predictor ($\beta = .23, p < .05$). The explained variance was $R^2 = .15$.

Organizational tenure did not moderate the relations between contract breach and commitment; neither when analyzed separately ($\beta = .14; ns, k = 28; N = 16,207; R^2 = .02$), nor when analyzed simultaneously with age (age: $\beta = .20$, tenure: $\beta = .03; ns; k = 24; N = 14,039; R^2 = .02$)

In sum, age moderated the relations between contract breach and trust and commitment positively, but moderated the relation between contract breach and satisfaction negatively. After adding organizational tenure as a moderator, the effects of age remained significant.

2.4 Discussion

2.4.1 Psychological Contract Breach and Job Attitudes

Our results show that psychological contract breach is related strongly to job attitudes (i.e. trust, job satisfaction, and affective commitment). These results are comparable to the recent meta-analysis of Zhao et al. (2007). Although the sample of Zhao et al. (2007) differs somewhat from the current sample (due to availability and language of the studies), similar correlations were found between psychological contract breach and trust ($\rho = -.61$ in the current study vs. $\rho = -.65$ in the Zhao et al. study), job satisfaction ($\rho = -.52$ vs. $\rho = -.54$), and commitment ($\rho = -.39$ vs. $\rho = -.38$). Especially the correlation between psychological contract breach and trust ($\rho = -.61$) is high, indicating that cognitions that the organization has failed to fulfill its obligations is related strongly to a decrease of trust in the employer (Guest, 1998). Moreover, psychological contract breach is associated strongly with job satisfaction and

affective commitment. These findings underline the importance of psychological contracts at the workplace, in shaping attitudes of employees. Furthermore, these results are in line with affective events theory (Weiss & Cropanzano, 1996), as well as social exchange theory (Blau, 1964). When employees perceive their psychological contract as breached, they react to this breach by a decrease in trust, job satisfaction, and commitment to the organization.

2.4.2 Age as a Moderator

This study shows that age is related to the response to psychological contract breach. Based on lifespan theories of aging, we expected that as people grow older, and become better in regulating their emotions, they will respond less emotional to breach of their psychological contracts (Carstensen et al., 1999). This hypothesis was supported for the relation between contract breach and trust and organizational commitment. The correlation was less negative for older workers than for younger workers. This positive moderation of age in the breach–trust and breach–commitment relations corroborate the expectation that older workers focus more on positive aspects of their relationship with the organization, and hence are less affected by negative events, such as contract breach (cf. Allen & Meyer, 1993; Löckenhoff & Carstensen, 2004).

However, this was not the case for the relation between contract breach and job satisfaction, where the opposite pattern was found. The correlation was more negative for older workers than for younger workers. Thus, when contracts are breached, older workers respond with a higher decrease of job satisfaction, than younger workers. This adverse effect on the breach–satisfaction relation may be explained by several factors. Since older workers have more experience, the work they conduct may become less interesting (Clark, Oswald, & Warr, 1996; Sarker, Crossman, & Chinmeteeputuck, 2003). For younger workers the job may be of greater importance than the relation with their (in the future possibly changing) employer, whereas for older workers with fewer job transfer options the reverse is the case (Hedge et al., 2006; Kacmar & Ferris, 1989). Older workers' satisfaction may therefore stem primarily from the relation with the employer and coworkers, than younger workers, whose satisfaction may be derived more from the work they conduct. Therefore, when organizations break the psychological contract, younger workers' job satisfaction is less intensely harmed, but they lose trust in their employer and become less committed to the organization.

As the mobility of older workers is reduced, they may perceive fewer chances for job transfer than their younger colleagues, and may therefore react more strongly to contract breach on aspects like job satisfaction (Hedge et al., 2006). Finally, older workers may receive

higher satisfaction from factors outside their work, such as family, hobbies, and the community (Clark et al., 1996). Therefore, they can permit themselves to be less satisfied with their jobs after a contract breach, while maintaining satisfaction from areas outside their work.

When we analyzed the influence of organizational tenure on the relations between psychological contract breach and job attitudes, it appeared that organizational tenure moderated the breach-trust relationship positively, and did not moderate the relations between contract breach and job satisfaction and commitment. When age and organizational tenure were analyzed simultaneously, the effects of age remained the same, whereas the moderating effect of organizational tenure on the relation between contract breach and job satisfaction became significantly positive.

This study shows that it is important to separate effects due to age from effects due to organizational tenure. Considering the relation between contract breach and trust, the effects of age and organizational tenure are the same. With respect to the breach-job satisfaction relation, age (negative) and organizational tenure (positive) have adverse effects. Finally, regarding the breach-commitment relationship, it appeared that age has a positive effect, whereas the effect of organizational tenure was non-significant. The findings of the study have important implications for future research on psychological contracts.

2.4.3 Theoretical Implications

Research on the influence of age and aging on organizational phenomena is criticized for lacking theoretical explanations (Kanfer & Ackerman, 2004). This study takes a lifespan perspective, and provides a theoretical underpinning for the possible influence of age in psychological contracts. This is a major advantage, since specific hypotheses can be tested that are based on these theories (Löckenhoff & Carstensen, 2004). Until now, research on psychological contracts has mainly focused on the processes of how psychological contracts lead to job attitudes and behaviors (Conway & Briner, 2005). It is assumed that these processes are static and apply equally to all organizational employees. However, individual differences and the dynamic nature in these processes are neglected (Anderson & Schalk, 1998; Coyle-Shapiro & Neuman, 2004). Our results show that it is important to employ a dynamic lifespan perspective on psychological contracts, as it was clearly shown that relations between contract breaches and job attitudes are dependent on employee age. Future research should incorporate a lifespan perspective on the psychological contract processes that lead to job attitudes and behaviors.

Moreover, our study showed that there are differences between the effects of age and organizational tenure in the relations between psychological contracts and job attitudes. As the main focus of this paper was the influence of the factor age, we did not theorize further about the effects of organizational tenure. However, our results did show some interesting differential effects of age versus organizational tenure. For example, age moderated the relation between contract breach and job satisfaction negatively, whereas organizational tenure moderated this relation positively. Therefore, it is important to disentangle age effects from time spent within an organization, and to also theorize further about the effects of tenure. For example, a meta-analysis of Wright and Bonett (2002) showed that the relation between organizational commitment and work performance was moderated by tenure, whereas age did not affect this relationship.

2.4.4 Limitations of the Present Study

Despite these relevant new results and strengths of our study, we also have to address a number of limitations. Older workers are consistently missed or underrepresented in many reviewed studies because of early retirement options (Griffiths, 1999) and healthy worker effects (Zapf, Dormann, & Frese, 1996). Due to healthy people staying at the job and maybe conducting post-retirement work while unhealthy people retire early, there may be a survivor bias. The older people who are still employed may be very motivated, since until recently it was financially very attractive to retire early. On the other hand, since older workers in the studies included in the meta-analysis are the healthy and motivated survivors, this study may be a study of survival behavior in organizations (Noonan, 2005). The results show that by reacting less intense to contract breaches, older workers survive within organizations. However, it is impossible to estimate how these effects precisely influenced the outcomes of previous studies, and the results found in our meta-analysis. Therefore, future research should investigate whether there are differences between those who stay in the workforce and leave the workforce before official retirement age.

Furthermore, since most of the correlations in this meta-analysis are based on cross-sectional data, it is impossible to draw conclusions regarding causality. For example, people who are dissatisfied with their jobs may perceive more contract breaches. Due to the limited amount of longitudinal studies conducted on psychological contracts, we could not estimate whether there were differences between cross-sectional and longitudinal studies. Therefore, longitudinal research is needed to examine the causal direction of the relations under study (cf. De Lange, Taris, Kompier, Houtman, & Bongers, 2005).

Finally, in line with the procedure of Zhao et al. (2007), we reversed the correlations of fulfillment to indicate psychological contract breach. However, it can be argued that fulfillment and breach are two distinct components of the psychological contract (Conway & Briner, 2005). Breaking promises may have other effects than not fulfilling obligations. However, both obligations and promises constitute the psychological contract (Guest, 1998; Rousseau, 1995). Further research is needed to disentangle effects of breach, fulfillment, and unfulfillment.

2.4.5 Recommendations and Research Agenda

This meta-analysis is the first study to investigate the influence of aging in psychological contract research, and found a significant moderating influence of age in relations between contract breach and job attitudes. Further research should investigate the explanations of why age moderates relations between breach and trust and commitment positively, and the relation with job satisfaction negatively.

Furthermore, this study only focused on job attitudes as outcomes, but future research should also investigate relations between age, psychological contracts, and work behaviors, such as job performance, citizenship behaviors and turnover. In line with the findings of Zhao et al. (2007), psychological contract breach is related to work behaviors, and it may be expected that age also moderates these relations. Can the effects found be generalized to behavioral outcomes as well?

The results show that a lifespan perspective on employee-employer relations, expectations and obligations is important. One could therefore also examine more underlying social contract processes like fairness and justice (see Guest, 1998). For instance, in terms of training, older workers are, in general, treated less fairly than younger workers (Simpson, Greller, & Stroh, 2002). These research areas should also benefit from incorporating a lifespan perspective. Research is needed on the influence of age on justice and fairness perceptions.

Moreover, it can be argued that the content of the psychological contract may differ for younger versus older workers (Anderson & Schalk, 1998; Guest, 2004; Schalk, 2004). It is argued that older workers have a more traditional view of the employment relationship (Peterson & Spiker, 2005). For instance, younger workers may focus mainly on career-related or transactional types of obligations, whereas older workers are focused mainly on protection of the current status and working conditions (Schalk, 2004). According to lifespan psychology, older people develop other goals in life than younger people (Ebner, Freund, & Baltes, 2006). For instance, where younger people are focused on growth and learning, older people shift

their focus to maintaining current well-being and functioning. From that perspective, older workers may perceive different obligations from their employers than younger workers. Future research is needed to determine whether there is evidence for age-related differences in the content of the psychological contract.

Due to shortages at the labor market and recent changes in retirement ages, more people will be working after the age of 65. However, older workers (age >50) are underrepresented in psychological contract research to date. We therefore need additional research that includes employees with a wider age range to investigate more specifically how older workers perceive their psychological contracts compared to younger workers, and how the relationships between psychological contracts and attitudes and behaviors differ for younger and older workers. It is also important to investigate how psychological contracts develop when people continue working after the age of 65, since it is likely that more and more workers will be active after their 65th (Peterson & Spiker, 2005).

Furthermore, age is a proxy of several age-related changes people experience, and refers to biological, psychological, social, and societal changes (De Lange, et al., 2006). For instance, age is linked to time spent within the organization or job (Wright & Bonett, 2002), family status (Roehling, Roehling, & Moen, 2001), and to a shortening of future time perspectives (Lang & Carstensen, 2002). Thus, the influence of age could be a proxy effect of other relevant age-related factors. As additional analyses revealed, there may be differences in the effects of age and tenure, such as in the relation between contract breach and job satisfaction. Future research should in depth study how age-related factors, such as tenure and family status, are related to the psychological contract.

Finally, we could not determine whether the relations found in this study were the consequence of aging or age cohort, since all psychological contract studies have been conducted in the last twenty years. Therefore, longitudinal research is needed, in order to disentangle age, cohort, and period effects (Schaie, 1986; Van Masche & Van Dulmen, 2004). Moreover, these types of studies are also needed to estimate appropriate time lags to investigate psychological contracts in relation to work-related outcomes (Hertzog & Nesselroade, 2003).

2.4.6 Practical Implications

Our meta-analysis has shown that older workers respond differently to organizational treatment than younger colleagues. When employees perceive that the organization has breached the psychological contract, older workers may respond to this by a strong decrease

in job satisfaction, whereas young employees respond by lowering their level of trust and commitment to the organization. Organizations should be aware that by fulfilling their promises and obligations, employee work attitudes are influenced, but this is also affected by the employee's age. Especially younger workers may respond to contract breaches by becoming less attached to the organization. To avoid decreases of trust, satisfaction, and commitment among employees, organizations should design and implement human resource policies and practices in such a way that psychological contract breach is prevented. This can be obtained through realistic job previews (Rousseau, 1995), and tailoring human resource practices to age-related needs.

Summarizing, this meta-analysis has shown that age plays an important role as moderator in the relationships between psychological contracts and job attitudes. Future research can therefore employ a more dynamic and life span perspective, and sophisticated longitudinal studies may be designed to examine the relations between psychological contracts and work-related outcomes across the life span.

2.5 References

References marked with an asterisk (*) indicate studies included in the meta-analysis.

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Chapter 3

Psychological Contract Types and Work-Related Outcomes: A Longitudinal Study of Age as a Moderator

This chapter is based on: Bal, P.M., De Lange, A.H., Jansen, P.G.W., & Van der Velde, M.E.G. (2009). *Psychological Contract Types and Work-related Outcomes: A Longitudinal Study of Age as a Moderator*. Manuscript under review.

Abstract

The aim of the study was to investigate the influence of age on the psychological contract and the moderating role of age in the relations between psychological contracts and work-related outcomes. Based on lifespan psychological theory, we hypothesized that older workers have different perceptions of the psychological contract than younger workers. More specifically, younger workers are expected to focus primarily on developmental obligations (e.g., training), whereas older workers are expected to focus primarily on socio-emotional obligations (e.g., flexible work scheme). Moreover, socio-emotional and developmental psychological contracts were supposed to have opposite effects on work-related outcomes between younger and older workers. The hypotheses were tested in a 2-wave longitudinal study. It was found that age was indeed negatively related to developmental obligations but not related to socio-emotional obligations. Significant two-way and three-way interaction effects of age and the psychological contract were found, indicating overall stronger reactions for younger workers than for older workers. The implications are discussed, and suggestions for future research are presented.

3.1 Introduction

The proportion of workers aged over 45 relative to younger workers is growing rapidly in North-America and Europe (Brooke & Taylor, 2005; European Commission, 2005). Birth rates decrease, resulting in a workforce that will increasingly be composed of older workers (Fouad, 2007). To maintain sufficient staff, organizations will have to employ a higher number of older workers. Therefore, organizational policies, which were traditionally focused on younger workers, will have to be tailored to older workers (Hedge, Borman, & Lammlein, 2006).

However, few studies have been conducted on the role of age in work motivation (Kanfer & Ackerman, 2004). For instance, it has been argued that psychological contracts are influenced by age (Farr & Ringseis, 2002; Lester, Kickul, & Bergmann, 2007; Sullivan, 1999). As people grow older, they tend to perceive different obligations from their employers (Bal, De Lange, Jansen, & Van der Velde, 2008; Schalk, 2004). Young people are mostly focused on building a career, whereas older people tend to be more focused on maintaining their current position within the organization (Schalk, 2004). Therefore, this study investigates the role of age in psychological contracts between employees and their organizations (Bal et al., 2008).

In the current paper, based on notions from lifespan psychology (Ebner, Freund, & Baltes, 2006; Freund, 2006), we distinguish between socio-emotional obligations and developmental obligations, and we will argue that perceptions of these specific types of obligations differ between younger and older workers. Moreover, we examine whether psychological contract fulfillment and the interplay between obligations and fulfillment relate differently to work-related outcomes for younger workers than for older workers. This longitudinal study of employees within an insurance company, contributes to existing research on psychological contracts by introducing theory-based types of obligations constituting the psychological contract, namely socio-emotional and developmental obligations. Moreover, by investigating demographic moderators as boundary conditions in the relations between psychological contracts and attitudes and behaviors at work, the study contributes to further understanding of the underlying processes that guide psychological contracts at the workplace.

3.1.1 The Psychological Contract

The psychological contract is defined as the employees' beliefs regarding mutual obligations between the employee and the organization (Conway & Briner, 2005; Rousseau, 1995). Employees form judgments regarding how well their employer has fulfilled its obligations (Morrison & Robinson, 1997; O'Neill, Halbesleben, & Edwards, 2007). Thus, the

psychological contract consists of two components: on the one hand employees' perceptions of employer obligations and on the other hand employees' judgments of employer fulfillment. Theoretically, obligations precede fulfillment over time; employees first perceive obligations from their employer, and at a later moment in time perceive that this obligation has been fulfilled or not fulfilled. Therefore, we measure perceptions of fulfillment one year subsequent to obligations. Previous research has shown that the combination of the two is related to work-related outcomes (Lambert, Cable, & Edwards, 2003).

According to Affective Events Theory (Weiss & Cropanzano, 1996; Zhao, Wayne, Glibkowski, & Bravo, 2007), negative events at the workplace, such as unfulfilled psychological contract obligations, elicit negative emotions, affecting job attitudes and work behaviors. In case employees perceive a discrepancy between what the employer is obliged to offer and what has been actually delivered, an affective reaction occurs, influencing for example organizational commitment and turnover intention (Zhao et al., 2007).

However, several authors have suggested that the relations between psychological contracts and its presumed effects are moderated by age (Farr & Ringseis, 2002; Turnley & Feldman, 1999). Indeed, a recent meta-analysis of Bal et al. (2008) found that the relations between contract breach and trust and affective commitment were stronger among younger workers, whereas the relation between contract breach and job satisfaction was stronger among older workers. As an explanation for these opposite moderating effects of age the authors suggested that the moderating role of age depends on the type of psychological contract fulfillment. Therefore, this study examines whether the reactions to two different *types* of psychological contracts differ between younger and older workers. We distinguish *socio-emotional obligations* and *developmental obligations* (in line with the terminology of Ebner et al., 2006; Freund, 2006). Although the psychological contract is often studied as a single construct, it is generally acknowledged that psychological contract consists of multiple dimensions or factors (De Vos et al., 2003; Rousseau, 1995; Rousseau & Parks, 1993). Employees exchange different sorts of obligations with their employers, which differ between employees (Conway & Briner, 2005). In sum, the psychological contract consists of four components: socio-emotional obligations, developmental obligations, socio-emotional fulfillment, and developmental fulfillment. In the next section, we will explain the relations between age and the different types of obligations.

3.1.2 Age and Type of Psychological Contract

According to lifespan theory, human development is associated with both gains and losses (Baltes & Baltes, 1990; Carstensen, Isaacowitz, & Charles, 1999; Ebner et al., 2006). More specifically, as people grow older, their health and biological abilities generally decrease, whereas knowledge and experience will generally increase (Kanfer & Ackerman, 2004). In coping with these changes, people strive for maximization of gains and minimization of losses (Baltes, Staudinger, & Lindenberger, 1999; Ebner et al., 2006). People respond to changes in their social and biological functioning by changing the focus of their main goals (Freund, 2006). Recently, it has been shown that younger people orient primarily on maximization of gains, whereas older people show an orientation towards minimization of losses (Ebner et al., 2006; Freund, 2006). This notion was supported in a study of Ebner et al. (2006), who found in four studies, in which life goals of younger and older adults were compared, that younger people in general have a higher focus on growth goals, whereas older people tend to focus on goals that maintain their current functioning and their existing relationships. This shift in life goals becomes stronger when time is perceived as limited or constrained (Ebner et al., 2006; Lang & Carstensen, 2002). Since losses are threatened by potential downward spirals, older workers increasingly focus on compensation for losses, by focusing on maintenance of current relationships (Carstensen et al., 1999; Freund, 2006). Previous research has indeed shown that older people have a greater focus on existing socio-emotional relationships with others than younger people (Löckenhoff & Carstensen, 2004).

These changes imply that with respect to the psychological contract, older workers are more focused than younger employees on ‘*socio-emotional*’ obligations (i.e., respectful treatment, expecting a safe work environment, and work-private balance) from their employers that enhance the relationships with the organization. Previous research has shown that these types of obligations provide safety and security (Herriot, Manning, & Kidd, 1997), and that people in later stages of their careers attach more importance to work-private balance (Ng & Feldman, 2007).

In contrast, younger workers will show a greater focus on ‘*developmental*’ obligations (i.e. training, career-building) than older workers, since they value knowledge goals (Ebner et al., 2006), which stimulate personal growth (Simpson, Greller, & Stroh, 2002). Thus, we expect that younger workers will focus primarily on developmental obligations, whereas older workers focus primarily on socio-emotional obligations. In line with this theory, the first and second hypotheses are:

H1: Age is positively related to socio-emotional obligations.

H2: Age is negatively related to developmental obligations.

3.1.3 The Role of Age in the Relations between Psychological Contracts and Work Engagement and Turnover Intention

Besides a direct effect on psychological contract obligations, age moderates the relations between the psychological contract and work-related outcomes (Bal et al., 2008). Since socio-emotional obligations are more important to older workers than to younger workers, fulfillment of these obligations elicits stronger effects on work-related outcomes among older workers compared to younger workers. In the same line of reasoning, fulfillment of developmental obligations elicits stronger reactions for younger workers than for older workers. Previous research has shown that importance moderates the relations between organizational treatment and work-related outcomes (Haslam, Powell, & Turner, 2000; Wiesenfeld, Swann, Brockner, & Bartel, 2007). Fulfillment of important obligations (i.e. a high perceived level of obligations) has stronger effects on work-related outcomes than fulfillment of less important obligations because salient obligations are monitored by employees and consequential in terms of behavior (Coyle-Shapiro & Kessler, 2000; Edwards, 1996; Kwong & Leung, 2002; Turnley, Bolino, Lester, & Bloodgood, 2003). In this study, two relevant work-related outcomes are investigated: work engagement and turnover intention. We focus on these work-related outcomes, because previous studies have shown relations between age and work engagement (Schaufeli & Bakker, 2004b), and turnover intention (Griffeth, Hom, & Gaertner, 2000). Moreover, researchers have called for more research on the role of age in relation to these work-related concepts (Bal et al., 2008; Hedge et al., 2006). Further, meta-analyses have shown contract fulfillment is significantly related to these work-related outcomes (Zhao et al., 2007). High contract fulfillment makes employees more engaged in their work, and decreases their intentions to leave the organization.

Finally, researchers have argued that job attitudes and behaviors not only depend on the level of fulfillment, but also depend on the level of promised obligations (Coyle-Shapiro & Conway, 2005; Coyle-Shapiro & Kessler, 2000; Lambert et al., 2003). Previous research has shown that the strongest effects on outcomes occur when employees have high perceptions of both obligations and fulfillment (Lambert et al., 2003) in contrast to low obligations and low fulfillment. High perceptions of obligations create an ambitious standard, that, when fulfilled, elicit positive feelings above the main effects of the level of fulfillment and low levels of obligations (Edwards, 1996; Lambert et al., 2003).

In sum, the effects of contract obligations and fulfillment are expected to differ between younger and older workers. We expect that the relations between socio-emotional obligations and fulfillment with the work-related outcomes (work engagement and turnover intention) are stronger for older workers. Further, we expect that the relations between developmental obligations and fulfillment with the work-related outcomes (work engagement and turnover intention) are stronger for younger workers. The third and fourth hypotheses are:

H3a: The relations of socio-emotional obligations and fulfillment with work engagement are stronger for older workers.

H3b: The relations of socio-emotional obligations and fulfillment with turnover intention are stronger for older workers.

H4a: The relations of developmental obligations and fulfillment with work engagement are stronger for younger workers.

H4b: The relations of developmental obligations and fulfillment with turnover intention are stronger for younger workers.

3.2 Method

3.2.1 Sample and Procedure

The study was conducted in a Dutch division of a multinational risk management organization. The Dutch division included twelve offices in the Netherlands. 1300 employees were invited to participate in the study at the first measurement, which was in June 2006. One year later (June 2007), all participants who responded to the first questionnaire were emailed and asked to participate in a follow-up study. By means of online survey-software, which could be accessed by a personal hyperlink, employees were asked to fill out the questionnaire, resulting in a total response of $N=727$ (response rate 56%) at time point 1. Of the 727 participants at T1, 242 responded to the second questionnaire, resulting in a final response of 19%. Analyses showed that the final sample did not differ significantly from the company's total employee population in terms of age, gender, tenure, contract, or educational level. Further analyses showed that the sample at T2 did not differ significantly on any variable from the sample at T1. Of the respondents at T1, 9% had left the company at T2.

Of the 242 participants, 40% were female, at T1 the average age was 42 years ($SD = 9.53$; range 19-62 years), the average organizational tenure was 11 years ($SD = 10.39$), and average job tenure was 6 years ($SD = 5.37$). Of the employees, 96% had a permanent contract, 76% worked full-time, and 17% of the respondents had a university degree.

3.2.2 Measures

Psychological Contract

To measure the socio-emotional and developmental obligation types, the psychological contract measure of De Vos et al. (2003) was used. Obligations were measured by indicating the extent to which employees felt that their organization was obliged to provide socio-emotional and developmental obligations (De Vos et al., 2003). Fulfillment was measured by indicating the extent to which employees felt their employer had actually fulfilled the obligations (De Vos et al., 2003). The psychological contract items were measured with a 5-point Likert scale ('not at all' to 'to a very great extent'). Obligations were measured at T1 and fulfillment was measured at T2 (one year later). We used a 9-item scale, tapping the two factors socio-emotional (6 items) and development (3 items). The socio-emotional factor consisted of obligations and fulfillment concerning, amongst others, a safe work environment and respectful treatment. The developmental factor included obligations and fulfillment of training and career development. Appendix A shows the items that were used to measure both psychological contract types. Confirmatory Factor Analyses (CFA with Lisrel 8.72; Jöreskog & Sörbom, 2005) were conducted to test the construct validity. The four-factor model, consisting of the four hypothesized factors (socio-emotional obligations, developmental obligations, socio-emotional fulfillment, and developmental fulfillment) reached good fit ($\chi^2 = 177.95$, $df = 113$; $p < .001$; RMSEA = .05; CFI = .98). Moreover, the four-factor model fitted significantly better than a two-factor model, consisting of obligations and fulfillment, ($\Delta\chi^2 = 332.77$, $\Delta df = 5$; $p < .001$), as well a single-factor model, including all items ($\Delta\chi^2 = 848.63$, $\Delta df = 6$; $p < .001$). The Cronbach's alpha's of the obligation and fulfillment scales ranged from .72 to .85.

Work-related Outcomes

Work engagement was measured by the Utrecht Work Engagement Scale (UWES, Schaufeli & Bakker, 2003, 2004a) at T1 and T2. The scale consisted of 8 items, which could be answered on a 7 point-scale, ranging from 'never' to 'daily'. An example is: "At my work, I feel bursting with energy". The reliability at T1 and T2 was .94.

Turnover intention was measured by a three-item scale by Camman, Fichman, Jenkins, and Klesh (1983) at T1 and T2, which could be answered on a 7-point scale, ranging from 'totally disagree' to 'totally agree'. The alpha was .74 at T1 and .77 at T2. An example is: "I often think of leaving the organization".

Demographic Variables

The following demographic variables were measured: age, gender (0 = female, 1 = male), education, salary (salary scale of each employee), and work status (0 = part-time, 1 = full-time). These data were obtained from organizational records. Because previous research has found gender differences in career choices (Fouad, 2007), and therefore gender may influence perceptions of the psychological contract, and work-related outcomes have shown to be influenced by education, income, and work status (Mathieu & Zajac, 1990; Riketta, 2005), we controlled for these variables in the analyses.

3.2.3 Analysis

Moderated regression analysis was conducted to test the hypotheses. The independent variables were centered to avoid multicollinearity (Aiken & West, 1991; Dawson & Richter, 2006). To test the first and second hypotheses, in the first step the demographic variables (T1) were entered, and in the second step age. The third and fourth hypotheses were tested by entering the demographic variables simultaneously with the outcome at T1 in the first step. In the second step psychological contract obligations and fulfillment were added to the equation, and in the third step the interaction terms between the psychological contract measures (i.e., obligations and fulfillment) and age, consistent with other research on psychological contracts (Lambert et al., 2003). Slope difference tests were conducted among the significant three-way interactive effects (for more information: see Dawson & Richter, 2006). The significant interaction effects were plotted following the methods as described by Aiken and West (1991), and simple slopes were calculated. Finally, researchers have suggested curvilinear patterns between age and work-related outcomes (Hedge et al., 2006). However, we did not find curvilinear patterns between age and the psychological contract, or between age and the work-related outcomes.

3.2.4 Descriptive statistics

Table 3.1 presents the means and standard deviations, alpha coefficients, and correlations between the variables. All scales showed good reliabilities (Cronbach's alpha's >.72). Age was related negatively to developmental obligations (T1: $r = -.16, p < .05$), positively related to work engagement at T1 ($r = .13, p < .05$), and negatively related to turnover intentions (T1: $r = -.16, p < .05$; T2: $r = -.23, p < .01$).

Table 3.1: Means, standard deviations, reliabilities and correlations of the study variables (N = 242)

	Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Age T1	41.82	9.53	--												
2	Gender T1	.60	.49	.27**	--											
3	Education T1	4.56	1.76	-.32**	.12	--										
4	Salary T1	9.01	2.80	.34**	.51**	.31**	--									
5	Work Status T1	.77	.42	.15*	.43**	.18**	.33**	--								
6	Socio-emotional obligations T1	3.75	.50	-.01	.01	-.04	.10	-.05	.72							
7	Developmental obligations T1	2.99	.82	-.16*	.08	.16*	.13*	-.07	.46**	.79						
8	Work engagement T1	4.38	.97	.13*	.13*	-.07	.13*	.02	.38**	.39**	.94					
9	Turnover Intention T1	2.48	1.43	-.16*	.00	.13*	.01	.03	-.40**	-.37**	-.53**	.74				
10	Socio-emotional fulfillment T2	3.82	.50	.02	.06	.01	.11	-.10	.44**	.27**	.31**	-.19**	.74			
11	Developmental fulfillment T2	3.41	.79	-.09	-.04	-.08	-.08	-.16*	.28**	.42**	.32**	-.27**	.55**	.85		
12	Work engagement T2	4.81	1.08	.08	.11	.00	.14*	.08	.22**	.26**	.60**	-.32**	.46**	.32**	.94	
13	Turnover intention T2	2.67	1.39	-.23**	.05	.21**	.03	.07	-.37**	-.24**	-.42**	.52**	-.39**	-.47**	-.50**	.77

Note. All correlations .* are significant at the .05 level; All correlations .** are significant at the .01 level. : Gender: 0=female; 1=male. Work status: 0 = part-time;

1 = full-time. Cronbach's alpha coefficients are presented in bold along the diagonal.

3.3 Results

Hypothesis 1 and 2: Age is positively related to socio-emotional obligations and negatively related to developmental obligations. Table 3.2 shows the results of the first and second hypothesis. Age is not significantly related to perceptions of socio-emotional obligations ($\beta = -.06$, *ns*), whereas age is negatively related to perceptions of developmental obligations ($\beta = -.20$, $p < .01$). Therefore, hypothesis 1 was not supported (older workers do not perceive significant more socio-emotional obligations), and hypothesis 2 was supported (older workers perceive significantly fewer developmental obligations).

Table 3.2: Hierarchical Regression Analysis of Socio-Emotional Obligations and Developmental Obligations on Age

Variable	Socio-Emotional Obligations T1	Developmental Obligations T1
	β	β
Step 1: Demographic variables		
Gender T1	-.04	.08
Education T1	-.03	.17*
Salary T1	.15	.08
Work Status T1	-.08	-.16*
R^2	.02	.06
F	1.09	3.64**
Step 2: Age		
Age T1	-.06	-.20**
ΔR^2	.00	.03
ΔF	.54	6.99**
R^2	.02	.09
F	.98	4.38***

Note: N= 242; * $p < .05$; ** $p < .01$; *** $p < .001$

Hypothesis 3: The relations between socio-emotional obligations and fulfillment and work-related outcomes are stronger for older workers. Table 3.3 shows the results of the third hypothesis. The three-way interaction among socio-emotional obligations at T1, socio-emotional fulfillment at T2, and age was a significant predictor of work engagement ($\beta = .12$, $p < .05$). Figure 3.1 presents the plots of the three-way interactive effects on work engagement.

Table 3.3: Regression of Work-Related Outcomes on the Psychological Contract (Socio-Emotional) and Interactions between the Psychological Contract and Age

Variable	Work Engagement T2	Turnover Intention T2
	β	β
Step 1: Demographic variables T1 and job attitude T1		
Age	-.00	-.17*
Gender	-.04	.04
Education	-.04	.08
Salary	.06	.02
Work Status	.05	.06
Engagement	.61***	--
Turnover Intention	--	.48***
R^2	.39	.31
F	23.98***	17.26***
Step 2: Psychological Contract		
Socio-Emotional Obligations T1	-.16**	-.08
Socio-Emotional Fulfillment T2	.33***	-.29***
R^2	.47	.41
F	25.22***	19.92***
ΔR^2	.09	.10
ΔF	18.20***	19.53***
Step 3: Interactions		
Age x S-E. Obl.	-.01	.04
Age x S-E. Ful.	-.06	.04
S-E. Obl. x S-E. Ful.	-.03	.02
Age x S-E. Obl. x S-E. Ful.	.12*	-.02
R^2	.49	.42
F	17.79***	13.333***
ΔR^2	.02	.01
ΔF	2.02	.51

Note: N= 242; * $p < .05$; ** $p < .01$; *** $p < .001$.

S-E. Obl = Socio-Emotional Obligations T1; S-E. Ful. = Socio-Emotional Fulfillment T2.

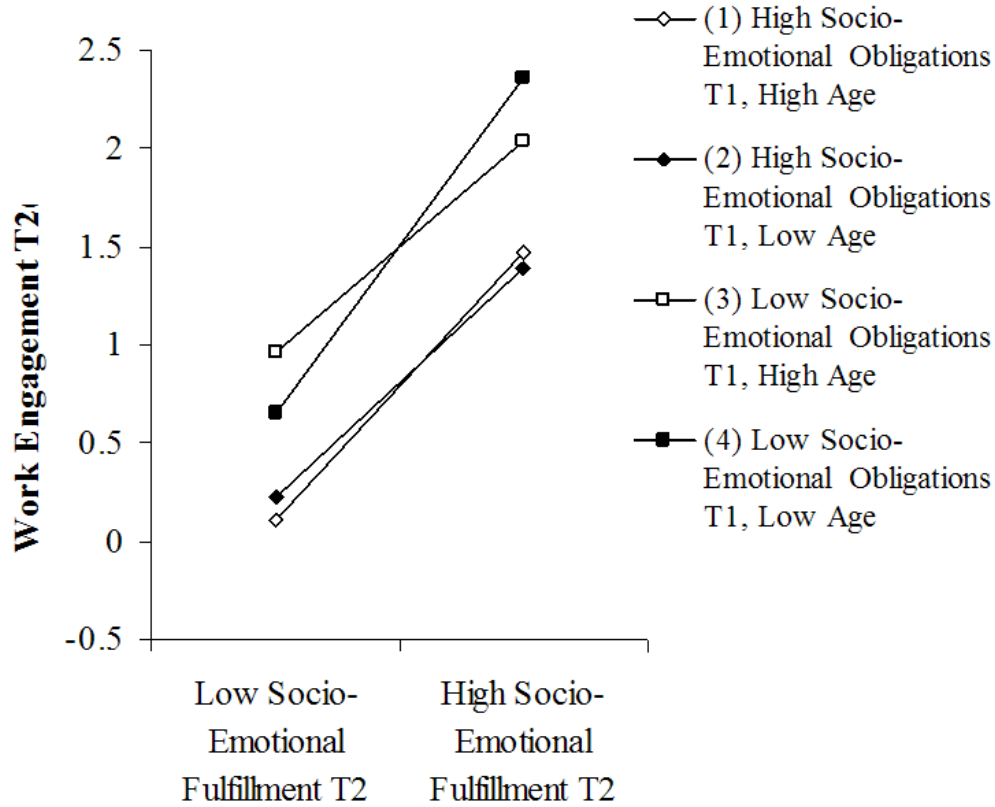


Figure 3.1: The three-way interaction between socio-emotional fulfillment, socio-emotional obligations and age on work engagement

Slope difference tests revealed that the slope of younger people with low socio-emotional obligations differed significantly from the slope of younger people with high socio-emotional obligations ($t = -2.10, p < .05$; see Figure 3.1). Moreover, the slope of older workers with high socio-emotional obligations and the slope of younger workers with low socio-emotional obligations differed significantly ($t = -2.23, p < .05$). These results suggest that for younger workers with low socio-emotional obligations, the effects of socio-emotional fulfillment are stronger on work engagement than for younger workers with high socio-emotional obligations as well as for older workers with low socio-emotional obligations. Therefore, hypothesis 3a is rejected: the strongest effects of socio-emotional fulfillment on work engagement are among the younger workers with low socio-emotional obligations.

There were no significant interactions between age, socio-emotional obligations, and socio-emotional fulfillment in predicting turnover intention. Therefore, hypothesis 3b is rejected: the effects of socio-emotional obligations and fulfillment on turnover intention do not differ between younger and older workers. In sum, three-way interactions among socio-

emotional obligations, socio-emotional fulfillment, and age were found on work engagement, indicating different effects of obligations and fulfillment for younger versus older workers.

Hypothesis 4: The relations between developmental obligations and fulfillment and work-related outcomes are stronger for younger workers. The results for hypothesis 4 are presented in Table 3.4. Age interacted with developmental fulfillment on work engagement ($\beta = -.15$, $p < .05$). The significant interaction effect is plotted in Figure 3.2.

Table 3.4: Regression of Work-Related Outcomes on the Psychological Contract (Development) and Interactions between the Psychological Contract and Age

<i>Variable</i>	<i>Work Engagement T2</i>	<i>Turnover Intention T2</i>
	β	β
Step 1: Demographic variables T1 and job attitude T1		
Age	-.00	-.17*
Gender	-.04	.04
Education	-.04	.08
Salary	.06	.02
Work Status	.05	.06
Work Engagement	.61***	--
Turnover Intention	--	.48***
R^2	.39	.31
F	23.98***	17.26***
Step 2: Psychological Contract		
Developmental Obligations T1	-.04	.03
Developmental Fulfillment T2	.20***	-.41***
R^2	.43	.46
F	21.14***	24.31***
ΔR^2	.03	.14
ΔF	6.31**	29.78***
Step 3: Interactions		
Age x Dev. Obl.	.04	-.03
Age x Dev. Ful.	-.15*	.19**
Dev. Obl. x Dev. Ful.	-.13*	.08
Age x Dev. Obl. x Dev. Ful.	.07	-.00
R^2	.46	.49
F	15.75***	17.90***
ΔR^2	.03	.03
ΔF	3.28*	3.20*

Note: N= 242; * $p < .05$; ** $p < .01$; *** $p < .001$. Dev. Obl = Developmental Obligations T1; Dev. Ful. = Developmental Fulfillment T2.

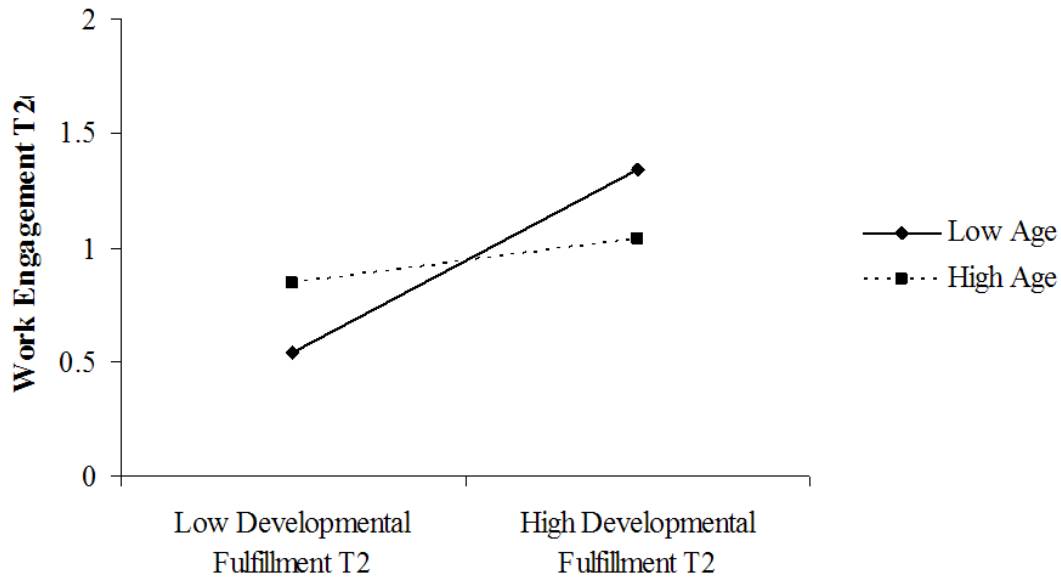


Figure 3.2: The two-way interaction of developmental fulfillment and age on work engagement

Figure 3.2 shows that the relation between developmental fulfillment and work engagement is small for older workers, whereas the relation is strongly positive for younger workers. The slope of developmental fulfillment among the younger workers (one standard deviation below the mean age) was positive ($B = .44, p < .001$), whereas the slope of developmental fulfillment among older workers (1SD above the mean age) was not significant ($B = .06, ns$). Thus, the relationship between developmental fulfillment and work engagement is stronger for younger workers. Furthermore, the interaction between developmental obligations and developmental fulfillment was a significant predictor of work engagement ($\beta = -.13, p < .05$). A graphical representation of the interaction effect showed that the effects of developmental fulfillment on work engagement are stronger among workers with low developmental obligations than among the workers with high developmental obligations (not shown in a figure). In sum, hypothesis 4a is supported: the effects of developmental fulfillment on work engagement are stronger for younger than for older workers.

Age interacted significantly with developmental fulfillment on turnover intention ($\beta = .19, p < .01$). Figure 3.3 shows the interaction between developmental fulfillment and age on turnover intention. As can be seen, the negative effects of developmental fulfillment on turnover intention are stronger among younger workers compared to older workers. The slope of developmental fulfillment among the younger workers (1 SD below the mean age) was strongly negative ($B = -1.05, p < .001$), whereas the slope of developmental fulfillment

among older workers (1 SD above the mean age) was less strongly negative ($B = -.37, p < .05$). In sum, hypothesis 4b is supported: age moderated the relations between developmental fulfillment and turnover intention with stronger reactions among younger workers.

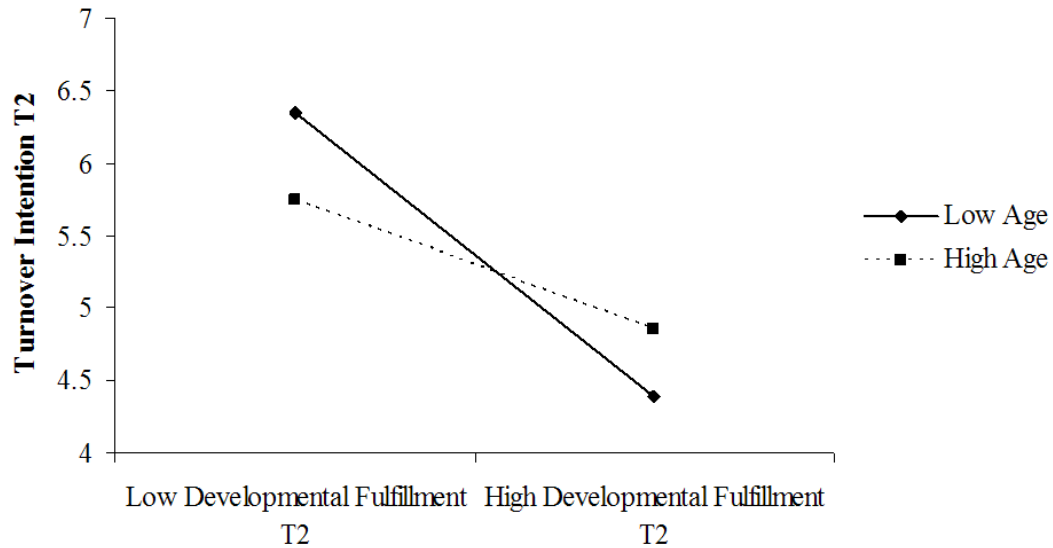


Figure 3.3: The two-way interaction of developmental fulfillment and age on turnover intention

3.4 Discussion

Based on lifespan psychology, we expected that older workers have different perceptions of their employer obligations from younger workers, and react differently to psychological contract fulfillment compared to younger workers. More specifically, we expected that older workers would react more intensely to fulfillment of socio-emotional obligations, whereas younger workers would show stronger reactions to fulfillment of developmental obligations.

The study indeed showed that younger workers perceive higher obligations concerning development in their work than older workers, but there were no age-related differences in perceptions of socio-emotional obligations. It might be the case that younger workers are both involved in building a relationship with their organization, and meanwhile developing themselves to achieve a higher status within the organization and their careers (Schalk, 2004).

In this study, lifespan psychological theory was incorporated in psychological contract theory. Whereas lifespan theory proposes that younger people prioritize development and older people prioritize existing relationships, in a dynamic environment such as the workplace, other factors play a role as well. Employer obligations develop within the context of reciprocity: to perceive obligations from the employer, employees have obligations towards

their employer (Dabos & Rousseau, 2004). Therefore, it is likely that employees adapt their expectations according to their current exchange relationships with their employer. An alternative explanation could be that because of older workers' decreased chances at the labor market, they might not have very high expectations, and develop a more realistic psychological contract, based on what they are likely to receive from their employer.

In general, younger workers react more strongly to psychological contract fulfillments than older workers. Both socio-emotional and developmental fulfillment have strong effects among younger workers in increasing their work engagement, and decreasing their turnover intentions. Older workers' engagement at work and turnover intentions are more stable and less dependent on how the organization treats them. The results are in line with several studies (Bal et al., 2008; Hansson, Robson & Limas, 2001; Rousseau, 2001), which have revealed that older workers may experience dampening of emotional responsiveness and increased stable mental models about their employment situations, and therefore react less strongly to contract breaches.

3.4.1 Theoretical Implications

In this study we found that relations between contract fulfillment and work-related outcomes depend on employee's age. Thus, psychological contract theory can benefit from incorporating a lifespan perspective on the processes that lead to work-related behaviors, and take into account the influence of demographic differences, including age. Moreover, it depends on the type of expected employer obligation and work-related outcome whether the level of perceived obligations influence work-related outcomes. Whereas turnover intention is predicted solely by the level of fulfillment (and interactions with age), work engagement is affected by the perceptions of obligations as well. In general, younger workers benefit most from a low level of obligations but a high level of fulfillment. Among younger workers, work engagement may be especially enhanced when they perceive low socio-emotional obligations and high socio-emotional fulfillment. Work engagement is also enhanced in situations of low developmental obligations, and high developmental fulfillment.

Although research on psychological contracts has focused mainly on relationships with work-related outcomes and behaviors, this study clearly showed that the content of the psychological contract may vary with age. Employees' expectations change throughout the lifespan, and these expectations may have different consequences for the employment relationship in the sense that older workers develop different psychological contracts from younger workers (Schalk, 2004). As the current study has shown, although there were no

significant age-related differences in socio-emotional obligations, younger workers perceive higher developmental obligations than older workers.

3.4.2 Limitations of the Present Study

The study has some limitations. First, although the study was based on a longitudinal design, intra-individual changes over time could not be investigated. Hence, possible differences in psychological contracts can be subscribed to cohort differences as well as aging (Schaie, 1986; Smola & Sutton, 2002). Another limitation is that although contract obligations and fulfillment were measured with a one-year time lag, work-related outcomes were measured at the same time as contract fulfillment.

Furthermore, a limitation of the study could be restriction of range; healthy worker effects could have influenced the results (Zapf, Dormann, & Frese, 1996). There is a selection effect of healthy people staying in the workforce and unhealthy people leaving the workforce. On the other hand, since older workers in the study are the healthy and motivated survivors, this study may be a study of survival behavior in organizations (Noonan, 2005). By reacting less intensely than younger workers to lack of developmental fulfillment, older workers may survive within the organization. It is well-known that older workers receive less development from their organizations (Simpson et al., 2002). Through emotion regulation, older workers may have become better in coping with unfulfillment of their psychological contracts (Bal et al., 2008; Carstensen et al., 1999).

A final limitation is that the study was based on self reports of employees. This increases the chance of common method variance, because all variables were rated by the same source. However, by employing a longitudinal design, this study has decreased the chance of common method bias. Although it has been suggested that common method bias is an "urban myth" (Spector, 2006), there is a need to investigate psychological contracts from different perspectives, such as employees, managers, and job recruiters at companies (Rousseau, 1995). This would provide for multiple perspectives on how psychological contracts (i.e. mutual obligations) are perceived by different parties within the employment relationship.

3.4.3 Suggestions for Future Research

This study focused on the moderating effects of age on work-related outcomes in terms of attitudes and intentions of employees; future research should also investigate relations between age, psychological contracts, and actual work behaviors, such as job performance, citizenship behaviors and employee turnover. According to the findings of Zhao et al. (2007),

psychological contract breach is related to work behaviors, and it may be expected that age also moderates these relations. Furthermore, it is necessary that future research investigates whether younger and older workers differ in their perceptions of other important factors at work, such as justice perceptions and trust. It is likely that in line with the current study, older workers react differently to justice perceptions than younger workers (Bal et al., 2008).

Due to shortages at the labor market and recent changes in retirement ages, more people will be working after the age of 65. However, older workers (age > 60) are underrepresented in psychological contract research to date. We therefore need additional research that includes employees with a wider age range in order to investigate more specifically how older workers perceive their psychological contracts compared to younger workers, and how the relationships between psychological contracts and attitudes and behaviors differ for younger and older workers. It is also important to investigate how psychological contracts develop when people continue working after the age of 65, since it is likely that more and more workers will be active after their 65th (Peterson & Spiker, 2005).

Next, age is a proxy of several age-related changes people experience, and refers to biological, psychological, social, and societal changes (De Lange, et al., 2006; Kooij, De Lange, Jansen, & Dijkers, 2008). For instance, age is linked to time spent within the organization or job (Wright & Bonett, 2002), family status (Roehling, Roehling, & Moen, 2001), and to a decrease of future time perspectives (Lang & Carstensen, 2002). Thus, the influence of age could be a proxy effect of other relevant age-related factors. Future research should in depth study how age-related factors, such as tenure and family status, are related to the psychological contract.

3.4.4 Practical implications

The results of the current study also have important implications for organizational practice. Managers should realize that younger and older workers have different perceptions of their relationship with the organization, and react differently to psychological contract fulfillments. For instance, when younger people are deprived of development, they show a higher turnover intention and lower work engagement than older workers.

Nowadays, it is argued that workers should develop themselves continuously, to stay employable throughout their careers. To establish this, managers should stimulate older workers to take part in training, and keep developing their careers. Whereas younger workers may leave the company after investments in training, older workers are more likely to stay in the organization and remain motivated by training. Moreover, younger workers react more

intensely to breach of their psychological contracts, by a stronger decrease in work engagement. In conclusion, to avoid decreases in engagement and increases in turnover intention among employees, organizations should design and implement human resource policies and practices in such a way that psychological contract breach is prevented. This can be obtained by offering both training and development, and inducements that maintain employees' position and current functioning.

3.4.5 Conclusion

This study showed that age plays an important role in the development and outcomes of the psychological contract. We integrated lifespan theory with psychological contract theory and found that when people grow older, their perceptions of their psychological contract with their organizations and their reactions towards contract fulfillment change. While generally younger workers react more strongly on fulfillment of developmental obligations, the effects of socio-emotional fulfillment depend both on employee age and perceptions of socio-emotional obligations. Our results reveal that future psychological contract theory and research can benefit from lifespan theory.

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Appendix A: Items used to measure the Psychological Contract

Socio-Emotional:

-
- 1 Freedom to job well
 - 2 Flexible working scheme
 - 3 Safe work environment
 - 4 Retirement benefits
 - 5 Respectful treatment
 - 6 Work-private balance
-

Development:

-
1. Support to learn new skills
 2. Career support and mentoring
 3. Up to date training and development
-

Chapter 4

Reciprocity in Psychological Contracts of Younger and Older Workers

This chapter is based on: Bal, P.M., Jansen, P.G.W., Van der Velde, M.E.G., & De Lange, A.H. (2009). *Reciprocity in Psychological Contracts of Younger and Older Workers*. Manuscript under review.

Abstract

This study investigates differences in reciprocity in psychological contracts between younger and older workers. Reciprocity in psychological contracts refers to an exchange of obligations between the employer and the employee. Based on previous work, three types of employer psychological contract obligations are examined: economic, socio-emotional, and developmental obligations. It was hypothesized that younger workers would react more strongly on employer economic and developmental obligations in relation to employee obligations, whereas older workers would react more strongly on employer socio-emotional obligations in relation to employee obligations. In a sample of workers varying in age from 22-79, hypotheses were tested using the temporary employees of several companies. Results largely supported the hypotheses, by showing that younger workers indeed have stronger reactions to employer economic and developmental obligations. Older workers reacted more strongly to employer socio-emotional obligations. Finally, receiving development may also increase felt obligations among older workers. The theoretical and practical implications are discussed.

4.1 Introduction

The current study investigates the relations between employer and employee psychological contract obligations. It focuses on differences in psychological contracts between younger and older workers. Due to the proportionate decline of younger workers in the labor market (Kanfer & Ackerman, 2004), organizations increasingly focus on attracting and retaining older workers. Consequently, research on age-related issues has grown significantly. However, few studies have focused on how age influences the obligations between employees and their organizations (Bal, De Lange, Jansen, & Van der Velde, 2008; Van der Heijden, Schalk, & Van Veldhoven, 2008). Instead, studies on psychological contracts typically focus solely on employer obligations (Conway & Briner, 2005; Zhao, Wayne, Glibkowski, & Bravo, 2007). Little attention is given to either the employee obligations or the two in combination (see for exceptions: Coyle-Shapiro & Kessler, 2002; Coyle-Shapiro & Neuman, 2004; Dabos & Rousseau, 2004; De Vos, Buyens, & Schalk, 2003). In this study, using a sample of temporary workers, we focus on how employer obligations relate to employee obligations because organizations make promises to temporary workers in order to influence employees' obligations to the organization (Coyle-Shapiro & Kessler, 2002; Rousseau, 1995).

The current study contributes to psychological contracts research by: (1) building a theoretical framework for investigating the interplay between employer and employee obligations, (2) furthering understanding of reciprocity in mutual obligations within the psychological contract by examining how employer obligations influence employee obligations, and (3) investigating age differences in the nature of reciprocity among younger and older, pre-retirement and post-retirement workers.

4.1.1 *The Psychological Contract*

According to Rousseau (1995, p.9), a psychological contract is “individual beliefs, shaped by the organization, regarding terms of an exchange agreement between individuals and their organization.” Terms of an individual's psychological contract include that person's understandings of his or her own as well as the employer's obligations (Dabos & Rousseau, 2004; Rousseau, 1995). Although the majority of studies focused on the employer's psychological contract obligations, the psychological contract itself consists of the employees' perceptions regarding the *mutual* obligations of both (Rousseau, 1995). Both employee and organization are perceived to have obligations towards each other, and it is assumed that these obligations are interdependent. High levels of employer obligations are related to higher levels of employee obligations (Coyle-Shapiro & Kessler, 2002).

Furthermore, employees form judgments regarding how well each party fulfills these obligations (Rousseau, 1995). Previous studies have shown that perceived obligations as well as fulfillment influence work-related outcomes. In particular, the combination of high obligations and high fulfillment predict outcomes beyond their main effects (Lambert, Edwards, & Cable, 2003; Sels, Janssens, & Van den Brande, 2004). Therefore, it is important to investigate both obligations and fulfillment in predicting outcomes.

Typically, the mechanisms underlying psychological contracts are explained by social exchange theory (Blau, 1964), and in particular the norm of reciprocity (Gouldner, 1960). People engage in social interactions and expect their efforts to be reciprocated by the other party. Organizations make promises to their employees to motivate them to put effort in their jobs and in supporting the organization (Rousseau, 1995, 2005). When employees perceive high employer obligations and employer fulfillment, they are more likely to feel obligated to reciprocate and hence increase their own obligations towards the organization (Coyle-Shapiro & Kessler, 2002). Previous studies have indeed shown that high levels of employer obligations and employer fulfillment are related to high levels of employee obligations (Coyle-Shapiro & Kessler, 2002; Coyle-Shapiro & Neuman, 2004; De Vos et al., 2003). However, these studies did not investigate specific patterns of reciprocation. In particular, the nature or content of the obligations involved has not been addressed. Employer obligations have been investigated as one single construct (i.e., not distinguishing between different categories of employer obligations), while researchers have shown that the obligations consist of multiple content types (Dabos & Rousseau, 2004; De Vos et al., 2003; Sels et al., 2004). This applied also to employee obligations. Moreover, many studies measure only one side of the psychological contract, the employee's own obligations for example, or what the employee believes the employer owes in return, but not both. Therefore, we present a theoretical framework of the multiple resources employees and employers exchange within the psychological contract.

4.1.2 *Types of Employer and Employee Obligations*

In his work on exchange of resources in social interactions, Foa (1971) distinguished six types of resources: money, goods, status, information, affiliation, and services (see also Parks, Conlon, Ang, & Bontempo, 1999; Teichman & Foa, 1975). Although Foa focused on exchange of resources in any social situation, in the current study we only focus on resource exchange in the employment relationship situation. Hence, resources are framed as exchanges between employee and organization. In the current study, we combined these six types into three types of employer obligations, being *economic*, *socio-emotional*, and *developmental* employer

obligations (see also Coyle-Shapiro & Conway, 2005). Economic obligations refer to money and goods employers offer to their employees, and salary and fringe benefits belong to this type of obligations. Socio-emotional obligations refer to affiliation and services employers provide to employees. These obligations concern how the organization treats its employees and create an optimal work environment (Parks et al., 1999). Finally, developmental obligations include status and information, and refer to obligations that enhance advancement and standing within the organization. Examples of developmental obligations are education, training and participation in decision making (De Vos et al., 2003).

With respect to employee obligations, employee contributions (i.e., resources) involve mainly effort put in the job or directed toward helping the employer (i.e., services as discussed by Foa, 1971; Organ, 1988). Therefore, employee obligations often entail effort directed toward in-role behaviors, job citizenship behaviors, and high performance (Van Dyne & LePine, 1998; Workman & Bommer, 2004). In-role obligations concern contributions involving working hard and efficiently and cooperation with colleagues. Citizenship obligations are contributions typically associated with extra-role behaviors (Organ, 1988), and involve commitments to help coworkers and the broader firm such as being flexible about hours and volunteering to do extra tasks. High performance obligations concern proactive contributions enhancing organizational performance in the long run. These obligations differ from in-role activities as they go beyond standard contributions, and differ from citizenship in that they are proactive rather than reactive, as in the case where a worker introduces a better way of producing a product or providing a service. To gain competitive advantage, organizations are increasingly dependent on proactive contributions from highly committed employees (Pfeffer, 1994). Increases in employer psychological contract obligations and employer fulfillment have been shown to lead to increases in respective employee obligations (Bal et al., 2008; Coyle-Shapiro & Kessler, 2002; Dabos & Rousseau, 2004).

4.1.3 *Age and Relations between Employer and Employee Obligations*

Age is an important factor in the dynamics of the psychological contract. Older workers differ from younger workers in their perceptions of psychological contract (Bal et al., 2008; Schalk, 2004). With their different work-related needs, older workers react differently from younger ones to what the organization promises and actually offers. Differences in needs and goals between younger and older workers are specified by research in lifespan psychology (Carstensen, Fung, & Charles, 2003; Carstensen, Isaacowitz, & Charles, 1999; Löckenhoff & Carstensen, 2004). According to the socioemotional selectivity theory (Carstensen et al., 1999,

2003), when people grow older, their future time perspectives decrease (Lang & Carstensen, 2002). Therefore, the feeling that ‘time is running out’ is salient. As a consequence, older people tend to focus increasingly on positive aspects of relationships with others, and to avoid negative aspects. Longitudinal research supports this idea of ‘emotional selectivity’ by finding that older people report less negative affectivity than younger people, whereas positive affectivity remains stable across the lifespan (Charles, Reynolds, & Gatz, 2001).

Research indicates that older and younger workers differ in the resources they find salient. For older people, the socio-emotional aspects of the exchange with the organization become more important, especially for those working after retirement (Feldman, 1994). Thus we expect socio-emotional obligations and fulfillment will have stronger impact on employee obligations among older workers than among younger workers (Lambert et al., 2003). Conversely, economic and developmental aspects of the job are more important among younger workers (Ebner, Freund, & Baltes, 2006; Freund, 2006). Younger workers primarily tend to seek maximization of economic gains and career development, enhancing their status and advancement within their organization and career. Therefore, employer obligations and fulfillment concerning economic and developmental aspects have stronger effects on employee obligations on the part of younger workers than for older workers (Simpson, Greller, & Stroh, 1999). Thus we hypothesize:

H1: The relations of employer economic obligations and fulfillment with employee obligations are stronger for younger workers than older workers.

H2: The relations of employer socio-emotional obligations and fulfillment with employee obligations are stronger for older workers than younger workers.

H3: The relations of employer developmental obligations and fulfillment with employee obligations are stronger for younger workers than older workers.

4.2 Method

4.2.1 Sample and Procedure

To overcome previous concerns regarding criteria defining a worker as “older” workers (Ng & Feldman, 2008), the current study assesses a wide age range from pre-retirement to post-retirement workers. The study was conducted in two organizations; one among a sample of pre-retirement temporary workers for a Dutch technical organization, and one among a sample of post-retirement workers working for an employment agency. All participants were temporary, having a comparable formal contract with their employer.

Pre-retirement temporary employees of a technical organization in the Netherlands were contacted in January 2008. Out of 250 total, 116 employees completed an online survey (response rate 46%). Their average age was 39 years (range 20-61); 74% of the respondents was male; 92% worked five days per week. Their mean organizational tenure was three years. The post-retirement workers were contacted through an employment agency specialized in workers aged 65 or older (the official retirement age in the Netherlands). These agency workers typically worked for long periods (i.e., one year or longer) in a single firm. In June 2007, 450 temporary employees were emailed and asked to fill out the online questionnaire, resulting in a response of 176 (response rate 39%). Comparisons revealed that the sample did not differ significantly from the agency's total employee population in terms of gender or mean age, tenure with the agency, education, and work hours per week. Workers in this second sample held various jobs from teaching to interim management. Their average age was 69 (range 65-79 years); 76% were male; they worked on average three days a week, and had been with the agency for three years. Of the respondents, 96% worked part-time.

The samples were combined into one sample of 292 respondents based upon evidence of comparability (below). Of the total sample, mean age was 57 years, 75% were male, 79% were married or cohabiting, and 63% worked part-time. The level of education varied and included primary education (3%), secondary education (35%), college degree (56%), and university degree (6%). The samples differed significantly in terms of age ($F = 1471.37$, $df = 290,1$, $p < .001$), and work status ($F = 40.50$, $df = 290,1$, $p < .001$), indicating that the post-retirement workers were older and worked more part-time. No differences existed on other demographics.

4.2.2 Measures

Questionnaires for both sets of respondents were identical. All items used a 5-point Likert scale, ranging from 'not at all' to 'to a very great extent'.

Employer Obligations. We measured three types of employer obligations: Economic, Socio-emotional, and Developmental Obligations. Respondents rated the extent to which they believed their employer, being the employment agency and/or the organization they currently worked for, was obliged to provide the contract elements (see De Vos et al., 2003). Because it may differ for each employee who is the contract maker, respondents were allowed to make their own assumptions regarding their employer (i.e., being the employment agency or the organization they currently work for). The items derived from previous psychological contract research (Appendix A; De Vos et al., 2003; Robinson, Kraatz, & Rousseau, 1994).

Economic Obligations (6 items) included obligations such as high salary and fringe benefits. Socio-emotional Obligations (5 items) are such obligations as flexible working scheme and respectful treatment. Developmental Obligations (6 items) include obligation of interesting work and training and development.

Employer Fulfillment. Employer fulfillment was measured using the same employer obligations. Respondents rated the extent the employer had actually fulfilled its obligations.

Employee Obligations. Three types of employee obligations were measured: In-role, Citizenship, and High Performance Obligations. The items were also based on previous work on psychological contracts (De Vos et al., 2003; Robinson et al., 1994). Employees indicated the extent to which they believed they were obliged to their employer (i.e., the employment agency and/or the organization), to provide a range of contributions. In-role Obligations (6 items) include quality of work and cooperating with colleagues. Citizenship Obligations (6 items) include being flexible about the work and working hours. High Performance Obligations (4 items) refer to looking for better ways of working and saving costs. Appendix B shows the items that were used for each employee obligation.

4.2.3 Demographic Variables

Age was measured as a continuous variable. In the analyses we further controlled for Sample (pre-retirement vs. post-retirement sample), Gender, Education, Marital Status, Work Status (part-time vs. full-time), and Organizational Tenure.

4.2.4 Analysis

To assess the construct validity of the nine psychological contract scales, a Confirmatory Factor Analysis was conducted, using Lisrel 8.80 (Jöreskog & Sörbom, 2008). Table 4.1 shows the results of the CFA. Five different models were tested. First, a nine-factor model was tested with the nine psychological contract scales under study (three employer obligations, three employer fulfillment, and three employee obligations). Subsequently, the model was compared to four other models (see Table 4.1). The nine-factor model resulted in a good fit ($\chi^2 = 2614.14$, $p < .001$; $df = 1046$; RMSEA = .07; CFI = .95; NNFI = .94), and proved to fit better than other models. All standardized factor loadings were higher than .47, ranging from .47 to .93. To investigate whether the samples could be combined into one sample, we conducted CFAs for both samples separately. Both the model of the pre-retirement employees ($\chi^2 = 352.43$, ns ; $df = 1046$; RMSEA = .01; CFI = 1.00; NNFI = 1.00), and the model of the post-

retirement employees ($\chi^2 = 1674.94$, $p < .001$; $df = 1046$; RMSEA = .06; CFI = .93; NNFI = .92) fitted well.

Table 4.1: *Confirmatory Factor Analysis of the Psychological Contract Items*

	Model	χ^2	Df	$\Delta \chi^2$	RMSEA	CFI	NNFI
1	Nine-factor	2614.14	1046	--	.07	.95	.94
2	Six-factor	5046.41	1091	2432.27***	.11	.87	.86
3	Three-factor	7576.16	1103	4962.02***	.14	.79	.77
4	Two-factor	9615.95	1105	7001.81***	.16	.73	.70
5	One-factor	13,463.32	1166	10,849.18***	.20	.61	.56

Note. *** $p < .001$; RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index; NNFI = Non-Normed Fit Index.

1: 9-factor: economic employer obligations, socio-emotional employer obligations, developmental employer obligations, economic employer fulfillment, socio-emotional employer fulfillment, developmental employer fulfillment, in-role employee obligations, citizenship employee obligations, high performance employee obligations.

2: Six-factor: economic employer obligations, socio-emotional employer obligations (socio-emotional + developmental), economic employer fulfillment, socio-emotional employer fulfillment (socio-emotional + developmental), in-role employee obligations, citizenship employee obligations (citizenship + high performance).

3: Three-factor: employer obligations, employer fulfillment, employee obligations.

4 Two-factors: employer obligations and fulfillment, employee obligations.

5: One-factor: all items together.

Cronbach's alphas ranged from .73 (Socio-emotional Employer Fulfillment) to .90 (Economic Employer Fulfillment) for the total sample. The Cronbach's alphas for the pre-retirement sample ranged from .70 (Employee High Performance Obligations) to .85 (Employer Economic Fulfillment). Alphas for the post-retirement sample ranged from .75 (Employer Socio-emotional Obligations) to .90 (Employer Economic Obligations). Since the same factor structure exists across samples, combining them to test hypotheses was deemed appropriate.

Hypotheses were tested using hierarchical moderated regression. Independent variables were centered to avoid multicollinearity (Aiken & West, 1991). In the first step, the demographic variables were entered. In the second step, the main effects of age, employer

obligations and employer fulfillment were entered. Subsequently, the two-way interactions between age, employer obligation and employer fulfillment were added to the model (step 3). Finally, the three-way interaction effect among age, employer obligation and employer fulfillment was entered (step 4), consistent with Lambert et al. (2003). The significant interaction effects were plotted following Aiken and West (1991), and simple slopes were calculated. Moreover, slope difference tests were conducted for the significant three-way interactions (Dawson & Richter, 2006). According to Rogers (2002), moderated regression often has low statistical power, and suffers from Type 2 errors. For this reason, a significance level of .10 tests for interaction (Aguinis, 2002; McClelland & Judd, 1993; Rogers, 2002).

4.2.5 Descriptive Statistics

Table 4.2 shows the means, standard deviations, coefficient alphas, and inter-correlations between the variables. Correlations between the psychological contract scales ranged from -.01 to .68. Although some scales are highly correlated, the factor analyses showed an orthogonal factor structure. Age was negatively related to Employer Economic Obligations ($r = -.22, p < .01$), Employer Socio-emotional Obligations ($r = -.26, p < .01$), Employer Developmental Obligations ($r = -.62, p < .01$), Employer Economic Fulfillment ($r = -.52, p < .01$), Employer Developmental Fulfillment ($r = -.59, p < .01$), Employee Citizenship Obligations ($r = -.28, p < .01$), and to Employee High Performance Obligations ($r = -.28, p < .01$), indicating that in general older workers report themselves likely to receive economic inducements and developmental opportunities.

Table 4.2 Correlations between the Variables under Study and Cronbach's alphas

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Gender	1.75	.43	--														
2 Age	57.03	16.15	.10	--													
3 Marital Status	.21	.40	-.32	-.10	--												
4 Education	3.82	1.50	.09	-.07	.09	--											
5 Work status	1.37	.48	.05	-.68	.09	-.02	--										
6 Organizational Tenure	3.11	2.58	.06	.08	-.02	-.08	.02	--									
7 ER Economic	3.43	.89	-.01	-.22	.06	.05	.18	.18	.89								
8 ER Socio-emotional	3.90	.61	.05	-.26	.02	-.03	.16	.16	.39	.75							
9 ER Developmental	3.19	.93	-.00	-.62	.05	.07	.55	.55	.54	.54	.88						
10 ERF Economic	2.51	.91	-.02	-.52	-.02	-.09	.50	.49	.12	.15	.35	.90					
11 ERF Socio-emotional	3.65	.62	.07	-.01	-.02	-.12	-.02	-.02	-.01	.32	.02	.27	.73				
12 ERF Developmental	2.66	.93	-.04	-.59	.01	-.08	.55	.55	.12	.31	.57	.68	.35	.89			
13 EE In-role	4.23	.46	-.02	-.03	-.02	.05	-.01	-.01	.20	.37	.14	.08	.40	.14	.84		
14 EE Citizenship	3.39	.68	.07	-.28	-.05	.06	.29	.29	.09	.28	.28	.23	.23	.29	.42	.80	
15 EE High Performance	3.73	.75	.05	-.28	-.01	.08	.24	.24	.37	.43	.45	.16	.21	.35	.46	.61	.86

Note. Correlations larger than .11, $p < .05$, correlations larger than .15, $p < .01$. Values in bold along the main diagonal are coefficient alphas for scaled variables. M = Mean; SD = Standard Deviation; ER = Employer obligations; ERF = Employer fulfillment; EE = Employee obligations. Gender: 1 = female, 2 = male. Marital Status: 1 = married or cohabiting, 2 = single. Education: scale from 1 = primary education to 7 = college degree. Work Status: 1 = parttime, 2 = fulltime.

4.3 Results

H1: The relations of employer economic obligations and fulfillment with employee obligations are stronger for younger workers than older workers. The results of the hypothesis are shown in Table 4.3. Age did not moderate the relations between Employer Economic Obligations and Fulfillment and Employee In-role Obligations. However, Age moderated the relation between Employer Economic Fulfillment and Employee Citizenship Obligations ($\beta = -.11, p < .10, \Delta R^2 = .02$). The interaction effect is plotted in Figure 4.1. Employer Economic Fulfillment had stronger positive effect on Employee Citizenship Obligations among younger workers ($\beta = .30, p < .01$) than among older workers ($\beta = -.06, ns$). Furthermore, the three-way interaction effect among Age, Employer Economic Fulfillment and Employer Economic Obligations in Citizenship Obligations was also significant ($\beta = -.16, p < .10, \Delta R^2 = .01$). The interaction is graphically presented in Figure 4.2. The relation between Employer Economic Fulfillment and Employee Citizenship Obligations was positive among younger workers with high Employer Economic Obligations ($\beta = .43, p < .01$), whereas the corresponding relation for older workers and younger workers with low Employer Economic Obligations was non-significant. Slope difference tests revealed that the slope of the younger workers with high Employer Economic Obligations differed significant from the slope of the older workers with high Employer Economic Obligations ($t = -3.23, p < .001$), the slope of the older workers with low Employer Economic Obligations ($t = 2.34, p < .05$), and the slope of the younger workers with low Employer Economic Obligations ($t = 1.96, p < .05$).

Finally, the three-way interaction among Age, Employer Economic Fulfillment and Employer Economic Obligations was significantly related to Employee High Performance Obligations ($\beta = -.17, p < .05, \Delta R^2 = .01$). The interaction effect is plotted in Figure 4.3. A positive relation of Employer Economic Fulfillment was found for younger workers with high Employer Economic Obligations ($\beta = .22, p < .05$), whereas the relations were negative for older workers with high Employer Economic Obligations ($\beta = -.29, p < .05$) and non-significant for younger workers with low Employer Economic Obligations ($\beta = -.15, ns$) and for older workers with low Employer Economic Obligations ($\beta = .05, ns$). Slope difference tests revealed that the slope of younger workers with high Employer Economic Obligations differed significantly from the slope of older workers with high Employer Economic Obligations ($t = -2.67, p < .01$). In sum, the first hypothesis is supported for Employee Citizenship and High Performance Obligations, where younger workers react more strongly to Employer Economic Fulfillment.

Table 4.3: Regression analysis of employee obligations on economic employer obligations and fulfillment, and their interactions with age ($N = 292$)

		Employee Obligations					
		In-role		Citizenship		High Performance	
		β	R^2	β	R^2	β	R^2
Step 1	Sample	.03		.14		.24	
	Gender	-.03		.04		.05	
	Marital Status	-.04		-.06		.00	
	Education	.05		.06		.05	
	Work Status	-.02		.17		-.05	
	Organizational Tenure	-.03		-.01		-.08	
			.01		.10		.10
Step 2	Age	-.09		-.10		.03	
	Employer Economic Obligations	.15 ⁺		-.05		.19**	
	Employer Economic Fulfillment	.11		.08		-.04	
			.06		.11		.19
Step 3	Age * Employer Economic Obligations	-.03		.02		.08	
	Age * Employer Economic Fulfillment	-.04		-.11 ⁺		-.06	
	Employer Economic Obligations *	.00		.06		.01	
	Employer Economic Fulfillment						
			.07		.13		.21
Step 4	Age * Employer Economic Obligations * Employer Economic Fulfillment	-.12		-.16 ⁺		-.17*	
			.07		.14		.22

Note. Standardized regression coefficients are reported. ⁺ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

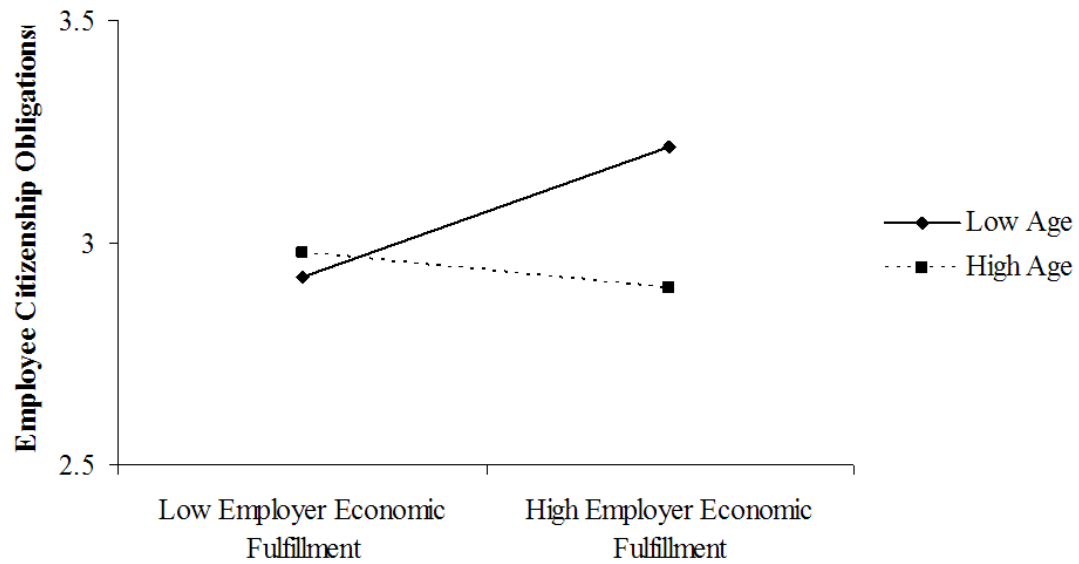


Figure 4.1: The Two-Way Interaction between Employer Economic Fulfillment and Age on Employee Extra-role Obligations

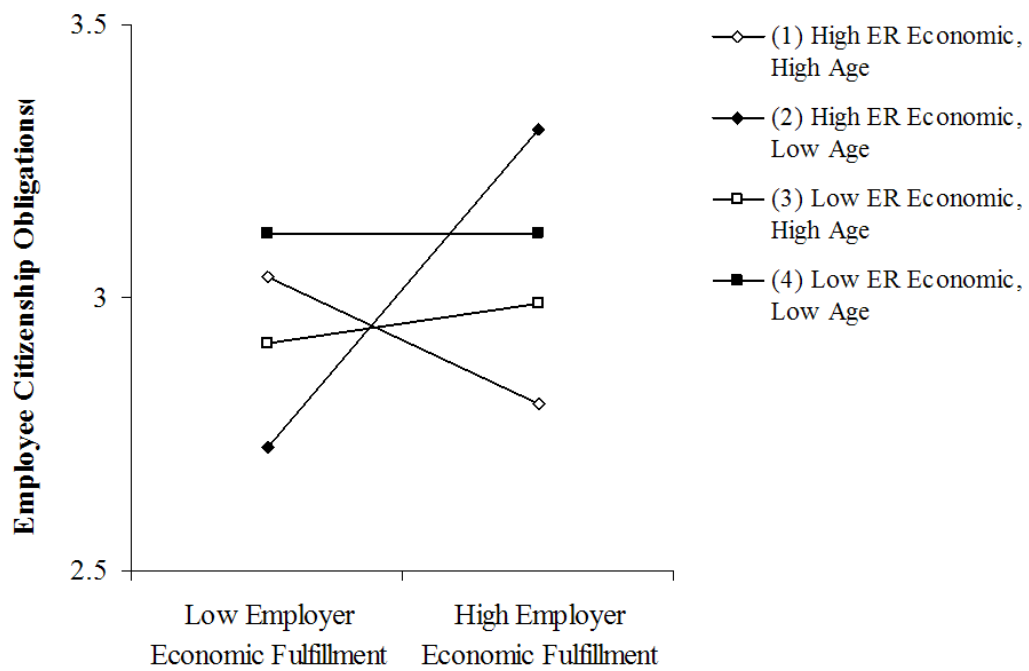


Figure 4.2: The Three-Way Interaction between Employer Economic Fulfillment, Employer Economic Obligations, and Age on Employee Extra-role Obligations. ER Economic = Employer Economic Obligations

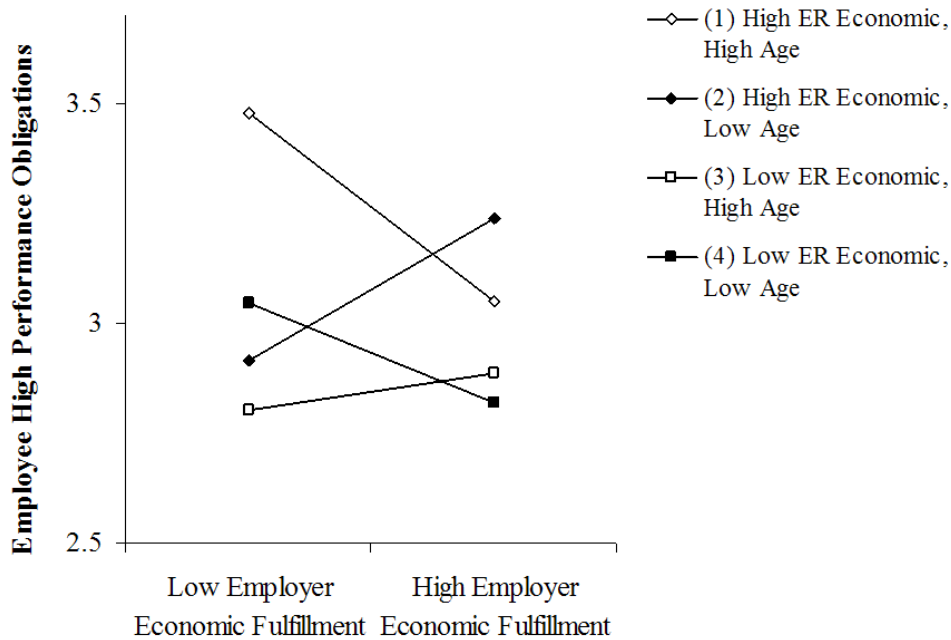


Figure 4.3: The Three-Way Interaction between Employer Economic Fulfillment, Employer Economic Obligations, and Age on Employee High Commitment Obligations. ER Economic = Employer Economic Obligations

H2: The relations of employer socio-emotional obligations and fulfillment with employee obligations are stronger for older workers than younger workers. The results of the second hypothesis are shown in Table 4.4. Age interacted with Employer Socio-emotional Fulfillment and Employer Socio-emotional Obligations in predicting Employee In-role Obligations ($\beta = .13, p < .10, \Delta R^2 = .01$). The interaction effect is graphically represented in Figure 4.4. The relation between Employer Socio-emotional Fulfillment and Employee In-role Obligations was strongest among older workers with high Employer Socio-emotional Obligations ($\beta = .50, p < .001$), and weakest among younger workers with high Employer Socio-emotional Obligations ($\beta = .24, p < .05$). Slope difference tests revealed that the slope of older workers with high Employer Socio-emotional Obligations differed significantly from the slope of younger workers with high Employer Socio-emotional Obligations ($t = 4.24, p < .001$).

Furthermore, Age moderated the relation between Employer Socio-emotional Obligations and Employee Citizenship Obligations ($\beta = .10, p < .10, \Delta R^2 = .01$). The interaction is plotted in Figure 4.5. The relation was positive for older workers ($\beta = .33, p < .001$), but non-significant for younger workers ($\beta = .08, ns$), such that older workers with low Employer Socio-emotional Obligations had lower Employee Citizenship Obligations. Finally, Age

moderated the relation between Employer Socio-emotional Obligations and Employee High Performance Obligations ($\beta = .15, p < .01, \Delta R^2 = .02$). The interaction effect is plotted in Figure 4.6. The relation was strongly positive for older workers ($\beta = .51, p < .001$), and less strongly positive for younger workers ($\beta = .19, p < .05$). In sum, hypothesis 2 is supported. The relations between Employer Socio-emotional Obligations and Fulfillment and Employee Obligations are stronger for older workers than for younger workers.

Table 4.4: Regression analysis of employee obligations on socio-emotional employer obligations and fulfillment, and their interactions with age (N = 292)

		Employee Obligations					
		In-role		Citizenship		High Performance	
		β	R^2	β	R^2	β	R^2
Step 1	Sample	.03		.14		.24	
	Gender	-.03		.04		.05	
	Marital Status	-.04		-.06		.00	
	Education	.05		.06		.05	
	Work Status	-.02		.17		-.05	
	Organizational Tenure	-.03		-.01		-.08	
			.01		.10		.10
Step 2	Age	-.00		-.15		.05	
	Employer Socio-emotional Obligations	.29***		.16**		.34**	
	Employer Socio-emotional Fulfillment	.36***		.19**		.08	
			.24		.19		.25
Step 3	Age * Employer Socio-emotional Obligations	-.02		.10 ⁺		.15**	
	Age * Employer Socio-emotional Fulfillment	.04		-.01		-.06	
	Employer Socio-emotional Obligations * Employer Socio-emotional Fulfillment	.01		.02		.03	
			.25		.20		.27
Step 4	Age * Employer Socio-emotional Obligations *	.13 ⁺		.02		-.07	
	Employer Socio-emotional Fulfillment						
			.26		.20		.27

Note. Standardized regression coefficients are reported. ⁺ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

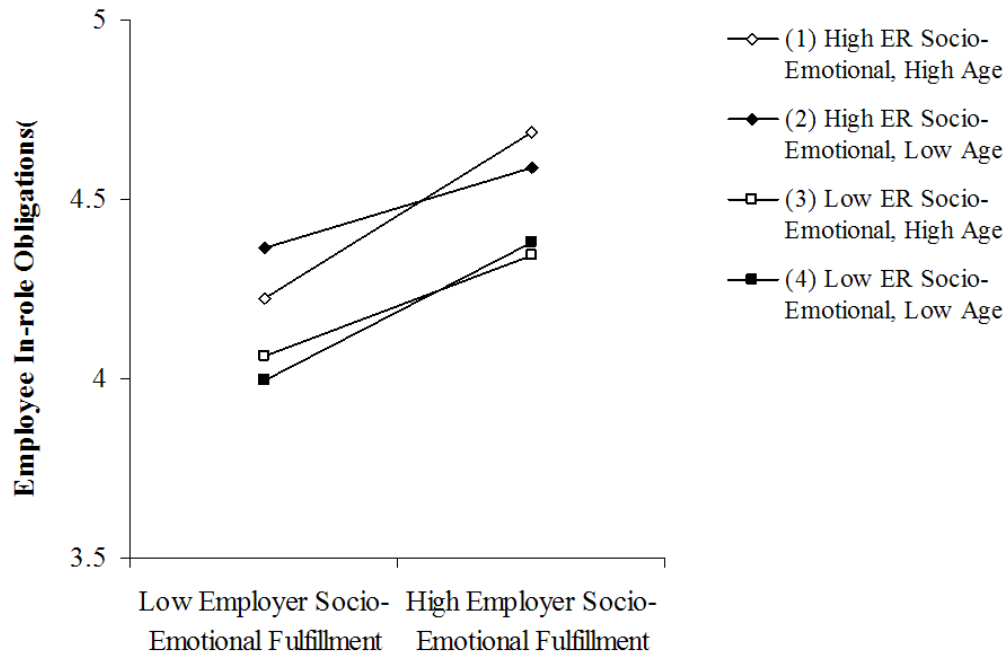


Figure 4.4: The Three-Way Interaction between Employer Socio-emotional Fulfillment, Employer Socio-emotional Obligations, and Age on Employee In-role Obligations. ER Socio-Emotional = Employer Socio-Emotional Obligations

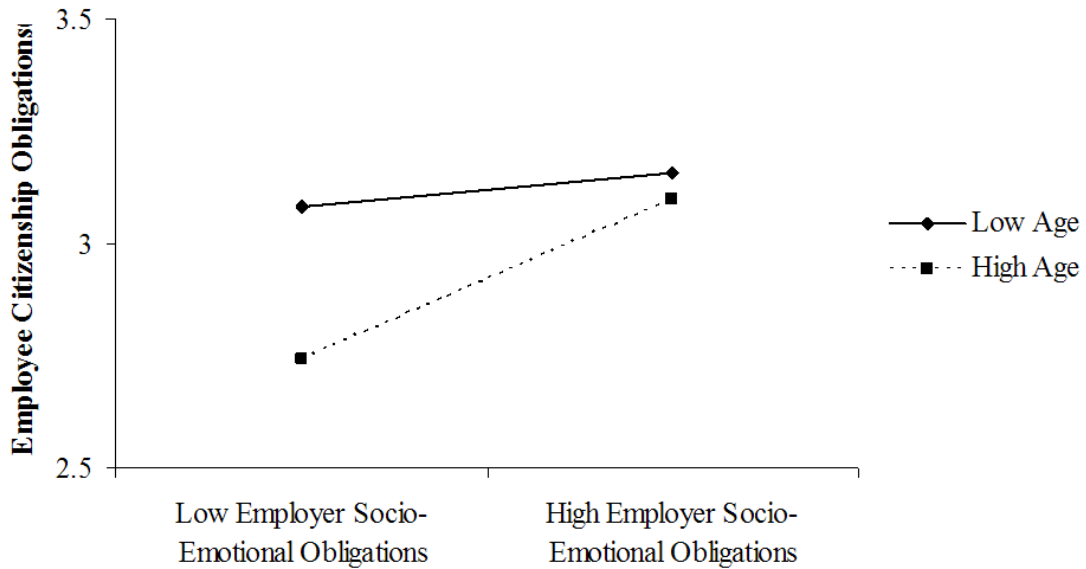


Figure 4.5: The Two-Way Interaction between Employer Socio-emotional Obligations and Age on Employee Extra-role Obligations

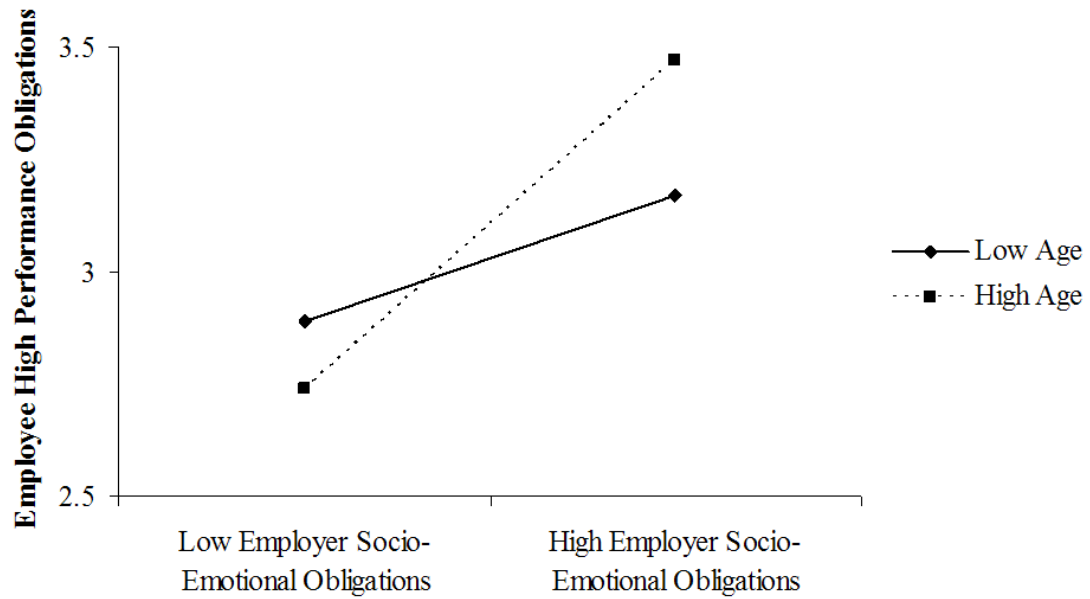


Figure 4.6: The Two-Way Interaction between Employer Socio-emotional Obligations and Age on Employee High Commitment Obligations

H3: The relations of employer developmental obligations and fulfillment with employee obligations are stronger for younger workers than older workers. The results of the third hypothesis are shown in Table 4.5. Age moderated the relation between Employer Developmental Obligations and Employee In-role Obligations ($\beta = -.14, p < .10, \Delta R^2 = .01$). The interaction effect is shown in Figure 4.7. The relation was not significant for older workers ($\beta = .15, ns$), but positive for younger workers ($\beta = .37, p < .01$), such that an increase in Employer Developmental Obligations was related to higher Employee In-role Obligations. Age did not moderate the relations between Employer Developmental Obligations and Fulfillment and Employee Citizenship Obligations.

Finally, there was a significant three-way interaction effect among Age, Employer Developmental Fulfillment, and Employer Developmental Obligations on Employee High Performance Obligations ($\beta = -.29, p < .01, \Delta R^2 = .02$). The interaction is presented in Figure 4.8. There was a positive effect of Employer Developmental Fulfillment on Employee High Performance Obligations for older workers with low Employer Developmental Obligations ($\beta = .39, p < .01$), and for younger workers with high Employer Developmental Obligations ($\beta = .19, p < .05$), whereas the other slopes were non-significant (older workers, high Employer Developmental Obligations: $\beta = -.18, ns$; younger workers, low Employer Developmental Obligations: $\beta = -.23, ns$). Slope difference tests showed that the slope of older workers with low Employer Developmental Obligations differed significantly from the slope of older

workers with high Employer Developmental Obligations ($t = -2.58, p < .01$), and the slope of younger workers with low Employer Developmental Obligations ($t = 1.98, p < .05$).

In sum, the third hypothesis is partly supported; Age only moderated the relationship of Employer Developmental Obligations with In-role Obligations in the expected direction (where younger workers have stronger reactions). However, positive relations between Employer Developmental Fulfillment and Employee High Performance Obligations were also found for older workers with low Employer Developmental Obligations.

Table 4.5: Regression analysis of employee obligations on developmental employer obligations and fulfillment, and their interactions with age (N = 292).

		Employee Obligations					
		In-role		Citizenship		High Performance	
		β	R^2	β	R^2	β	R^2
Step 1	Sample	.03		.14		.24	
	Gender	-.03		.04		.05	
	Marital Status	-.04		-.06		.00	
	Education	.05		.06		.05	
	Work Status	-.02		.17		-.05	
	Organizational Tenure	-.03		-.01		-.08	
			.01		.10		.10
Step 2	Age	.10		-.21		.09	
	Employer Developmental Obligations	.15		.05		.17 ⁺	
	Employer Developmental Fulfillment	.16 ⁺		.10		.04	
			.06		.13		.23
Step 3	Age * Employer Developmental Obligations	-.14 ⁺		.07		.09	
	Age * Employer Developmental Fulfillment	-.03		.04		.05	
	Employer Developmental Obligations * Employer Developmental Fulfillment	-.08		.06		-.04	
			.07		.13		.24
Step 4	Age * Employer Developmental Obligations * Employer Developmental Fulfillment	-.10		-.11		-.29**	
			.07		.14		.26

Note. Standardized regression coefficients are reported. ⁺ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

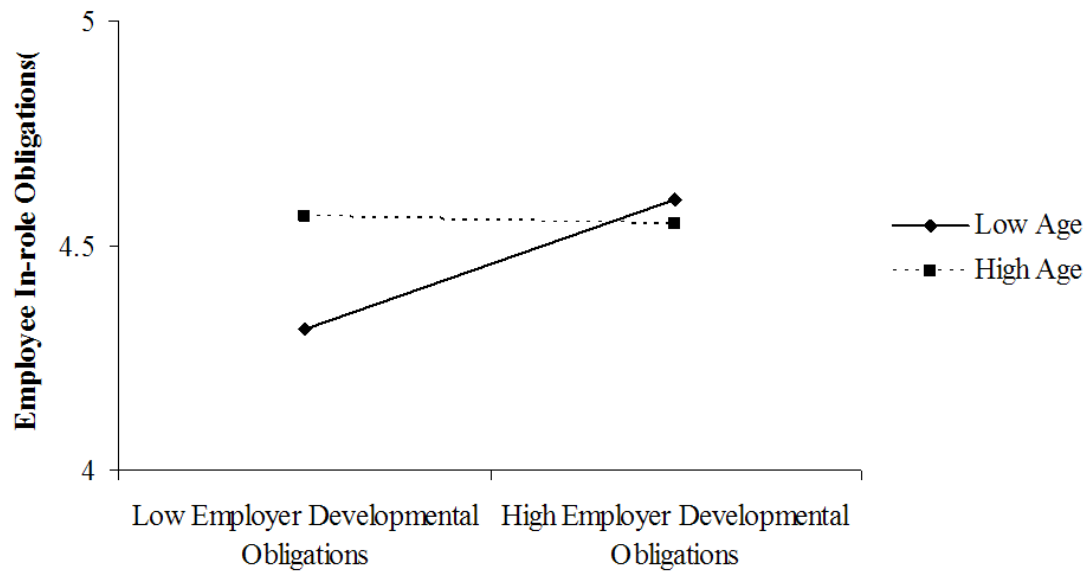


Figure 4.7: The Two-Way Interaction between Employer Developmental Obligations and Age on Employee In-role Obligations

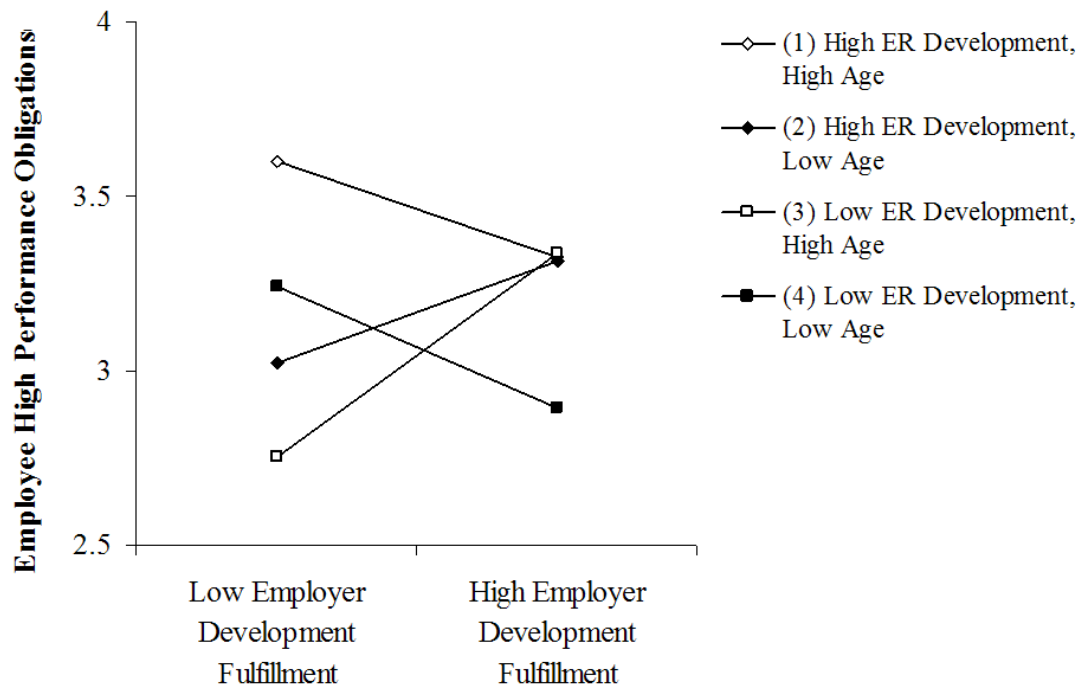


Figure 4.8: The Three-Way Interaction between Employer Developmental Fulfillment, Employer Developmental Obligations, and Age on Employee High Commitment Obligations. ER Development = Employer Development Obligations.

4.4 Discussion

People differ in what they most value and respond to in their relation with their employer. These differences are related to employee's age. The study showed that economic and developmental aspects of their work motivate younger workers to engage in citizenship and high performance behaviors. To achieve knowledge-related goals younger workers set for themselves (Ebner et al., 2006), they appear inclined to reciprocate higher obligations and contributions from their employers regarding development and economic gains, which in turn help younger workers enhance their career and learning. Furthermore, socio-emotional aspects in their work motivate older workers in putting extra effort to support peers and the organization. Freedom, flexibility and good work-nonwork balance address older workers' needs for positive work environment, and in line with the norm of reciprocity, they in turn respond with contributions of citizenship and high performance. To gain competitive advantage, organizations focus on stimulating high performance behaviors among employees (Pfeffer, 1994). An approach based on employee age and career stage increases employee high performance obligations.

Previously, demographic influences on psychological contracts have largely been overlooked. The current study provides a first step in identifying the boundaries around the dynamics associated with psychological contracts. The present study provides theory and empirical evidence that age plays a moderating role in psychological contract processes. This links to recent work on idiosyncratic deals (Hornung, Rousseau, & Glaser, 2008; Rousseau, 2005), in how workers seek out different resources in employment that fulfill personal needs and preferences. A practical implication is to prepare employers to get more value out of resources by being flexible in face of different needs and interests of younger and older workers. Employers and managers in age-diverse organizations are encouraged to be more flexible towards different needs of age groups and use more idiosyncratic deals.

Reciprocity takes different forms for younger and older workers. Although employers may assume that it gives to the employee and gets something back from the employee, younger workers do not necessarily feel compelled to reciprocate the same resources that older workers do. It would be interesting to further investigate how older workers negotiate their psychological contracts with their organization, and how this process differs from how younger workers negotiate. Recent work on idiosyncratic deals between workers and their organization suggest that older workers differ from younger workers in the kinds of individualized deals they create with their organization (Hornung et al., 2008; Rousseau, 2005). Renegotiating their psychological contracts, particularly through idiosyncratic deals, can make

it possible for older workers to continue working and make contributions to their employer. In achieving such outcomes, creating effective psychological contracts among older workers can help address an important challenge in the contemporary work force in Europe and North-America (European Commission, 2005; Kanfer & Ackerman, 2004).

Finally, the study affirms that the psychological contract consists of multiple dimensions. Beyond the traditional distinction between transactional and relational contracts, exchange is fundamentally about resources. It makes sense to characterize psychological contracts based on resources exchanged (Parks et al., 1999). Psychological contract theory can benefit from a focus on resources. Concomitantly, psychological contract measurement should address a more complete array of resources exchanged in employment.

4.4.1 Practical Implications

The study has several practical implications for organizations and managers. Nowadays it is important for organizations to retain and motivate their older workers, even beyond retirement age. This study showed that organizations should take different approaches in motivating younger and older workers. Although both younger and older workers feel obligated to contribute to in-role performance, younger workers are especially motivated by economic and developmental inducements, whereas older workers felt obligations are stimulated by socio-emotional aspects within the job. Managers should also note that offering development to older workers enhances their pro-socio-emotional behaviors.

4.4.2 Limitations and Research Suggestions

Several limitations of the study should be acknowledged. First, since the study was based on cross-sectional data, causal inferences cannot be made. Longitudinal studies are needed (e.g., Coyle-Shapiro & Kessler, 2002). Furthermore, the results cannot be assumed to generalize to the broad working population, since they are based on temporary workers. Full-time, regular workers may have different psychological contracts with their organizations. Moreover, the study was conducted in the Netherlands. In other societies with other pension systems and healthcare benefit schemes, results could differ.

This study did not distinguish between fulfillment and overfulfillment. It may be that employees react even stronger on overfulfilled psychological contract obligations. Therefore, future research should incorporate the whole range of contract fulfillment. Finally, the current study measured solely employee's psychological contracts. Future studies should also measure

organizational perceptions, by for instance measuring contract obligations as perceived by managers and other employer representatives.

4.4.3 Conclusion

This study provides insight into boundary conditions surrounding reciprocity in psychological contracts between employees and organizations. Younger workers differ from older workers in the types of resources that engender reciprocity. Organizations may benefit from more flexibly targeting resources to particular segments of their workforce.

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Appendix A: Employer Obligations and Fulfillment Items and their Factor Loadings

		Factor loadings CFA		
Employer Obligations		Economic Obligations	Socio- emotional Obligations	Developmental Obligations
1	Pay increase to maintain standards of living	.68		
2	Fair pay in comparison to employees doing similar work	.92		
3	Fair pay for the responsibilities of the job	.92		
4	Fringe benefits	.80		
5	High salary	.66		
6	Pay for performance	.75		
7	Freedom to the job well		.73	
8	Flexible working scheme		.58	
9	Safe work environment		.76	
10	Respectful treatment		.76	
11	Good work-private balance		.51	
12	Interesting work			.60
13	Participation in decision making			.80
14	Support to learn new skills			.82
15	Up to date training and development			.83
16	Career support and mentoring			.86
17	Challenging job			.72
Cronbach's α		.89	.75	.88

		Factor loadings CFA		
Employer Fulfillment		Economic Fulfillment	Socio-emotional Fulfillment	Developmental Fulfillment
1	Pay increase to maintain standards of living	.85		
2	Fair pay in comparison to employees doing similar work	.83		
3	Fair pay for the responsibilities of the job	.82		
4	Fringe benefits	.67		
5	High salary	.88		
6	Pay for performance	.78		
7	Freedom to the job well		.84	
8	Flexible working scheme		.56	
9	Safe work environment		.54	
10	Respectful treatment		.47	
11	Good work-private balance		.59	
12	Interesting work			.65
13	Participation in decision making			.64
14	Support to learn new skills			.84
15	Up to date training and development			.87
16	Career support and mentoring			.88
17	Challenging job			.75
Cronbach's α		.90	.73	.89

Appendix B: Employee Obligations Items and their Factor Loadings.

Employee Obligations		Factor loadings CFA		
		In-role	Citizenship	High Performance
1	Work hard and efficient	.75		
2	Cooperate well with colleagues	.93		
3	Assist colleagues	.80		
4	Deliver quality in your work	.81		
5	Share information with colleagues	.70		
6	Get along well with colleagues	.61		
7	Work extra hours if necessary		.71	
8	Volunteer tasks that are not part of your job		.78	
9	Be flexible about what is part of the job		.75	
10	Be flexible in work hours		.70	
11	Work unpaid hours to finish a task		.51	
12	Accept a transfer to another project/department		.58	
13	Look for better ways of doing the job			.83
14	Look for better ways of working within the department			.82
15	Look for ways to save costs			.70
16	Adapt to changes in the way how the work is done			.77
α		.84	.80	.86

Chapter 5

Age and trust as moderators in the relation between procedural justice and turnover: a large-scale longitudinal study

This chapter is based on: Bal, P.M., De Lange, A.H., Ybema, J.F., Jansen, P.G.W., & Van der Velde, M.E.G. (2009). *Age and trust as moderators in the relation between procedural justice and turnover: a large-scale longitudinal study*. Manuscript under review.

Abstract

In the current study we investigated the moderating roles of age and trust on the effect of procedural justice on turnover. We suggested that older workers and those with high prior trust in their organization are able to buffer the impact of procedural justice on turnover. Older workers tend to avoid negative events, and therefore react less intensely to unfair treatment. Moreover, people with high trust attribute unfair treatment to circumstances rather than deliberate intention. Results from a three-wave longitudinal large-scale survey among a representative sample from the Dutch working population showed a significant three-way interaction among age, trust and procedural justice in predicting turnover. Among all younger workers, and among older workers with low trust in their organization, a negative relation was found between procedural justice and turnover, whereas the relation was not significant between procedural justice and turnover for older workers with high trust. The theoretical and practical implications are discussed.

5.1 Introduction

Due to the growing number of older workers on the labor market, organizations are increasingly aware of the fact that it is important to retain their older workers (European Commission, 2005; Kanfer & Ackerman, 2004). It is therefore not surprising that age has become an important factor in organizational research (Greller & Stroh, 1995; Kanfer & Ackerman, 2004; Sterns & Camp, 1998). In particular, recent studies have focused on how older workers differ from younger workers in their reactions to organizational justice (Bal, De Lange, Jansen, & Van der Velde, 2008; Van der Heijden, Schalk, & Van Veldhoven, 2008). Older workers may react differently to justice compared to younger workers (Farr & Ringseis, 2002). Due to changes in socio-emotional functioning, older workers tend to avoid negative events, and focus increasingly on positive aspects of their relationship with the organization (Löckenhoff & Carstensen, 2004). Therefore, they react less intensely to unfair treatment by the employer.

Moreover, researchers have argued that trust may also moderate the relationship between procedural justice and turnover (Chiaburu & Marinova, 2006; Robinson, 1996), indicating that high prior trust in the organization buffers the negative impact of low procedural justice on turnover. However, few studies have actually investigated the combined roles of age and trust in the processes that lead from justice perceptions to employee turnover (Bal et al., 2008; Warr, 2001). Therefore, in the current paper we focus on the interplay between age and trust as moderators in the relations between procedural justice on turnover. Based on a longitudinal study of a representative sample of the Dutch working population, the hypotheses were tested that age and trust would moderate the relations between procedural justice and turnover.

5.1.1 Procedural Justice and Turnover

The organizational justice literature is influenced by the work of Homans (1961) and Adams (1965), who studied the concept of distributive justice. Distributive justice refers to the perceived fairness of organizational outcomes (Cohen-Charash & Spector, 2001). Building on distributive justice research, the focus shifted in the 1970s to the fairness of the process through which allocations are made. This perceived fairness of the procedures used to make decisions is referred to as procedural justice (Lind & Tyler, 1988; Thibaut & Walker, 1975). It is important for employees that their organizations treat them procedurally fair because it signals that the employees are being valued as member of the organization (Lind & Tyler, 1988; Pearce, Bigley, & Branyiczki, 1998; Posthuma, Maertz Jr., & Dworkin, 2007; Siers,

2007). Conversely, unfair procedural treatment may enhance the feeling that one is not valued as member of the organization.

According to social exchange theory (Cropanzano & Mitchell, 2005; Gouldner, 1960), employees expect that their contributions to the organization should be proportional to what the organization offers. If the employer treats employees procedurally unfair, this norm of reciprocity is harmed (Gouldner, 1960). In line with psychological contract theory, unfair treatment is a breach of the psychological contract between the employee and the organization (Rousseau, 1995). Since procedural justice refers to how the *organization* treats the employees, employee responses will be directed towards the organization, including reactions such as decreased organizational citizenship behaviors and increased turnover (Cropanzano & Mitchell, 2005; Lavelle, Rupp, & Brockner, 2007).

Previous studies have shown negative relationships between procedural justice and turnover, indicating that decreases in procedural justice lead to higher turnover (Aquino, Griffeth, Allen, & Hom, 1997; Griffeth, Hom, & Gaertner, 2000; Hendrix, Robbins, Miller, & Summers, 1998; Posthuma et al., 2007). Therefore, we expect that procedural justice relates negatively to turnover in the following year. The first hypothesis is:

H1: Procedural justice is negatively related to turnover in the following year.

5.1.2 Age as a Moderator in the Relations between Procedural Justice and Turnover

Before we discuss the moderating role of age in the relations between procedural justice and turnover, we expect a main effect of age on turnover. Turnover may be lower among older workers compared to younger workers (Hedge, Borman, & Lammlein, 2006; Turnley & Feldman, 1999). Older workers are more embedded within their jobs and therefore have lower needs to change jobs (Feldman, 2007; Mitchell, Holtom, Lee, Sablinski, & Erez, 2001). Moreover, they experience more difficulties in finding new jobs because they suffer from negative stereotyping and age discrimination (Posthuma & Campion, 2008). Therefore, we expect that older workers have lower turnover than younger workers. The second hypothesis is:

H2: Age is negatively related to turnover.

Previous research has shown that the relations between procedural justice and outcomes are moderated by individual differences (Fischer & Smith, 2006). In the current study we

expect that the effects of procedural justice may differ between younger and older workers. Based on the Socio-emotional Selectivity Theory (SST) of Carstensen and colleagues, it is plausible to assume age-related differences in these relations (Carstensen, Fung, & Charles, 2003; Carstensen, Isaacowitz & Charles, 1999; Löckenhoff & Carstensen, 2004). According to Carstensen et al. (1999, 2003), in young adulthood time is perceived as expansive. Young people prepare for a long and unknown future, and hence their goals are primarily developmental related (Löckenhoff & Carstensen, 2004). However, future time perspectives decrease with age (Lang & Carstensen, 2002), causing an increased focus on the present, and in particular on existing personal relationships (Carstensen et al., 2003). The perception of approaching retirement may be characterized by an effort of making experiences more directly positive. More specifically, older people focus increasingly on immediate positive aspects of work and the long-term relationship with their organization. Longitudinal research supports this idea of ‘emotional selectivity’ by finding that older people report less negative affectivity than younger people, whereas positive affectivity remains stable across the lifespan (Carstensen, Pasupathi, Mayr, & Nesselroade, 2000; Charles, Reynolds, & Gatz, 2001).

Moreover, research has shown that older workers are quicker in returning to positive moods after negative events than younger workers (Carstensen et al., 2000). In other words, although negative events (e.g., unfair treatment) may happen at the workplace, older workers tend to ignore these events, and focus on positive aspects of their work and organization. Therefore, the effects of procedural justice on turnover may be most prominent among younger workers and less among older workers. Support for this notion has been shown in a recent meta-analysis of Bal et al. (2008), who found that the (negative) relations between psychological contract breach and trust and affective commitment were stronger among younger workers compared to older workers. The third hypothesis is:

H3: Age moderates the relation between procedural justice and turnover, with the strongest relations among younger workers.

5.1.3 Prior Trust as a Moderator in the Relation between Procedural Justice and Turnover

In addition to age, trust in the organization has been proposed as a moderator in the relation between procedural justice and turnover (Dirks & Ferrin, 2002). Previous research has shown that trust is an important factor in turnover decisions following unfair treatment (Guest, 2004; Van den Bos, Wilke & Lind, 1998). Trust can be defined as “an individual propensity to trust and an individual’s expectations about a trustee’s future behavior” (Dunn

& Schweitzer, 2005). In two experiments, Van den Bos and colleagues (1998) showed that the effects of procedural justice depend on the level of trust people have in an authority. Because people tend to evaluate events confirming existing beliefs and attitudes, unfair treatment is perceived as less severe and intentional when people have high prior trust in their employers (Fiske & Taylor, 1984; Van den Bos et al., 1998). Therefore, employees with high trust in their employer may attribute unfair treatment to circumstances rather than deliberate intention of the employer (Robinson, 1996). In this way, the effects of procedural justice on turnover are buffered by the high trust people have, and hence they are more likely to stay with their organizations. Thus, although people may feel that they have been treated unfairly by their employers, they do not leave their organization when they have a high trust-based relationship with their employer. Indeed, Chiaburu and Marinova (2006) found significant interactive buffer effects of trust on the relation between justice and organizational citizenship behaviors. Therefore, the fourth hypothesis is:

H4: Prior trust moderates the relation between procedural justice and turnover, with the strongest relations for those with low prior trust.

5.1.4 Age and Trust as Moderators in the Relations Between Procedural Justice and Turnover

Finally, it can be argued that trust buffers the relation between procedural justice and turnover mainly among the older workers. It has been shown that older workers are more concerned with their long-term relationship with the organization (Löckenhoff & Carstensen, 2004), and therefore trust in the organization becomes more important for older workers. They have a higher focus on establishing and maintaining trust in the organization than younger workers (Carstensen et al., 2003; Rousseau & Parks, 1993). The effects of procedural justice on turnover will therefore be smaller among older workers with high trust than among younger workers and older workers with low trust, because of the buffering effect of trust for these employees. Trust may act as a buffer where older workers who have high trust in their organization may be more willingly to accept or ignore unfair treatment, and stay with the organization. Younger workers, on the other hand, are more likely to evaluate procedural justice regardless of the trust they have in the organization, and hence, procedural justice is negatively related to turnover among younger workers (Aquino et al., 1997; Löckenhoff & Carstensen, 2004). Moreover, for younger workers who have on average spent less time in the organization than older workers, trust may be less stable than it is for older workers.

Consequently, their current level of trust provides them with less information on the future trustworthiness of their employer than it does for older workers.

Thus, we propose that the effects of procedural justice on turnover will be negative among all younger workers and older workers with low trust in their organization, and will be not significant among older workers with high trust in the organization. Hence, we expect a three-way interaction between procedural justice, trust and age, such that trust buffers the effects of procedural justice on turnover only for older workers. The fifth hypothesis is:

H5: Age and trust moderate the relationship between procedural justice and turnover, such that the relationship is negative for younger workers, and for older workers with low trust, whereas the relation is non-significant for older workers with high trust in the organization.

5.2 Method

5.2.1 Design

The Study on Health at Work (SHAW) is a longitudinal three-wave study among a sample of Dutch employees. The data were gathered through an existing internet panel of a large market research organization in the Netherlands. In May 2004, this organization selected a sample of 3,100 employees in their panel, and sent out an invitation by e-mail to this sample to participate in the study. At the first measurement, 2,502 participants (81%) filled out the internet questionnaire for this study. These 2,502 participants were approached again by e-mail in May 2005 and in May 2006 for the second and the third measurement. At the second measurement, 1,934 participants responded (77%), and at the third measurement, 1,921 participants responded (77%). In the resulting data file, there were 1,597 participants with full longitudinal data.

In line with the hypotheses of this study, we investigated the effects of procedural justice at time 2 on turnover at time 3. Furthermore, we investigated the moderating role of prior trust at time 1 and age (measured at time 1) on these relations. By investigating the variables at different time points, common method bias is avoided (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

5.2.2 Sample

Of the 1,597 participants, 44% were female and 56% were male. The age at the first measurement ranged from 15-64 years and the mean age was 39 years (SD = 11 years). Educational level was low for 19% of the participants (less than 1% no education; 3% primary

school; 15% preparatory secondary school), middle for 41% of the participants (26% secondary vocational training; 15% high school or pre-university school), and high for 41% of the participants (30% higher vocational training; 11% university). At the first measurement, most participants (90%) held a permanent job at their current employer; the other 10% had a temporary or flexible contract. This is comparable to the Dutch workforce (CBS, 2008). Moreover, 38% of the participants had a part-time contract of 32 hours a week or less. Of the participants, 10% had an executive position, and another 25% of the participants had management tasks as part of their jobs. The sample for this study is largely representative of the population of Dutch employees, and participants from all major classes of occupations and branches of industry are included. However, the sample contains relatively less young employees, fewer low educated employees and fewer immigrants than the population.

5.2.3 Instruments

Procedural Justice was assessed at the second measurement (T2) with the scale from De Boer, Bakker, Schaufeli, and Syroit (2002). Four items measured structural procedural justice, an example being “At this company, employees’ complaints are taken seriously”. Employees indicated the extent to which this was characteristic for their organization on a 5-point scale (1= totally disagree to 5=totally agree). The internal consistency of the procedural justice scale was good (T2 $\alpha = .87$).

Trust in the Organization was measured at time 1. It was measured by a single item which stated: ‘do you trust the leadership of your organization?’ Respondents rated this by a three-point scale, with the categories ‘no’, ‘a little’, and ‘yes’. Previous studies have shown that one-item scales are valid to assess job attitudes (e.g, Nagy, 2002; Wanous, Reichers, & Hudy, 1997). A recent study of Ferrin, Dirks, and Shah (2006) showed evidence for the construct validity of a single-item measure for trust.

Turnover was measured at time 3. Respondents were asked whether they had left their organization in the last year (since the date of the second measurement) to work for another organization (0 = no; 1 = yes). At time 3, 14% of the respondents had changed organizations.

Demographic Variables. Age was measured by the year of birth of the respondent. The mean age of the sample at time 1 was 39.27 (SD = 10.54) years old, ranging from 15 years to 64 years. Furthermore, we controlled for the influence of gender (1 = male; 2 = female), education (scale from 1 = no education, to 7 = university degree), and contract status (1 = permanent contract; 2 = temporary contract) since these factors may influence perceptions of

justice and turnover (Cohen-Charash & Spector, 2001). People with higher education may easier find a new job, and employees with a temporary contract switch jobs more often than permanent employees.

5.2.4 Analysis

Logistic moderated regression analysis was conducted to test the hypothesis. The independent variables were standardized to avoid multicollinearity (Aiken & West, 1991). In the first step, gender, education and contract status were added to the empty model. In the second step, the main effects of age, procedural justice T2 and trust T1 were added to the model. In the third step, the two-way interaction effects were added, and in the fourth step the three-way interaction among age, procedural justice and trust was added. Simple slopes were calculated according to the methods of Aiken and West (1991) to investigate patterns of interactions between the variables procedural justice, trust and age on turnover. More specifically, we calculated the simple slopes of procedural justice on turnover for the moderator variables, at one standard deviation below and one standard deviation above the mean (i.e., age and trust T1).

5.3 Results

5.3.1 Descriptive Statistics

Table 5.1 shows the correlations between the study variables. As can be seen, age was negatively related to procedural justice ($r = -.07, p < .01$) and also negatively related to turnover ($r = -.30, p < .01$). Moreover, procedural justice and trust were positively correlated ($r = .43, p < .01$). Finally, procedural justice was negatively related to turnover ($r = -.07, p < .01$), whereas trust was not significantly related to turnover ($r = -.04, ns$).

Table 5.1: Correlations among the research variables (N=1597)

Variable	Time	M	SD	1	2	3	4	5	6	7
1 Age	T1	39.27	10.54	--						
2 Gender	T1	1.44	.50	-.15**	--					
3 Education	T1	4.86	1.38	-.08**	.01	--				
4 Contract Status	T2	1.10	.30	-.26**	.12**	-.02	--			
5 Trust	T1	2.35	.70	-.08**	.04	.04	.06*	--		
6 Procedural Justice	T2	2.76	.86	-.07**	.03	.13**	.06*	.43**	--	
7 Turnover	T3	.14	.34	-.30**	.06*	.05	.30**	-.04	-.07**	--

Note: * $p < .05$; ** $p < .01$; Gender: 1 = male, 2 = female.

Table 5.2: Logistic Regression of Turnover T3 on Trust T1, Procedural Justice T2, and the Interaction Effects Between Age, Trust T1, and Procedural Justice T2

Variable	Turnover T3											
	B	Wald	Odds Ratio	B	Wald	Odds Ratio	B	Wald	Odds Ratio	B	Wald	Odds Ratio
Step 1: Demographics												
Gender	.16	.99	1.17	.02	.02	1.02	.01	.01	1.01	.01	.01	1.01
Education	.11*	3.88	1.12	.13*	4.18	1.14	.12	3.56	1.13	.13*	4.22	1.14
Contract Status	2.02***	111.03	7.51	1.60***	55.22	4.96	1.62***	55.88	5.06	1.62***	55.98	5.07
Step 2: Main Effects												
Age				-.83***	79.56	.44	-.82***	76.39	.44	-.75***	60.84	.47
Procedural Justice T2				-.32***	13.20	.73	-.30**	7.96	.74	-.34**	9.93	.71
Trust T1				-.17*	4.01	.84	-.19*	4.43	.83	-.24*	5.33	.79
Step 3: Two-way Interactions												
Age * Trust T1							.01	.02	1.01	-.04	.19	.96
Age * Proc. Justice T2							.07	.48	1.07	.06	.38	1.06
Trust T1 * Proc. Justice T2							-.07	.78	.94	-.17	3.54	.86
Step 4: Three-way interaction												
Age * Trust T1 * Proc. Justice T2										-.21*	5.12	.81
Model χ^2	110.55***			220.41***			222.25***			227.59***		
Model DF	3			6			9			10		
-2 Log Likelihood	1120.90			1011.43			1009.20			1003.86		
Nagelkerke R ²	.13			.24			.24			.25		

Note: N= 1597; * $p < .05$; ** $p < .01$; *** $p < .001$

Table 5.2 shows the results of the hierarchical moderated logistic regression analysis. Procedural justice T2 had a significant main effect on turnover ($B = -.34, p < .01, OR = .71$). Increases in procedural justice lead to significantly less turnover among employees. Therefore, hypothesis 1 is supported. Moreover, age had also a significant negative impact on turnover at T3 ($B = -.75, p < .001, Odds Ratio = .47$), indicating that turnover of older workers is lower than that of younger workers. Therefore, hypothesis 2 is supported. Further, trust T1 had a significant impact on turnover ($B = -.24, p < .05, OR = .79$), where people with high trust in their employer have a lower turnover. None of the two-way interactions among age, trust T1, and procedural justice T2 were significant in predicting turnover. Therefore, hypotheses 3 and 4 were not supported.

Finally, the three-way interaction effect between procedural justice, trust and age was a significant predictor of turnover at T3 ($B = -.21, p < .05, OR = .81$). Simple slope analysis of procedural justice T2 on turnover T3 for the four different groups (older workers with high trust, older workers with low trust, younger workers with high trust, younger workers with low trust), revealed that the slope of procedural justice on turnover was non-significant for older workers with high trust ($B = .10, ns, OR = 1.11$). The slope for older workers with low trust was negative ($B = -.65, p < .05, OR = .52$) as well as for younger workers with low trust ($B = -.43, p < .001, OR = .65$), and for younger workers with high trust ($B = -.36, p < .01, OR = .70$). The interactive effects between procedural justice, trust, and age on turnover are graphically represented in Figure 5.1.

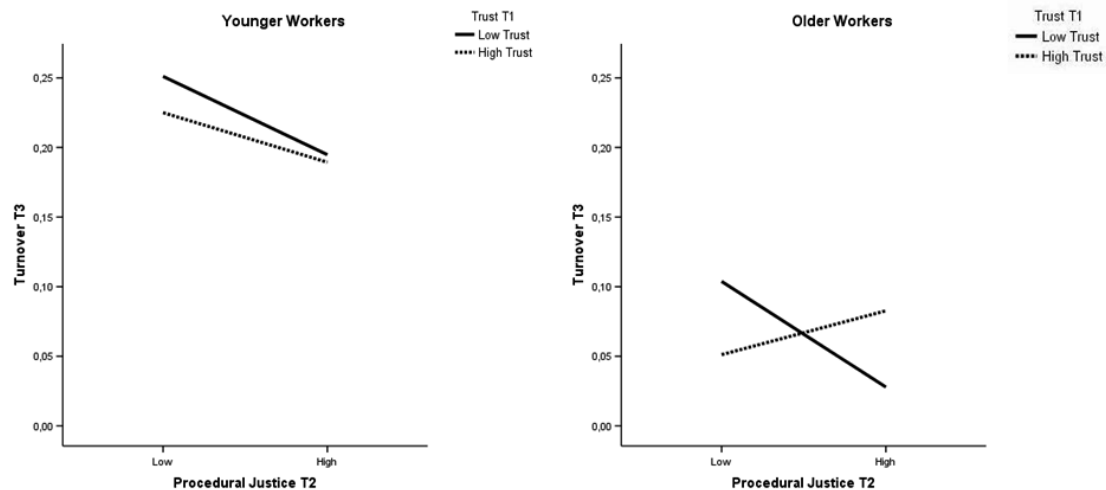


Figure 5.1: The Interactive Effects of Age, Trust T1 and Procedural Justice T2 on Turnover T3

As can be seen, whereas the effect of procedural justice on turnover is negative for all younger workers, regardless of their trust in the organization, and also negative for older workers with low trust, the effect was not significant for the older workers with high trust in the organization. Thus, even when procedural justice was low, turnover of older workers with high trust was low. Therefore, the fifth hypothesis is supported.

To test whether the interactive effects could be attributed to squared effects of the variables under study (procedural justice, trust; Edwards, 1996), we added the squared effects of procedural justice and trust to the model. However, neither of these were significant predictors of turnover, nor did they change the effects of the main or interactive effects of age, procedural justice, and trust on turnover.

5.4 Discussion

The current study investigated the moderating roles of age and trust in the relation between procedural justice and employee turnover. Building on previous research on moderators of the relationships between procedural justice and outcomes (Aquino et al., 1997; Fischer & Smith, 2006; Posthuma et al., 2007; Siers, 2007), we introduced boundary conditions to the relation between procedural justice and turnover, and we expected age and trust to influence these relationships. The results of the longitudinal study supported the hypothesis that prior trust buffers the relation between procedural justice and turnover among older workers. The study revealed negative relationships between procedural justice and turnover among younger workers, and older workers with low trust, whereas older workers with high trust are able to buffer the impact of procedural justice on turnover. This supports the notion from lifespan psychology, which stated that older people increasingly focus on positive aspects of their relationships with others (Löckenhoff & Carstensen, 2004). The current study shows that the trust-based relationship between older workers and their organizations becomes more important than procedural fairness. Furthermore, they are more likely to ignore negative events happening at the workplace (Carstensen et al., 1999).

Trust in the organization does not buffer the negative effects of low procedural justice on turnover among younger workers. Thus, although low levels of trust in the organization increases turnover of all employees as indicated by the main effect of trust on turnover, it functions only among the older workers as a buffer against the effects of unfair procedures. Whereas trust is an important aspect in retention of older workers, fair procedures are especially important to retain younger workers within the organization. Younger workers are more likely to leave the organization when they perceive structural unfair procedures.

The current study adds to previous studies on modifying conditions in reactions to how organizations treat their employees. For instance, Bal and colleagues (2008) showed meta-analytically that younger workers' reactions to psychological contract breach differed from those of older workers. Moreover, a study of Caldwell, Farmer, and Fedor (2008) showed interactions between quality of HR-practices and age on performance of volunteers. Fischer and Smith (2006) showed that values are also important moderators in relations between procedural justice and work outcomes. This study shows that older workers evaluate procedural justice differently from younger workers.

Socioemotional selectivity theory proposes that older workers focus on their relationship with the organization, and therefore are primarily concerned with how trustworthiness the organization is, in order to stay with the organization (Carstensen et al., 1999). When they have trust in the organization, they are more flexible facing procedural unfairness within the organization. This study shows that notions from lifespan theories, such as socioemotional selectivity theory, which have been not tested so far, can be applied to the workplace situation.

5.4.1 Strengths and Limitations

The current study has some strengths and limitations. First, the longitudinal dataset, including 3 measurements, of a representative large sample of the Dutch working population makes the results particularly strong. By investigating the relations of procedural justice, trust, age, and turnover over time, we could determine how people react to justice at the workplace. It can be argued that workers, when they perceive that they have been treated procedurally unfair, may evaluate and interpret the situation, and taking action may cost time and effort. Therefore, the longitudinal design better reflects how people react to justice over time.

Although the present study was based on a study with time lags of one year and two years between the separate variables, a limitation is that the constructs were all based on self-reports. Therefore, there is a chance of common method bias. However, the time lags of one and two years between the independent and dependent variables substantially decreased this risk (Podsakoff et al., 2003). Moreover, we asked whether people had left their organization in stead of turnover cognitions. Although not objectively measured, there is a marginal risk of response bias in the turnover data.

Another limitation could be that we used a single-item measure of trust. Although previous research has shown that these are valid (Ferrin et al., 2006), we could not estimate the reliability of the measure that is used in the current study. Moreover, we have used a measure for procedural justice that is aimed at assessment of how respondents perceive how

fair employees in general are treated within their organization. Further research could investigate whether results will be different when a different approach to procedural justice is taken (De Boer et al., 2002). For instance, employees might respond differently when they are asked how fair they are treated as an individual (Liao & Rupp, 2005). Furthermore, although the explained variance was not very high, researchers have shown that it is hard to detect statistical significant moderators in field studies, such as the current one (McClelland & Judge, 1993). Therefore, finding significant interactions are meaningful in understanding boundary conditions to the relationships between justice and turnover.

A final limitation could be that we did not differentiate between voluntary and involuntary turnover. However, a growing percentage of the Dutch working population has a temporary contract, increasing the mobility of workers (CBS, 2008). Because turnover is higher among employees with temporary contracts, it is important to control for this variable. As the analyses show, there is a main effect of contract status on turnover. However, it might be argued that because temporary employees are less embedded within the organization, they are more likely to leave their jobs when they are treated unfairly. Future research could shed more light on these differences.

For future research it would be interesting to study separate conceptualizations of age within the current study design. An avenue for future research should be how different operationalizations of age (i.e., chronological age, subjective age, functional age) explain differences in reactions to organizational treatment, including fairness of procedures, psychological contracts, and social exchanges between employee and organization (De Lange et al., 2006; Ng & Feldman, 2008).

5.4.2 Practical Implications

The study has practical implications as well. In the current economy, organizations are increasingly concerned with attraction and retention of skilled employees. Moreover, the graying workforce demands organizational attention to retention of older workers, with less early retirement options, through which older employees have to work longer. However, very few studies have focused on how younger workers differ from older workers in their needs, psychological contracts, and reactions to organizational treatment (Bal et al., 2008; Warr, 2001). The current study shows that to retain younger workers, organizations should develop fair procedures, since it is likely that when younger workers perceive low procedural justice, they will leave the organization. Furthermore, organizations should focus on strong trust-based relationships with their older workers, in order to retain them. To build trust among

employees, organizations should emphasize transformational leadership styles, and providing employees with support from the organization (Dirks & Ferrin, 2002).

5.4.3 Conclusion

The current study sought to explain whether older workers react differently to procedural justice than younger workers. By including another important moderating variable, trust in the organization, the study showed that the relations between procedural justice and turnover differed among younger and older workers and among employees with high and low trust. Negative relations were found for younger workers, and older workers with low trust, whereas older workers with high trust are able to buffer the adverse impact of low procedural justice on turnover. The study contributed by explaining why unfair procedural treatment does not necessarily lead to employee turnover. Researchers may benefit from incorporating a lifespan perspective on the relations between justice perceptions and work behaviors.

5.5 References

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Chapter 6

Psychological Contract Breach and Work Performance: Is Social Exchange a Buffer or an Intensifier?

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Abstract

The aim of the current study was to investigate how social exchanges modify the relationship between psychological contract breach and work performance. We present two concurrent hypotheses, based on theoretical interaction effects of social exchanges (conceptualized as social exchange relationships, perceived organizational support, and trust in the organization). First, the *buffering-hypothesis* predicts that high levels of social exchange buffer the negative relationship between contract breach and performance. Conversely, the *intensifying-hypothesis* predicts that high levels of social exchange accentuate the same relationship. Data from a sample of 266 employees in the United States strongly support the *intensifying-hypothesis*. The implications of the study for future research are discussed.

6.1 Introduction

Although previous research has confirmed the relationship between psychological contract breach and various performance dimensions (e.g., Turnley, Bolino, Lester, & Bloodgood, 2003), the processes through which contract breach leads to work performance has received less empirical attention. Since psychological contracts researchers use social exchanges between the employer and the employees as an explanatory framework, in the current study we examine breach processes from this perspective. Social exchanges (i.e., long-term state variables) between employee and organization may influence how perceptions of contract breach influence subsequent behaviors. Indeed, Aselage and Eisenberger (2003) proposed an integration of organizational support and psychological contract theories. Along similar lines, Guest (1998, p. 660) proposes to “switch the focus much more to [i]ssues such as trust, fairness and exchange”.

The psychological contract refers to “individual beliefs, shaped by the organization, regarding terms of an exchange agreement between the individual and their organization” (Conway & Briner, 2005; Rousseau, 1995, p. 9). Contracts of a psychological nature are typically presented as rooted in social exchange theory, describing mutual exchanges between employees and their organization. Psychological contract *breach* is defined as the cognition that the organization has failed to meet one or more obligations within the scope of the psychological contract whereas the employee has fulfilled his or her obligations (Morrison & Robinson, 1997).

This paper examines how the effects of psychological contract breach on job performance and organizational citizenship behaviors (OCBs) are modified by several perceptions of social exchanges, including social exchange relationships (SER; Shore, Tetrick, & Barksdale, 1999), perceived organizational support (POS; Eisenberger, Huntington, Hutchinson, & Sowa, 1986), and trust in the organization (Robinson & Rousseau, 1994). We develop new theoretical insights on how social exchanges can either have a desensitizing (“buffering”) or sensitizing (“intensifying”) effect on the breach – performance relationship. We contribute to existing knowledge on the consequences of psychological contracts and their relationship with performance (e.g. Turnley et al., 2003) by examining theory-based and heretofore empirically unexamined interactions between contract breach and these forms of social exchange.

6.1.1 Psychological Contract Breach and Work Performance

Psychological contract breach is negatively related to work performance (Turnley et al., 2003; Zhao, Wayne, Glibkowski, & Bravo, 2007). Consistent with prior work, we examine two

types of work performance: job performance (in-role) and organizational citizenship behaviors (extra-role; OCBs; Organ, 1988; Williams & Anderson, 1991). Employees and employers engage in exchanges in which each party reciprocates the other's contributions (Blau, 1964). According to the norm of reciprocity (Gouldner, 1960), when employers do not fulfill their promises and obligations, the employee reciprocates by altering his or her contributions to the organization (e.g., by reducing their efforts and performance). Thus, psychological contract breach is expected to be negatively related to employee job performance. Moreover, when the organization fulfills its promised obligations, employees may be motivated and engage in discretionary behaviors, including increased effort and organizational citizenship (OCBs; Coyle-Shapiro, 2002; Turnley et al., 2003). Conversely, contract breach may adversely impact organizational citizenship. In sum and consistent with previous research, we expect that psychological contract breach is negatively related to job performance and organizational citizenship behaviors, presented formally in our first hypothesis.

H1a: Psychological contract breach is negatively related to job performance.

H1b: Psychological contract breach is negatively related to organizational citizenship behaviors (OCBs).

6.1.2 Social Exchange as a Moderator between Contract Breach and Work Performance

Social exchange may function as moderator in the relations between contract breach and work performance. Indeed, previous work demonstrated that not all individuals react equally to contract breaches (Coyle-Shapiro, 2002; Restubog & Bordia, 2006). For example, high perceived justice may attenuate the relations between breach and outcomes. In the current study, we examine how differences in social exchange between individuals influence the effects of breach. Social exchange refers to the social interactions between employee and organization, potentially generating high-quality long-term relationships between employee and organization (Cropanzano & Mitchell, 2005). Specifically, we propose that high-quality relationships may sensitize or desensitize a person to negative effects of contract breach on work performance.

In this study, three different constructs within the overarching social exchange construct are investigated: social exchange relationships (SER; Shore, Tetrick, Lynch, & Barksdale, 2006), perceived organizational support (POS; Aselage & Eisenberger, 2003), and trust in the organization (Dirks & Ferrin, 2002; Dunn & Schweitzer, 2005). Although they are all related to the overarching concept of organization – employee social exchanges, they are conceptually distinct and previous studies have shown their distinctiveness through construct validity

examinations (Aselage & Eisenberger, 2003; Blau, 1964; Shore et al., 2004, 2006; Tekleab & Chiaburu, 2003; Wayne, Shore, & Liden, 1997).

For example, while perceived organizational support (POS) focuses on global beliefs about the *support received* from the organization, psychological contract breach describes unfulfilled *obligations* by the organization or its agents (Aselage & Eisenberger, 2003; Coyle-Shapiro & Conway, 2005). From another direction, trust in the organization captures one's integrity and dependability *based on past events* (Robinson, 1996). Furthermore, social exchange relationships (SER) refer to the strength of the *socio-emotional aspects* exchanged by the employee and the organization (Shore et al., 2004, 2006). We focus on these forms of social exchange in response to recent calls for empirical integration (e.g., Aselage & Eisenberger, 2003; Guest, 2004; Shore et al., 2006). More importantly, our goal is to empirically test whether our theoretical propositions hold across various forms of exchange.

We propose two competing interaction effects, both stemming from existing theory. The *buffering-hypothesis* explains why employees with high social exchanges with their organization react *less* intensely to contract breaches than employees with low-quality relationships: desensitizing effect (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Turnley & Feldman, 1999b). Conversely, the *intensifying-hypothesis* explains why employees with high social exchanges react *more* intensely to contract breaches than employees with low-quality relationships: sensitizing effect (Coyle-Shapiro, 2002; Restubog & Bordia, 2006; Zhang, Tsui, Song, Li, & Jia, 2008).

According to the *buffering-hypothesis*, the negative relationship between contract breach and work behaviors will be reduced for people having high-quality social exchange relationships. These employees perceive breaches as less severe and less intentional (Morrison & Robinson, 1997; Rousseau, 1995), precisely because of the high-quality of exchanges with their organizations. For instance, employees with high levels of trust in their employer may attribute contract breaches to circumstances, rather than to the organization itself (Morrison & Robinson, 1997; Turnley & Feldman, 1999b), consistent with the idea that individuals prefer to form causal explanations consistent with existing beliefs. Since contract breach is inconsistent with the high trust in the organization, people will use an interpretive filter and think about the breach in a way that is consistent with their high levels of trust (Robinson, 1996). Thus, the negative relationship between contract breach and work performance will be attenuated for individuals with high social exchanges.

We present this hypothetical relationship in Figure 1. The slope across low and high levels of contract breach is assumed to be essentially flat for high social exchange employees: the

decrease in performance for these individuals should be minimal. Conversely, the slope of the low social exchange employees (across the same low and high levels of breach) should be strongly negative: these employees will exhibit a sharp decrease in performance since they lack the means to buffer the negative feelings associated with contract breach. Empirical evidence for the buffering hypothesis stems from several studies (e.g., Bakker et al., 2007; Erdogan, Kraimer, & Liden, 2004). For example, Erdogan and colleagues (2004) found that employees with high POS and LMX reported high (job and career) satisfaction, both when value congruence was low and high, whereas the employees with low POS and LMX reported low satisfaction when value congruence was low, and high levels of satisfaction when value congruence was high. Similarly, Bakker and co-authors (2007) reported that high job resources buffered the negative effects of pupil misbehaviors on teachers' work engagement.

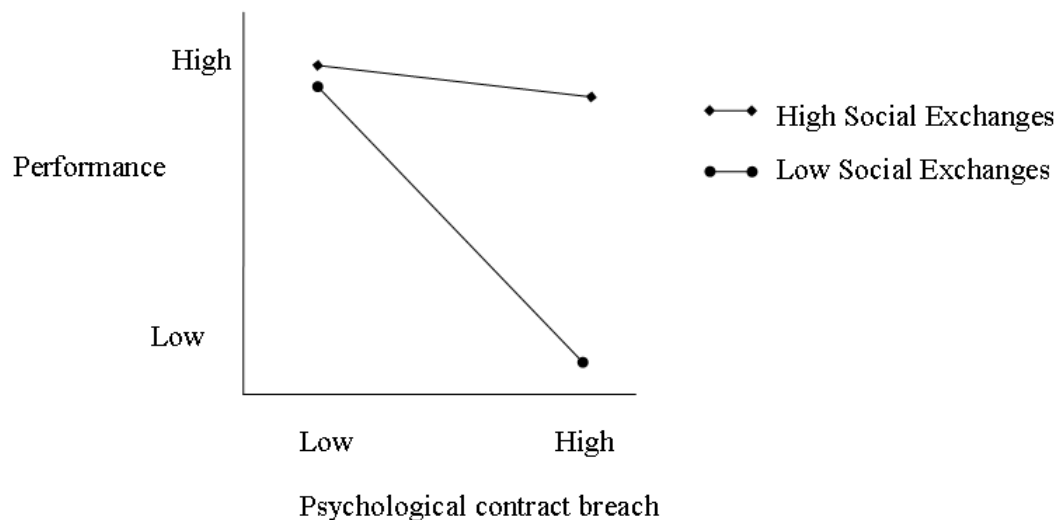


Figure 6.1: Buffering hypothesis: Hypothetical interaction between psychological contract breach and social exchanges on performance

In contrast to the buffering-hypothesis, the *intensifying-hypothesis* proposes that employees who have high-quality social exchange relationships with their organizations are more sensitive to contract breach (Coyle-Shapiro, 2002; Restubog & Bordia, 2006). Since employees with high-quality social exchanges may have become more committed to their organizations (Masterson, Lewis, Goldman, & Taylor, 2000), and are less likely to leave the organization (Tekleab, Takeuchi, & Taylor, 2005), psychological contract breach inflicts severe damages on their relationship with the organization. This is consistent with arguments provided by

Robinson and Rousseau (1994): employees placing greater value on the employment relationship are more negatively influenced by contract breaches than those for whom the employment relationship is of marginal importance. For employees with high social exchanges, the way the organization treats the employee becomes important and consequential (Elangovan & Shapiro, 1998; Kwong & Leung, 2002). Hence, they feel more betrayed by contract breaches than employees with low social exchanges (Robinson & Morrison, 1995). As a result, these employees reciprocate to breaches by reducing their job performance and diminishing discretionary efforts (OCBs; Turnley et al., 2003). Employees with poor-quality social exchanges may already have lower expectations of their organization; contract breach may be yet another signal that the organization does not provide the employee with sufficient resources in the job, and does not value the employee as member of the organization (Aselage & Eisenberger, 2003). Therefore, the impact of psychological contract breach among employees with weak social exchanges may be less severe than for those with strong social exchanges.

Support for the intensifying-hypothesis stems, for instance, from studies such as the one provided by Zhang and colleagues (2008). Specifically, the relationship between supervisory support and trust in the organization was strongly positive for people with high quality employment relationships, in contrast to employees with a weak employment relationship. Therefore, psychological contract breach and high social exchanges may influence work performance more strongly than a combination of contract breach absence and low social exchanges. Furthermore, employees with low social exchanges may already be among the less performing employees, regardless of the level of contract breach. This is indicated by the main effects of social exchange variables on job performance, as shown in a number of empirical studies and meta-analyses (Dirks & Ferrin, 2002; Gerstner & Day, 1997; Rhoades & Eisenberger, 2002; Tsui, Pearce, Porter, & Tripoli, 1997). Therefore, when psychological contract breach is absent (or when the psychological contract is fulfilled), employees with high social exchanges have a higher work performance than employees with low social exchanges.

The *intensifying-hypothesis* is depicted in Figure 2. As indicated, the slope of the low social exchange employees is essentially flat across low and high levels of breach: these employees' performance will remain largely unaffected; conversely, the slope of the high social exchange employees is strongly negative. Perceived breach will have a strong negative impact on performance.

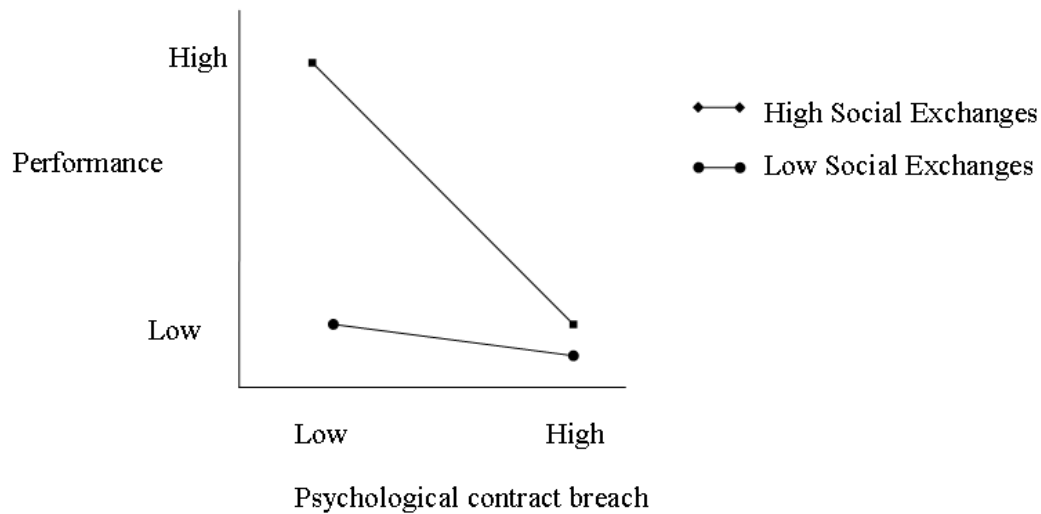


Figure 5.2: *Intensifying hypothesis: Hypothetical interaction between psychological contract breach and social exchanges on performance*

Both theory-based hypotheses have received empirical support (buffering-hypothesis: Robinson, 1996; intensifying-hypothesis: Restubog & Bordia, 2006). However, we expect the intensifying-hypothesis to be most applicable to the current study. Psychological contract breach refers to a profound damage to the employment relationship between the employee and organization (Conway & Briner, 2005; Rousseau, 1995), and may cause a revision of one's relationship with the organization and its agents (Morrison & Robinson, 1997). In line with previous work on the effects of 'betrayal' (Elangovan & Shapiro, 1998; Restubog & Bordia, 2006), employees connected through stronger social exchanges and bonds to their organization, feel the betrayal more intensively, as opposed to those with weaker and transactional social exchanges. This is precisely because contract breach is in sharp contrast with the belief employees have about their high-quality relationship with their organization. Hence, these employees reciprocate by a stronger reduction of work and discretionary effort. In the next section, we elaborate on the interactive effects of social exchanges (specified as social exchange relationship, perceived organizational support, and trust in the organization) through the *intensifying-hypothesis* lens.

6.1.3 Social Exchange Relationships

Social exchange relationships are defined as the obligations between employee and organization, based on mutual investment in the relationship, a long-term duration, and the

emphasis on non-financial exchanges (Blau, 1964; Shore et al., 2006). The social exchange relation reflects the socio-emotional aspects of the employment relationship, and thus the perceived quality of the employment relationship (Blau, 1964, p. 91-93). According to Morrison and Robinson (1997), contract breaches function as a trigger for a cognitive sense-making process. As stated above, people with strong social exchange relationships may feel particularly betrayed when the organization breaks its side of the psychological contract, damaging the long-term exchange relationship employees establish with their organizations (Dulac, Coyle-Shapiro, Henderson, & Wayne, 2006). Consequently, they reduce their work efforts to a level that is comparable to the inducements the organization has given.

H2: Social exchange relationships moderate the relation between psychological contract breach and (a) job performance and (b) organizational citizenship behaviors. Specifically, strong social exchange relationships accentuate the negative relationship between breach and behavioral outcomes.

6.1.4 Perceived Organizational Support (POS)

Perceived organizational support is defined as the employees' belief concerning the extent to which the organization cares about them and values their contributions to the organization (Aselage & Eisenberger, 2003; Rhoades & Eisenberger, 2002). Support from the organization bolsters employees' self-esteem and gives the employee the feeling that the employer values them. Absence of contract breach, or high contract fulfillment, creates a positive spiral in which employees reciprocate and increase the effort put in the job. However, contract breach among people with high POS may cause feelings of betrayal, because the support they received was not in line with the psychological contract they had with their organization. Consequently, they restore the imbalance by reducing work effort, in line with the norm of reciprocity (Gouldner, 1960) and negative reciprocation (Eisenberger, Lynch, Aselage, & Rohdieck, 2004).

H3: POS moderates the relation between psychological contract breach and (a) job performance and (b) organizational citizenship behaviors. Specifically, high POS accentuates the negative relationship between breach and behavioral outcomes.

6.1.5 Trust in the Organization

Trust and mutual obligations are two closely interlinked concepts (Blau, 1964, p. 99; Guest, 2004). Trust is especially built when two parties reciprocate mutual obligations over a

certain period, creating an exchange relationship (Blau, 1964; Coyle-Shapiro & Conway, 2004). Experiences of psychological contract breach should depend on social and psychological factors specific to the employment relationship in which it occurs (Morrison & Robinson, 1997; Robinson, 1996). According to prior definitions, trust is an individual propensity to trust, combined with an individual's expectations about a trustee's *future* behavior (Dunn & Schweitzer, 2005; Mayer, Davis, & Schoorman, 1995). Researchers have used selective interpretation arguments to argue that employees perceive breaches through the existing levels of trust they have in their organization. Indeed, Robinson (1996) found that trust moderates the relation between contract breach and future trust. When deciding on how much effort to engage in for the organization, the effects of contract breach depend on the level of trust in the organization: employees with high trust will feel more betrayed and consequently reduce their work and discretionary efforts. As proposed by Mayer, Davis, and Schoorman (1995), when the organization has broken the psychological contract, employees experience higher risks in trusting their employer. Hence they take less risk in the existing relationship, and diminish job performance and discretionary behaviors. Therefore, the fourth hypothesis is:

H4: Trust in the organization moderates the relation between psychological contract breach and (a) job performance and (b) organizational citizenship behaviors. Specifically, high trust accentuates the negative relationship between breach and behavioral outcomes.

6.2 Method

6.2.1 Sample and Procedure

We collected data from a service provider in the Mid-Atlantic region of the United States. In existence since the early 1970s, the company is functionally organized, with units responsible for specific market segments, supported by human resource, information technology, and other units. The organization has a well-developed internal labor market. Study participants were in professional positions (administrative and operations). We collected the data using self-report questionnaires, based on 266 employees who completed the survey (response rate of 53.2%). Of the 266 participants, 79 percent were men, 69 percent had at least some college education, 81 percent were 30 years or older, 75 percent had worked for the organization for more than three years, and 82 percent had been on the current position for more than a year. We were interested to measure both work performance and discretionary behaviors in the form of citizenship. Since psychological contract breach refers to *organizational*

failure to meet its obligations, we expected that reactions to breach will predict *organization-directed* citizenship behaviors (Lavelle, Rupp, & Brockner, 2007).

6.2.2 Measures

We used previously published scales to collect data relevant for the study. All measures were assessed using a 5-point Likert-type scale (1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; and 5=strongly agree).

Psychological Contract Breach. Consistent with prior work on psychological contract breach (Robinson & Morrison, 1995; Robinson & Rousseau, 1994), we used explicit questions asking the extent to which the organization fulfilled or broken its obligations to the employees. The scale contained eight items from Robinson and Morrison (2000). Examples of items are: “Overall, [the organization] has fulfilled its commitment to me” (reverse coded), and “[The organization] has broken many of its promises to me even though I’ve upheld my side of the deal”. We estimated the internal reliability using Cronbach’s alpha (.89).

Social Exchange Relationships. Participants were asked to respond to items asking them to describe the nature of the exchange relationships underlying their psychological contract. Shore and colleagues (1999) provided a scale to measure the degree to which employees have social exchanges with their employer. The items capture the exchange process rather than the specific content of the psychological contract. Seven items were used to assess a social exchange relationships. An item reads, “I don’t mind working hard today – I know I will eventually be rewarded by [the organization].” Cronbach’s alpha for the scale was .83.

Perceived Organizational Support. Perceived organizational support ($\alpha = .91$) was assessed using a 8-item scale (e.g., “Help is available from the organization when I have a problem”) taken from Eisenberger and colleagues (1986).

Trust in the Organization. The 7-item trust in organization scale was taken from Robinson & Rousseau (1994), stemming originally from Gabarro and Athos (1976; $\alpha = .80$). A sample item is, “My organization is open and upfront with me.”

Job Performance. Job performance was measured using the 4-item in-role behavior scale provided by Williams & Anderson (1991; $\alpha = .86$). An example of an item is “I meet the performance requirements of the job.”

Organizational Citizenship Behaviors. Organization-focused citizenship behaviors were measured using the 9-item scale provided by Williams & Anderson (1991; e.g., “I adhere to informal rules to maintain order”). Cronbach’s alpha for this scale in our study was .90.

Control Variables. Based on previous studies investigating similar relationships (Kickul & Lester, 2001; Robinson, 1996; Rousseau, 1995; Turnley et al., 2003), we controlled for gender (1=male, 2=female), length of employment (measured as employees' tenure with the organization, in years), and educational level.

6.2.3 Statistical Analyses

To assess the construct validity of the variables, confirmatory factor analyses were conducted using Lisrel 8.72 (Jöreskog & Sörbom, 2005). The four-factor model, including psychological contract breach, SER, POS, and trust in the organization reached good fit ($\chi^2 = 692.05$, $df = 388$, $p < .001$; RMSEA = .05; CFI = .98). Moreover, the four-factor model fitted significantly better than a two-factor model, consisting of a contract breach factor and a factor of the other three social exchange variables, ($\Delta\chi^2 = 837.29$; $\Delta df = 5$; $p < .001$), as well a single-factor model, including all items ($\Delta\chi^2 = 1846.01$; $\Delta df = 6$; $p < .001$).

The hypotheses were tested using moderated hierarchical regression analyses. The independent variables were centered before interactions were calculated (Aiken & West, 1991). In the analyses, in the first step, gender, tenure, and education were added to the model. Subsequently, the main effects were added in the second step and in the final step the interactions. Since researchers have stated that interactive effects are harder to detect, especially in field studies, an alpha level of .10 was used to estimate significant interactive effects (Aguinis, 2002; Aguinis, Beaty, Boik, & Pearce, 2005). Although both the buffering- and intensifying-hypothesis require the same statistical testing of interactions (Aiken & West, 1991), the method does not reflect the differences in direction incorporated in the two hypotheses. Therefore, the patterns of the interactions are plotted, to investigate which hypothesis is supported for this study. Moreover, following the methods of Aiken and West (1991), we calculated the simple slopes of the interactive effects one standard deviation below and above the mean to test the aforementioned hypotheses. The correlations between the variable under study are shown in Table 1.

6.3 Results

6.3.1 Hypothesis 1: Contract breach is negatively related to work performance.

The results of the first hypothesis are shown in Table 6.1. Psychological contract breach is negatively correlated with both in-role behaviors ($r = -.19$, $p < .01$) and organizational citizenship behaviors ($r = -.20$, $p < .01$). Therefore, both hypothesis 1a and hypothesis 1b are supported.

Table 6.1: Descriptive Statistics, Zero-order Correlations, and Cronbach's alphas

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1 Gender	1.20	.40	--								
2 Tenure	3.97	1.70	-.16	--							
3 Education	2.23	1.19	.06	-.18	--						
4 Psychological Contract Breach	2.54	.71	.03	.02	-.05	.89					
5 Perceived Organizational Support	3.17	.86	.11	-.11	-.05	-.49	.91				
6 Trust in the Organization	3.27	.71	.06	-.13	.04	-.59	.68	.80			
7 Social Exchange Relationships	3.39	.67	-.00	-.03	-.03	-.45	.57	.56	.83		
8 In-role behaviors	4.54	.59	-.01	-.07	-.02	-.19	.14	.20	.13	.87	
9 OCBs	3.86	.77	.03	.10	-.01	-.20	.30	.25	.18	.28	.90

Note. $N = 266$. Correlation coefficients greater than $\pm .13$ are significant at $p < .05$.

Correlation coefficients greater than $\pm .17$ are significant at $p < .01$. Values in bold along the main diagonal are coefficient alphas for scaled variables. OCBs = Organizational Citizenship Behaviors.

6.3.2 Hypothesis 2: SER moderates the relationship between contract breach and performance and OCBs.

The results of the second hypothesis are shown in Table 6.2. SER moderated the relationship between contract breach and in-role behaviors significantly ($\beta = -.13, p < .05, \Delta R^2 = .02$). The interaction effect is plotted in Figure 6.3. As predicted by our intensifying-hypothesis, the low-SER employees had lower performance levels when contract breach was low. The slope for the low-SER employees was not significant ($\beta = -.09, ns$), whereas the slope for the high SER-employees was strongly negative ($\beta = -.30, p < .001$).

Moreover, SER moderated the relation between contract breach and OCB significantly ($\beta = -.12, p < .10, \Delta R^2 = .01$). The interaction is graphically represented in Figure 6.4. The simple slope for the low SER-employees was not significant ($\beta = -.08, ns$), whereas the simple slope for the high SER-employees was negative ($\beta = -.27, p < .01$). The pattern supported the intensifying-hypothesis. In sum, both hypothesis 2a and hypothesis 2b are supported.

Table 6.2. Hierarchical regression analyses predicting employee performance and organizational citizenship behaviors

	Dependent variables					
	In-role behaviors			OCBs		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
<i>Control variables</i>						
Gender	-.02	-.02	-.02	-.02	.05	.06
Tenure	-.08	-.07	-.08	-.08	.12	.12
Education	-.03	-.04	-.06	-.03	.00	-.01
<i>Independent variables</i>						
Psychological contract breach (PCB)		-.17*	-.20**		-.15*	-.17*
Social exchange relationship (SER)		.04	.03		.12	.11
PCB * SER			-.13*			-.12 ⁺
F	.56	2.31*	2.68*	.56	3.63**	3.66**
ΔF		4.92**	4.36*		7.39***	3.66 ⁺
R ²	.01	.04	.06	.01	.07	.08
ΔR ²		.04	.02		.05	.01
<i>Control variables</i>						
Gender	-.02	-.02	-.02	.05	.02	.02
Tenure	-.08	-.07	-.09	.11	.14*	.13*
Education	-.03	-.04	-.06	.01	.02	.01
<i>Independent variables</i>						
Psychological contract breach (PCB)		-.17*	-.22**		-.07	-.11
Perceived organizational support (POS)		.05	.02		.28***	.26***
PCB * POS			-.19**			-.13*
F	.56	2.35*	3.64**	1.06	6.56***	6.34***
ΔF		5.00**	9.73**		14.63***	4.81*
R ²	.01	.04	.08	.01	.11	.13
ΔR ²		.04	.04		.10	.02
<i>Control variables</i>						
Gender	-.02	-.02	-.02	.05	.04	.04
Tenure	-.08	-.06	-.07	.11	.14*	.14*
Education	-.03	-.04	-.06	.01	-.00	-.01
<i>Independent variables</i>						
Psychological contract breach (PCB)		-.12	-.16*		-.07	-.08
Trust in organization (TRORG)		.12	.11		.23**	.22**
PCB * TRORG			-.16**			-.04
F	.56	2.82*	3.51**	1.06	4.98***	4.19***
ΔF		6.17**	6.68**		10.72***	.35
R ²	.01	.05	.08	.01	.09	.09
ΔR ²		.05	.02		.08	.00

Note. Standardized regression coefficients are reported. ⁺ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

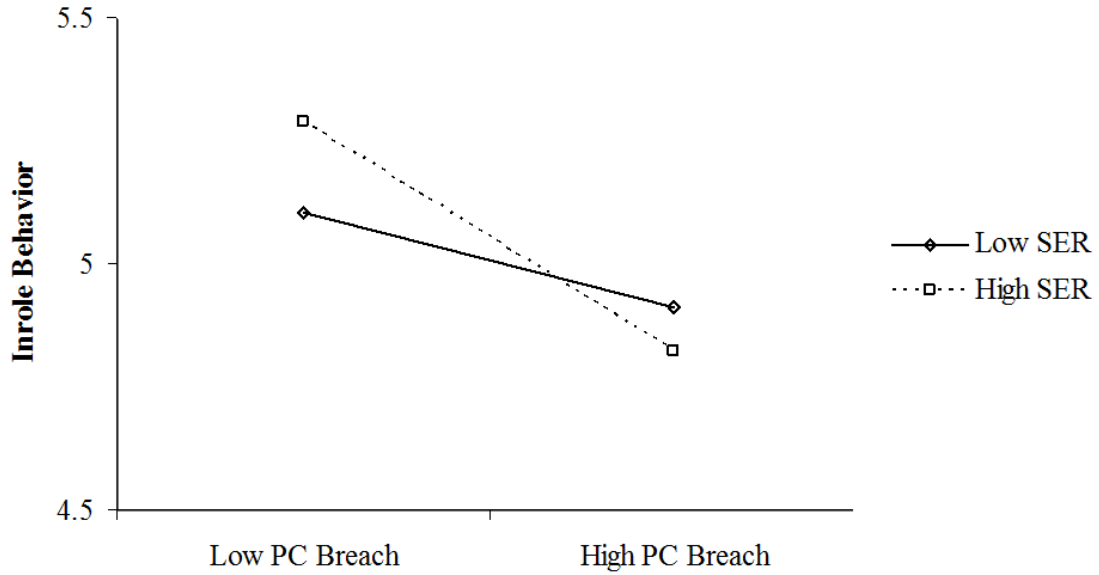


Figure 6.3: Interaction between psychological contract breach and social exchange relationships (SER) on in-role performance

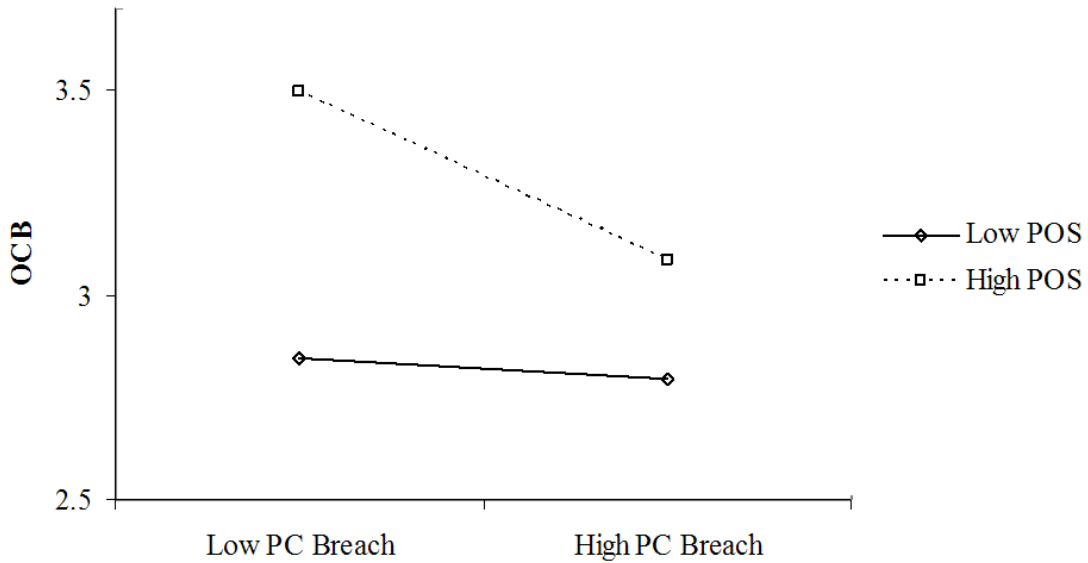


Figure 6.4: Interaction between psychological contract breach and social exchange relationships (SER) on organizational citizenship behaviors

6.3.3 Hypothesis 3: POS moderates the relationship between contract breach and performance and OCBs.

The results of the third hypothesis are shown in Table 6.2. POS moderated the relation between contract breach and in-role behaviors significantly ($\beta = -.19, p < .01, \Delta R^2 = .04$). The graphical representation of the interaction effect is shown in Figure 6.5. The slope for the low

POS-employees was not significant ($\beta = -.05, ns$), whereas the slope for the high POS-employees was strongly negative ($\beta = -.39, p < .001$).

POS also significantly moderated the relation between contract breach and OCBs ($\beta = -.13, p < .05, \Delta R^2 = .02$). The plot of this interaction is shown in Figure 6.6. The simple slope for the low POS-employees was insignificant ($\beta = .01, ns$), whereas the simple slope for the high POS-employees was negative ($\beta = -.22, p < .05$). Both Figure 6.5 and Figure 6.6 show that the intensifying-hypothesis is supported for POS as moderator. In sum, both hypothesis 3a and 3b are supported.

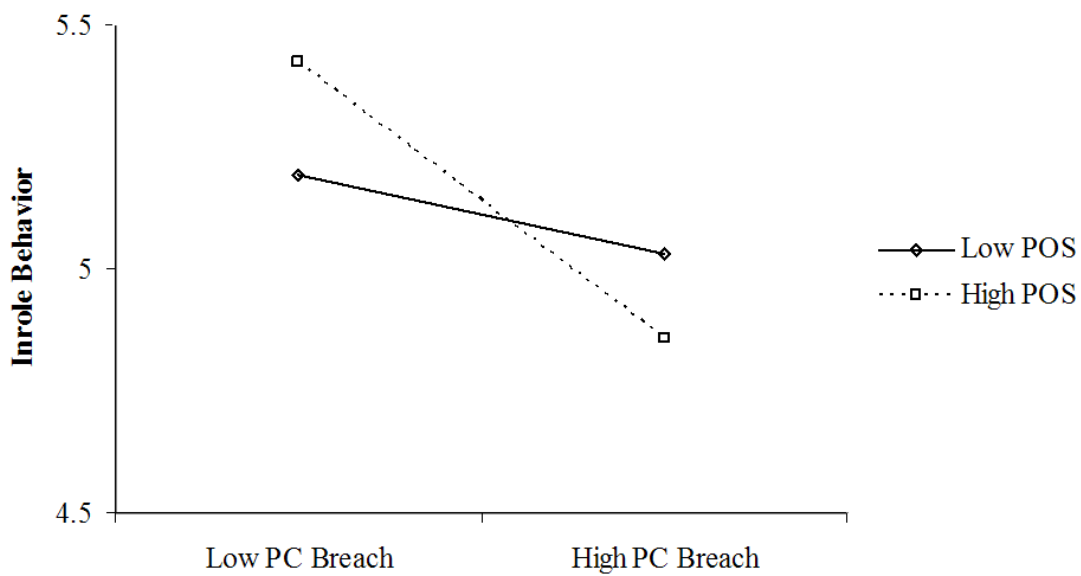


Figure 6.5: Interaction between psychological contract breach and perceived organizational support (POS) on in-role performance

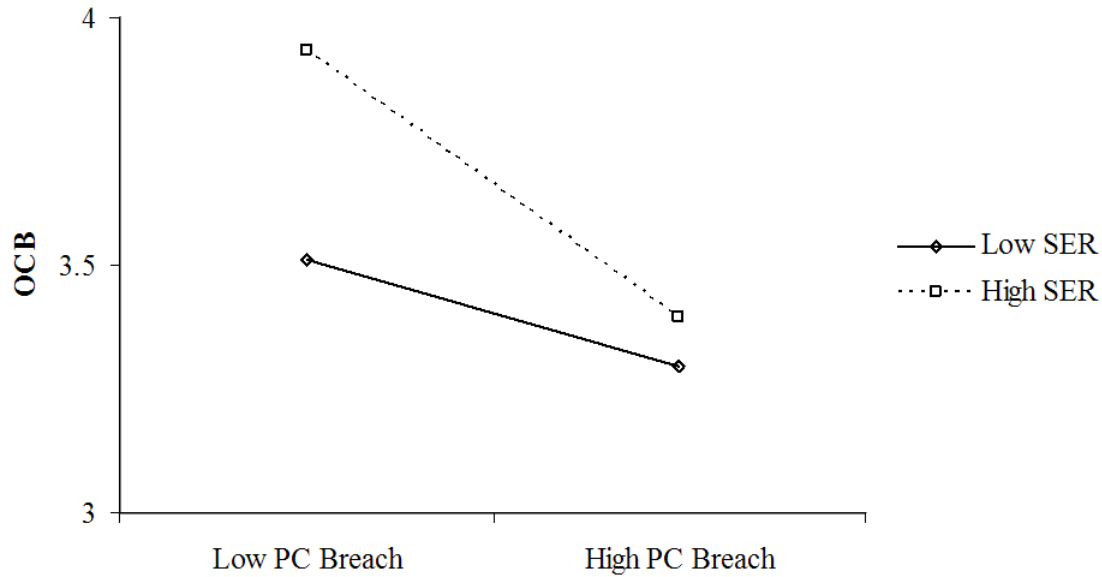


Figure 6.6: Interaction between psychological contract breach and perceived organizational support (POS) on organizational citizenship behaviors

6.3.4 Hypothesis 4: Trust moderates the relationship between contract breach and performance and OCBs.

The results of the trust hypotheses are shown in Table 6.2. Trust moderated the relationship between psychological contract breach and in-role behaviors ($\beta = -.16, p < .01, \Delta R^2 = .02$). This interaction effect is graphically presented in Figure 6.7. The simple slope for the low-trust employees was non-significant ($\beta = -.03, ns$). The simple slope for the high-trust employees was negative ($\beta = -.28, p < .01$). The pattern of interaction supports the intensifying-hypothesis, indicating stable low levels of performance for low-trust employees and declining performance for high-trust employees when contract breach increases. Contrary to our hypothesis, trust did not moderate the relationship between psychological contract breach and OCBs ($\beta = -.04, ns$). Therefore, hypothesis 4a is supported and hypothesis 4b is not supported.

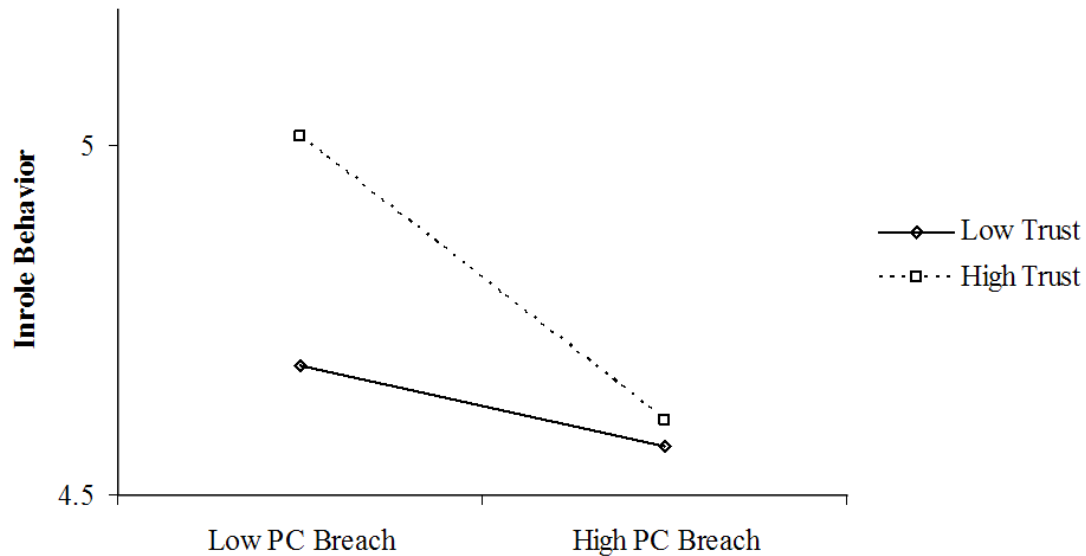


Figure 6.7: Interaction between psychological contract breach and trust in the organization on in-role performance

To summarize, five out of the six interactions presented a-priori in by our theory were supported, all of them in the expected direction in line with the *intensifying-hypothesis*. The separate social exchange variables moderated the relationship between psychological contract breach and work behaviors, such that behaviors of employees with low levels of social exchanges were not significantly affected by contract breach, whereas the work behaviors decreased as contract breach increased among the employees with high levels of social exchanges.

6.4 Discussion

The current study focused on the moderating role of social exchanges in the relation between psychological contract breach and work performance. First, we proposed that psychological contract breach would be negatively related to work performance. We found support for a negative relationship with both job performance and organizational citizenship behaviors, confirming previous research on the effects of psychological contract breach (Coyle-Shapiro, 2002; Turnley et al., 2003; Zhao et al., 2007). Furthermore, we presented two patterns of interactions between psychological contract breach and a number of social exchange variables: one where social exchange buffers the relationship between contract breach and work performance (buffering-hypothesis), and a pattern where social exchange accentuates the relations between contract breach and work performance (intensifying-

hypothesis). Based on previous work on betrayal (Elangovan & Shapiro, 1998; Restubog & Bordia, 2006), we proposed that psychological contract breach refers to a profound damage to the employment relationship, and therefore especially those who experience high levels of social exchange feel betrayed, and reciprocate contract breaches by reducing effort on the job.

In this study, we found strong support for the intensifying-hypothesis. Five out of six possible interactions were significant, and further analyses showed that the relations of contract breach with work performance were negative for employees with high social exchange (SER, POS, and trust), whereas the same relationship was not significant for employees with low social exchanges. Visual inspection showed that work performance was lower for employees with low social exchanges, regardless of the level of psychological contract breach, whereas performance was higher among high social exchange employees, and it decreased for high levels of psychological contract breach. Overall, this pattern supports the notion that the high social exchange employees feel especially betrayed when their psychological contract has been broken. For employees, with low social exchanges, contract breach is yet another signal that the organization does not care for the employee (Aselage & Eisenberger, 2003; Eisenberger et al., 1986).

6.4.1 Theoretical Implications

The study contributes to a more sophisticated understanding of the impact of contract breaches on employee behaviors. Although researchers have pointed to potential moderators in these relationships (Morrison & Robinson, 1997; Zhao et al., 2007), there have been very few studies of the specific patterns of interactions between psychological contracts, social exchange, and employee behaviors. Although researchers have mentioned that high-quality relationships between the employee and the organization may buffer the negative effects of contract breach, the current study contributes by showing intensifying effects of high social exchanges. Since in the current study we used a global measure of psychological contract breach, which refers a profound damage of the employment relationship, therefore a sense of betrayal among those with high social exchange may be most likely (Robinson & Morrison, 2000). On the other hand, we suggest that minor breaches of the psychological contract may be buffered by high social exchanges, in line with the propositions of Morrison and Robinson (1997). When contract breach is perceived as less severe (e.g., not getting a day off when asked), one might attribute it more easily to circumstances, whereas more severe breaches (e.g., not getting a promotion), are more likely to be attributed to deliberate intention of the organization.

The current study contributes to the psychological contract literature by including moderators in the breach-outcome relationship. Individual differences may be a boundary condition of the relationships (e.g., employee cynicism could further attenuate the relationships (Johnson & O'Leary-Kelly, 2003), same with equity sensitivity (Kickul & Lester, 2001). In this way, the study integrates a contextual perspective into psychological contracts, by investigating how psychological contract affects behaviors in the context of a broader relationship between the employee and the organization. Future studies on the role of social exchanges in psychological contracts between employees and their organizations (Guest, 2004; Morrison & Robinson, 1997) can be extended by considering other plausible outcomes, including intentions (e.g., intention to leave), discretionary behaviors (e.g., voice) and attitudes (e.g., loyalty, neglect; Turnley & Feldman, 1999a).

6.4.2 Limitations and Suggestions for Further Research

This study is not without limitations. First, the data were collected at one point in time for all the variables, and thus causal inferences have to be treated with caution. Although there is strong evidence connecting contract breach with performance outcomes (e.g., Zhao et al., 2007), future research can rely on experimental, quasi-experimental or longitudinal designs, and provide more convincing evidence on causation. Longitudinal data (Robinson & Morrison, 2000) may be particularly useful: measuring employees' levels of performance and discretionary effort at time 1, before determining their views on exchanges and contract breaches (at time 2), and possible modifications of performance behaviors (at a subsequent time) can provide more convincing evidence for one of the configurations presented in Figures 5.1 and 5.2.

Second, the data were collected from a single source, which may bias the results by artificially inflating the relationships. For some of the variables, including breach and the social exchange variables, the focal employees are the best source of information. Future studies may provide measurement of the outcome variables from a different source (e.g., direct supervisor, coworkers; Chiaburu & Harrison, 2008). It should noted, however, that our study was focused on testing a number of interactions, which are less sensitive to data originating from one source (Evans, 1985).

Third, the study was conducted in one organization. Evidence for the generalizability of our findings should be provided in the future by confirming these results in other settings. Finally, we used a global measurement for psychological breach scale and did not seek to separate inducements and obligations differentiated by content (e.g., Coyle-Shapiro &

Conway, 2005). Examining in more detail whether our findings are consistent across types of obligations the employers did not fulfill will allow for increased model specification and more precise predictions.

Although our theory-based arguments for how social exchanges modify the contract breach to performance relationship are consistent with prior research outlining the importance of cognitions (e.g., Robinson, 1996), some of these cognitive mechanisms are not explicitly captured in the model. Do employees engage in these types of judgments because they are cognitively motivated to reach specific *outcomes*, or because of the use of preferred thinking *strategies* (see Molden & Higgins, 2005, for a review)? Future work in this distinction has theoretical and practical merit, as it can determine how employees form, retain, and modify impressions related to their contracts and exchanges.

6.4.3 Practical Implications

The current study has practical implications for organizations. First, we show that when employees perceive that the organization does not fulfill its promises and obligations, employees reciprocate by reducing their efforts in the job. Psychological contract breach was negatively related to both job performance and OCBs. However, these effects are strongest among the employees who have *high* perceptions of social exchange relationships, organizational support, and trust in the organization. In general, organizations try to establish long-term relationships with their employees by providing them with support and building strong relationships between the organization and the employee. However, the effects of the effort organizations put in building these strong relationships with their employees may be diminished by employees' perceptions of contract breaches. Both task performance and discretionary behaviors will suffer when employees perceive a breach in their psychological contract. To prevent these negative consequences, organizations should diminish contract breaches. This can be done by providing employees with realistic expectations rather than make unrealistic promises, and periodically reassess the extent to which employees and the organization (or their representing leaders) are "on the same page" (Tekleab & Taylor, 2003). Overall, both task and contextual performance are higher when employees have strong social exchanges and perceive low contract breach.

6.4.4 Conclusion

This paper showed that there are two theoretical meaningful interactions between psychological contracts and social exchanges. The results showed strong support for the

intensifying-hypothesis, which stated that especially employees with high social exchanges feel betrayed by their organizations when their psychological contracts have been broken. To reciprocate the contract breach, they diminish their efforts, thus negatively impacting job performance and OCBs. Our results reveal important boundary conditions in the relations between contract breach and work performance.

6.5 References

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Chapter 7

Discussion

7.1 Introduction

The aim of this thesis was to investigate the role of age in the relations between psychological contract breach and work outcomes. In five studies, four key issues were addressed that were previously unresolved in psychological contract research. These key issues concerned: 1) how age modifies the relations between psychological contract breach and work outcomes, 2) how age is related to psychological contract dimensions, 3) how age influences the relation between employer side of the psychological contract and employee side of the psychological contract, and 4) how the long-term relationship with the organization modifies the relations between psychological contract breach and work outcomes. The results and implications of the key issues are listed in Table 7.1. In this chapter, the main findings for each key issue are discussed, as well as the theoretical implications. This is done by discussing the findings for each key issue with regard to the relevant theories that have been used in this thesis: psychological contract theory, social exchange theory, and lifespan theory. Furthermore, the strengths and limitations of the thesis, recommendations for further research, and the practical implications are presented.

7.2 Age in the Relations between Psychological Contract Breach and Work Outcomes

7.2.1 Main Findings

The first key issue concerned the role of age in the relations between contract breach and work outcomes. The thesis shows that contract breach is related to a range of work outcomes, such as lower trust, job satisfaction, and affective commitment (Chapter 2), work engagement, higher turnover intentions (Chapter 3), and lower in-role job performance and organizational citizenship behaviors (Chapter 6). Further, it was shown that a specific form of contract breach, being breach of procedural justice, is related to higher employee turnover (Chapter 5).

The thesis shows that younger workers had stronger negative reactions to contract breaches and stronger positive reactions to fulfillments in relation to work outcomes than older workers (see Chapters 2 and 3). The negative relations between contract breach and trust, affective commitment, work engagement and the positive relation with work engagement was stronger for younger workers than for older workers. There was one exception: when psychological contract breach occurred, older workers showed stronger reactions in job satisfaction. Thus, although older workers maintain a positive relationship with the organization, their job satisfaction decreases when their psychological contracts are breached.

7.2.2 *Theoretical Implications*

In addition to research that showed that the relations between contract breach and outcomes are dependent on personality (Orvis, Dudley, & Cortina, 2008), and type of breach (Zhao, Wayne, Glibkowski, & Bravo, 2007), the current findings show that these relations are also contingent on age. Future researchers should incorporate employee age into models that investigate the underlying processes that guide psychological contract breach to influence work attitudes and behaviors.

With respect to social exchange theory, the current thesis shows that the norm of reciprocity is perceived differently by younger and older workers. Whereas contract breach represents a major disruption of the social exchange relationship between the worker and the organization, younger workers are more likely to react by lowering their attachment and contributions to the organization. It may be suggested that social exchange has a different meaning for younger than for older workers (Farr & Ringseis, 2002). For younger workers, it may be very important that their organizations fulfill their psychological contract in order to remain motivated in their work. In contrast, older workers, who have a higher tendency to focus on the positive relationship with the organization, may be less focused on psychological contract fulfillments. Their attitudes towards the organization are to a lesser degree influenced by work-related events than is the case among younger workers. Finally, the findings of the first key issue underline the need of a lifespan perspective on the relations of psychological contracts with work-related outcomes. To build theory-based hypotheses on the effects of age on consequences of contract breach, insights from socioemotional selectivity theory (Carstensen, Fung & Charles, 2003; Carstensen, Isaacowitz & Charles, 1999) were used. In line with this theory, older workers indeed react less strongly to negative events that happen at the workplace. This could be explained by their increased focus on positive experiences in their work and their current relationship with their organization, and their better emotion regulation compared to younger workers. Future research could shed more light on whether these processes are valid explanations of the differences between younger and older workers in their reactions to contract breach and fulfillment.

7.3 **Age in Relation to Psychological Contract Content**

7.3.1 *Main Findings*

The second key issue referred age differences in psychological contract dimensions. The thesis showed that based on theoretical notions from lifespan psychology, several dimensions within the psychological contract could be distinguished. A distinction was made between

Table 7.1: Age-Related Key Issues, Research Questions, Results, and Theoretical Implications.

Age-related Key Issue	Research Questions	Results	Theoretical Implications
1. Relations Between Contract Breach and Work Outcomes	How does age modify the relations between psychological contract breach and work outcomes?	Age moderates the relations between contract breach and outcomes, with stronger negative reactions among younger workers, except for the reaction of breach on job satisfaction, which was stronger for older workers.	Age should be taken into account in research on the effects of psychological contract breach, since younger workers in general react more strongly to contract breach.
2. Psychological Contract Content	How is age related to psychological contract dimensions?	Age is negatively related to developmental obligations, but not significantly related to socio-emotional obligations.	Psychological contract content differs with age. Younger workers perceive more developmental obligations
3. Reciprocity in Psychological Contract	How does age influence the relation between employer side of the psychological contract and employee side of the psychological contract?	Employer economic and developmental obligations have stronger relations with employee obligations among younger workers. Employer socio-emotional obligations have stronger relations with employee obligations among older workers.	Dynamics within the psychological contract differ between younger and older workers.

Age-related Key Issue	Research Questions	Results	Theoretical Implications
4. Long Term Relation vs. Short Term Relation	How does the long-term relationship with the organization modify the relations between psychological contract breach and work outcomes?	<p>The relation between procedural justice and turnover is non-significant for older workers with high trust, and is negative for younger workers and for older workers with low trust.</p> <p>The long-term relationship with the organization intensifies the relations of contract breach with work performance, with stronger negative relations for those with high quality relationships with their organizations.</p>	Strong relationships with the organization intensify the effects of contract breach, but not for older workers, for who a strong relationship buffers the negative impact of contract breach.

employer socio-emotional obligations and employer developmental obligations (Chapter 3). Socio-emotional obligations refer to obligations that enhance employees' relationship with the organization; developmental obligations are obligations that promote employee learning and advancement in the organization. Moreover, in Chapter 4 a distinction was made on the basis of the work of Foa (1971) on resource exchange. In this chapter, an employer economic dimension was added to the two previous dimensions (socio-emotional and development), in line with previous research on psychological contracts (e.g., Coyle-Shapiro & Conway, 2005; Raja, Johns, & Ntalianis, 2005). Economic obligations are obligations with respect to rewards and fringe benefits. The same factors were found as in Chapter 3 (socio-emotional and developmental), and these factors were found both in the pre-retirement and post-retirement sample. Therefore, the current thesis introduced theory-based, validated dimensions of psychological contract content.

In the thesis, it was investigated how age was related to these dimensions. It was shown that younger workers perceive high socio-emotional and developmental obligations from their organization, whereas older workers perceive high socio-emotional obligations and low developmental obligations. In addition to the findings from Chapter 4, where it was found that in general perceptions of employer obligations decrease with age, it can be concluded that younger workers perceive high obligations from their organizations, perceptions of employer obligations decrease with age, especially where it concerns developmental obligations.

7.3.2 Theoretical Implications

Psychological contract theory provides few clues regarding the dimensional structure of the content of the psychological contract (De Vos, Buyens, & Schalk, 2005; Rousseau, 1995). Although classifications have been made (e.g., De Vos, Buyens, & Schalk, 2003), there is little theoretical rationale for the existence of specific dimensions. Therefore, the current thesis empirically validated theory-based dimensions of the psychological contract. Based on lifespan psychological theories (Ebner, Freund, & Baltes, 2006; Freund, 2006) and the work of Foa on resource exchange (Foa, 1971), several employer and employee psychological contract obligations were distinguished. Regarding employer obligations, economic (referring to money and goods), socio-emotional (referring to affiliation and services offered by the organization) and developmental (referring to enhancement of status and receiving information) dimensions in the psychological contracts were distinguished. Further, a three-dimensional structure of employee obligations (in-role, citizenship behavior, and high performance) was also supported. Thus, researchers should be aware of the fact that psychological contracts are not

one-dimensional, but consist of multiple dimensions, which are perceived differently by employees.

Lifespan psychology proposes that younger people strive towards knowledge goals and learning, whereas older workers focus on retention of current functioning and prevention of losses (Ebner et al., 2006). The current thesis is one of the first studies where these age-related differences were investigated at the workplace. The thesis showed that younger workers indeed have a higher focus on economic gains and growth and learning than older workers (Ebner et al., 2006; Freund, 2006). Although older workers have a greater focus on their relationship with the organization and social aspects in their work (Carstensen et al., 1999; Löckenhoff & Carstensen, 2004), this was not reflected by a higher degree of perceived employer socio-emotional obligations among older workers. Younger workers also perceived high socio-emotional obligations from their employers. Research on psychological contract formation suggests that when people enter the organization, they often have high expectations of their employer (De Vos et al., 2003; Thomas & Anderson, 1998). However, employees adapt their expectations downwards based on their experiences of employer breaches, which would suggest a decrease of employer obligations over time (Robinson, Kraatz, & Rousseau, 1994). Thus, it may be that while older workers have higher needs of socio-emotional obligations, in reality their perceptions are influenced by experiences in the past. In sum, future research may benefit from incorporating a lifespan perspective on the obligations employees perceive from their organizations.

7.4 Reciprocity and Age

7.4.1 Main Findings

The third key issue concerned investigation of the interrelationships between employer and employee obligations. Thus far, the majority of studies have investigated solely perceptions of employer obligations and contract breaches by the employer. However, the psychological contract describes the mutual obligations between employee and organization (Rousseau, 1995). Researchers have shown empirical evidence for the reciprocal nature of employer and employee obligations (Coyle-Shapiro & Kessler, 2002; Dabos & Rousseau, 2004). High levels of employer obligations are related to high levels of employee obligations. The current thesis adds to these findings by showing that these relations are contingent on employee age; the relations of employer economic and developmental obligations with three forms of employee obligations (in-role, citizenship, and high performance) are stronger among

young employees, whereas the relations of employer socio-emotional obligations with employee obligations are stronger among older workers (Chapter 4).

7.4.2 Theoretical Implications

For psychological contract theory, the current findings add to previous research by showing specific relations between dimensions of employer obligations and dimensions of employee obligations. Previous research has shown that employer fulfillment is positively related to employee obligations (Coyle-Shapiro & Kessler, 2002; De Vos et al., 2003). The current study shows that employer obligations and employer fulfillment interact in relation to employee obligations. Thus, employees not only judge to which extent their employers have fulfilled the psychological contract, but also consider the level of promised obligations when they make judgments regarding their own level of obligations towards the employer. It shows that social exchange is an important factor in psychological contracts: high employer obligations and fulfillment are related to high employees' felt obligations, in line with the norm of reciprocity (Gouldner, 1960). Moreover, a contribution to social exchange theory is that employees will feel more obligated to return employer inducements if these inducements fulfill salient needs of the employee. The study described in Chapter 4 shows that economic and developmental psychological contracts have stronger effects on employee obligations among younger workers than among older workers because these aspects are more important to younger workers, based on insights from lifespan psychology. The reverse was the case for socio-emotional psychological contracts, where the effects were stronger for older workers. Future research may therefore benefit from incorporating lifespan perspective on the dynamic processes in psychological contracts, showing stronger reactions to fulfillment of obligations that enhance needs of employees.

7.5 The Interplay between Age, Long-Term Relations and Short-term Processes

7.5.1 Main Findings

The fourth key issue concerned investigation of the role of the long-term relationship with the organization in modifying the effects of contract breach on work outcomes. There are two possible moderator effects of long-term relationships (Morrison & Robinson, 1997; Robinson, 1996), namely a buffer-effect and an intensifying-effect. On the one hand, a strong relationship may buffer negative effects of psychological contract breach (buffer-effect; Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Erdogan, Kraimer, & Liden, 2004). On the other hand, strong relationships with the organization may intensify the negative effects of

contract breach (intensifier-effect; Coyle-Shapiro, 2002; Restubog & Bordia, 2006). It was shown that for older workers the effects of low procedural justice on turnover were buffered by high levels of trust in the employer. In general however, the negative effects of contract breaches on work outcomes are intensified by strong relationships with the organization. This can be explained by the fact that those with a high-quality relationship with the organization feel more betrayed by contract breach than those who already have a weak relationship with the organization (Elangovan & Shapiro, 1998; Restubog & Bordia, 2006). For the latter, contract breaches may be a confirmation of the weak relationship between the employee and the organization, having less impact. In sum, long-term relationships intensify the relations between psychological contract breach and job performance.

7.5.2 Theoretical Implications

Although previous theoretical studies mainly pointed towards buffer-effects (Morrison & Robinson, 1997; Turnley & Feldman, 1999), the current thesis showed that in general the effects of contract breach are intensified when employees have strong relationships with their organizations. Thus, the long-term relationship one has with the organization modifies how short-term events, such as contract breach, have an impact on work outcomes. For future studies on psychological contracts and their effects on employee behavior, researchers should realize that employees act upon breaches but also adapt behavior according to the long-term relation one has with the organization. For social exchange theory, this thesis shows that employees are engaged in both a short-term and long-term social exchange with their employer, and these interact in relation to work outcomes. Indeed, when employees experience contract breach, the long-term relationship affects the intensity of these breaches on consequences.

The thesis further shows that for older workers the patterns are different than for younger workers; as shown in Chapter 5, for older workers the long-term relationship with the organization is of particular interest in evaluating events that happen at the workplace. Therefore, when they are confronted with contract breaches, such as unfair treatment, they are more willingly to accept this and stay with the organization. Two mechanisms may explain the potential buffer-effect of trust among older workers. First, older people are, in general, working longer for their organization and therefore have developed more trust in the organization. Secondly, they have more difficulties in finding new jobs, and therefore attach higher value to their current organization in order to stay with the current organization. In sum, the thesis shows that for older workers the long-term relationship with their current

organization is of particular value, whereas for younger workers building a career is important, regardless of the organization they currently work for (Carstensen et al., 1999; Ebner et al., 2006). Although the current thesis takes one step in the direction of investigation of how social exchange processes differ between younger and older workers, there is more research needed on the interactive effects between age, short-term events, and long-term relationships.

7.6 Contributions, Limitations and Recommendations for Further Research

The current thesis contributes to previous knowledge on psychological contracts and ageing in a number of ways. First, the thesis was one of the first studies to use insights from lifespan psychology theories to build hypotheses regarding the role of age in psychological contracts between employees and their organizations. By doing this, a dynamic perspective on how psychological contracts are related to job attitudes and behaviors was obtained. Longitudinal studies were conducted to investigate how psychological contract breach is related to work-related outcomes and how age and social exchange relationships modify these relations.

Second, the thesis investigated psychological contracts of employees in a large age range. By including post-statutory workers, knowledge is obtained on how older workers experience their psychological contracts, and how their reactions to psychological contract fulfillments differ from those of younger workers. Third, the thesis contributes by investigation of multiple, theory-based dimensions of the psychological contract. Although previous researchers have argued that there are several dimensions in the psychological contract (De Vos et al., 2005), there were very few studies that actually have investigated this. In this study multiple dimensions of employer and employee obligations were identified and validated.

Finally, the study described in Chapter 6 proposed competing interaction effects of long-term relationships on the relation between psychological contract breach and job performance, namely the buffer-effect and the intensifier-effect. Whereas the study from Chapter 6 found strong support for the intensifier-effect, the study reported in Chapter 5 showed that among older workers negative effects may be buffered by long-term relationships. This thesis is the first study where these different interaction effects of long-term relationships have been described and tested.

Although the limitations for the separate studies have been described in each chapter, there were some limitations that applied to the whole thesis. First, the data were collected from a single source (i.e., employees) and are based on self reports only. This increases the chance of common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). There is,

however, reason to believe that the effects of common method bias are relatively small in the current thesis (Spector, 2006). First, longitudinal data were collected for the studies described in Chapters 2, 3 and 5, in order to control for common method bias. Moreover, by investigating turnover (Chapter 5), common method bias is also controlled for because respondents will recall fairly accurately whether they started to work for another organization in the last year. Still, a number of suggestions can be made for further research. When other sources, such as supervisors, organizational records, and coworkers, could be used to indicate for instance employee performance, the results of the studies would be strengthened. Although not being objective data, ratings of supervisors and coworkers provide a more complete picture of a workers' performance. Moreover, fulfillment of employee obligations was not assessed in the current thesis because of the high likelihood of response bias when directly asked to employees themselves. In future research, supervisors could be a more reliable source to indicate employee fulfillment (Coyle-Shapiro & Kessler, 2002).

Another limitation is that the thesis did not distinguish between age- and cohort-effects. It is very hard to collect data for longer periods of time, through which these kinds of comparisons between age-effects and cohort-effects could be better examined. Generally, people who were born in a certain cohort will have experienced different key events (e.g., fall of the Berlin wall; or mass unemployment) than people who were born in a later birth-cohort (Dencker, Joshi, & Martocchio, 2008; Masche & Van Dulmen, 2004). As a consequence they might have different values and work attitudes, and therefore different perceptions of their psychological contracts than people from other birth-cohorts (Sims, 1994). For instance, it has been suggested that the psychological contract has changed over time; whereas the psychological contract was characterized by long-term job security and employees staying with their employer throughout their careers, this has changed to more temporary relations with less job security for employees (Conway & Briner, 2002). Longitudinal research on differences between younger and older workers, and between workers from different birth-cohorts may reveal more specific differences in psychological contracts. For instance, researching psychological contracts over longer time periods may reveal whether employee expectations are influenced by maturation (age effects), by experiences prior to data collection (cohort effects), or by environmental impacts at different times of measurement (time effects; Masche & Van Dulmen, 2004).

7.7 Suggestions for Future Research

The current thesis addressed a number of previously unresolved issues with regard to the relations between age and psychological contracts. From the findings of this thesis, a number of major issues that should be addressed in future research can be mentioned. These include investigation into a deeper understanding of psychological contracts, age-related differences in idiosyncratic deals between employees and their organizations, and diversity perspective on psychological contracts. Below, each of these suggestions for future research will be discussed.

7.7.1 *Psychological Contracts*

In this thesis, based on notions from lifespan psychology (Ebner et al., 2006), and work on resource exchange (Foa, 1971), several psychological contract types were investigated. These types, based on *content* of the exchange between employee and organization, build on previous work on psychological contract types (Rousseau, 1995; Rousseau & Parks, 1993). This research provided a useful step in discovering specific exchange processes between employee and organization. However, the psychological contract scales as used in the current thesis will not fully tap the exchange processes between the employee and the organization. For instance, De Vos and colleagues (2005) included a contract dimension consisting of relations within one's work group. Future research could shed more light on the full range of exchange processes between the employee and the organization.

Another avenue for further research is the distinction between contract fulfillment and contract breach. In this thesis, and in line with most previous studies on psychological contracts (Zhao et al., 2007), fulfillment measures were reversed to indicate breach. However, one may suggest that fulfillment and breach are two distinct constructs. Whereas fulfillment refers to general perceptions of how the employer maintains the psychological contract with the employee in the long run, breach refers to specific short-term events that happen at the workplace (Robinson & Morrison, 2000). Since the psychological contract consists of multiple dimensions, some dimensions might be broken whereas others are fulfilled. It would be interesting to investigate how the interplay between contract dimensions relate to contract breach and fulfillment.

Furthermore, the psychological contract is established on the process of reciprocity (Rousseau, 1995). Because reciprocity refers to a balance in the contract, breach refers to an imbalance in the contract, where employer' fulfillment is not congruent with employees' contributions. Thus, reciprocity plays an important role in employee evaluations regarding contract breach. Future research is needed to further disentangle these processes.

Related to this, Cassar and Briner (2007) found five distinct components of breach in an interview study. These components included *delay* (not receiving inducements at the appropriate time), *magnitude* (not receiving enough), *type/form* (what is received differs from employees' qualitative standard), *inequity* (receiving less than others), and *reciprocal imbalance* (receiving less than employee contributes to the organization). Clearly, until now research has mainly focused on the magnitude component. Future research should investigate these components further, and possible distinct relations with outcomes.

Finally, the current thesis investigated psychological contracts solely from the employee perspective. As previously researchers have suggested, the psychological contract is about mutual exchanges between employee and organization (Coyle-Shapiro & Kessler, 2002). Although organizations cannot be anthropomorphized, organizations are represented by several parties (e.g. manager or recruiter). Employees may have multiple psychological contracts with different foci within the organization. Future research may reveal how psychological contracts differ between these parties within the organization.

7.7.2 *Idiosyncratic Deals*

Related to psychological contracts, future research may also focus on age differences in idiosyncratic deals. The current thesis shows that psychological contracts differs between younger and older workers. Employees have more and more personalized psychological contracts with their employer. Recent research indeed suggests that employees increasingly have different perceptions of employer and employee obligations (Sims, 1994). For instance, a number of studies have been conducted on individualized arrangements between employee and organization (Lai, Rousseau, & Chang, 2008; Rousseau, 2005). Different from psychological contracts that involve subjective perceptions of employees regarding the exchange relationship, idiosyncratic deals (or I-deals) refer to actual individualized arrangements between employee and organization (Rousseau, 2005; Rousseau, Ho, & Greenberg, 2006). One possible way of how older workers remain active within organizations may be through negotiating individualized agreements. Previous research has shown that use of I-deals may increase organizational commitment and decrease work-family conflicts (Hornung, Rousseau, & Glaser, 2008). It is likely that there are differences between younger and older workers in how they negotiate individual arrangements, and through these arrangement stay motivated in their jobs. Future studies may investigate this further.

7.7.3 Diversity and Psychological Contracts

Researchers have stressed the dynamic nature of the psychological contract (Anderson & Schalk, 1998; Schalk & Roe, 2008). The psychological contract changes over time and relations of psychological contract with work-related attitudes and behaviors are contingent; they are assumed to differ between various groups of people. The current thesis showed that psychological contracts differ with employee age. It is important to study effects of employee age, since the aging workforce is one of the greatest challenges the labor market faces today (Hedge, Borman, Lammlein, 2006). Age differences are one aspect of the increasing diverse labor market (Harrison & Klein, 2007); other diversity aspects, such as ethnicity and gender are also important. Indeed, an increasing number of ethnic minorities is entering the labor market (Liao, Joshi, & Chuang, 2004). Since people with different cultural backgrounds may have different values and norms, it is likely that they will have different experiences of their psychological contract with the organization. Research on these topics may have important implications for organizations seeking out HR policies that are tailored to individual needs of employees. Moreover, ethnic minorities may negotiate I-deals in such a way that fulfills their needs that differ from traditional work arrangements (e.g. flexible working schemes during Ramadan).

7.8 Practical Implications

Many organizations are dealing with issues with respect to how to motivate older workers in their jobs (Kanfer & Ackerman, 2004). In interviews with the participating organizations in the research project, managers asked how to motivate their older workers, since early retirement options were ceasing. They further asked how older workers' psychological contracts differed from those of younger workers, and how organizations should differentiate in treatment of younger and older workers. Below, the practical implications are discussed. For further information on how perceptions of specific employer and employee obligations differ with age, Appendix C gives an overview of how obligations are perceived throughout the life course.

7.8.1 Negotiating Psychological Contracts with Younger and Older Workers

Because of the changing labor force due to the growth of the proportion of older workers compared to younger workers, organizations will have to retain and motivate older workers in order to maintain sufficient staff. Currently older workers' psychological contracts contain very few developmental elements. Instead, their relationship with the organization is primarily

based on obligations with respect to creating a positive work environment and fair treatment with respect to salary. Organizations may want to offer older workers more development, since an organizational climate that promotes development increases motivation to continue working after retirement (Bal, Jansen, Van der Velde, & Kooij, 2008; Kooij, De Lange, Jansen, & Dikkers, 2008).

Older workers' felt citizenship obligations are lower than those of younger workers. To enhance older workers' citizenship obligations, organizations should focus on fulfilling the socio-emotional obligations that older workers perceive from their employer.

7.8.2 Broken Psychological Contracts

Organizations should try to prevent contract breaches as much as possible. Previous research showed that contract breach has a profound impact on job attitudes and behaviors, including mistrust, decreased satisfaction and commitment, and decreased performance and increased absence and turnover. Organizations may monitor their psychological contracts with the employees more intensely, and prevent breaches by providing more realistic expectations among the employees (Rousseau, 1995). Furthermore, reactions to contract breaches may be different among younger and older workers. Whereas younger workers react with lower trust and commitment, older workers may have lower performance (Harrison, Newman, & Roth, 2006).

Since older workers are more concerned with their relationship with the organization, the organization may focus on building trust among their employees that enhances commitment to the organization and prevents employee turnover. This can be established through offering age-specific inducements to employees, based on individual needs. For instance, older workers' motivation may be enhanced by offering more flexibility in their work, such as teleworking and flexible work schedules. Moreover, organizations can frequently communicate with their employees about mutual obligations in order to avoid contract breaches.

7.9 Conclusion

The current thesis aimed at investigating the role of age in reactions to psychological contract breaches and fulfillments. It was shown that age influenced psychological contracts in four different ways. First, older workers in general react less intensely to contract breaches towards job attitudes and behaviors. Second, younger workers perceive higher developmental obligations than older workers. Third, younger workers' felt obligations towards the organization are strongly enhanced by economic and developmental inducements, whereas

older workers' felt obligations are enhanced by socio-emotional inducements. Finally, long-term relationships may function as a buffer against contract breaches for older workers, but as an intensifier among younger workers. In conclusion, age has as important impact on how psychological contracts are experienced in organizations.

7.10 References

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Samenvatting

Leeftijd en Psychologisch Contractbreuk in Relatie tot Werkuitkomsten

De beroepsbevolking in Nederland, maar ook in andere westerse landen, vergrijst in een rap tempo. Terwijl er minder kinderen geboren worden, leven mensen langer en gezonder. Bovendien nadert de Babyboomgeneratie de pensioenleeftijd. Daardoor zal de arbeidspopulatie in de komende jaren sterk veranderen; een groter aandeel van de werkenden op de arbeidsmarkt zal ouder zijn en zullen oudere werknemers een belangrijke rol spelen op de arbeidsmarkt. Organisaties hebben echter moeite met het vasthouden en motiveren van oudere werknemers.

Gerelateerd hieraan is het feit dat er maar weinig wetenschappelijke kennis is over verschillen tussen jongere en oudere werknemers in hun psychologisch contract met de organisatie. Het psychologisch contract beschrijft de wederzijdse verplichtingen tussen werkgever en werknemer. Wanneer de werkgever zijn verplichtingen ten opzichte van de werknemers niet nakomt, is er sprake van contractbreuk. Het valt te verwachten dat jongeren andere verwachtingen hebben van hun werkgever dan oudere werknemers, en dat zij anders reageren op contractbreuk dan oudere werknemers. Het proefschrift richt zich er op te onderzoeken hoe leeftijd de relaties tussen het psychologisch contract, en met name contractbreuk, en werkgerelateerde uitkomsten beïnvloedt. Om de hypotheses in het proefschrift te onderbouwen werden inzichten uit levenslooptheorieën toegepast op de werksituatie. Het proefschrift is opgebouwd aan de hand van vier onopgeloste vragen over de relatie tussen leeftijd en het psychologisch contract. Deze vier onopgeloste vragen zijn: 1) hoe leeftijd de relaties tussen psychologisch contractbreuk en werkgerelateerde uitkomsten beïnvloedt; 2) hoe leeftijd gerelateerd is aan de inhoud van het psychologisch contract; 3) hoe leeftijd gerelateerd is aan reciprociteit binnen het psychologisch contract; en 4) hoe interacties tussen lange termijnrelaties en korte termijn relaties tussen werknemer en organisatie verschillen met leeftijd.

Deze vragen zijn beantwoord door middel van een vijftal studies. Eerst is een meta-analyse verricht over bestaande studies op het gebied van het psychologisch contract. Verder zijn door middel van empirisch onderzoek de onderzoeksvragen onderzocht. Zowel cross-sectionele als longitudinale studies zijn verricht (zie hoofdstuk 3-6). Hieronder volgt een samenvatting van de belangrijkste onderzoeksvragen.

Resultaten

1) *Hoe beïnvloedt leeftijd de relaties tussen psychologisch contractbreuk en uitkomsten?* Hoofdstuk 2 geeft een meta-analyse weer over de modererende rol van leeftijd in de relaties tussen psychologisch contractbreuk en drie werkhoudingen: vertrouwen in de werkgever,

baantevredenheid, en affectieve betrokkenheid. Op basis van levenslooptheorieën, waaronder de *socioemotional selectivity theory* van Carstensen en collega's, werd verwacht dat oudere werknemers minder sterk reageren op contractbreuk dan jongeren. Dit werd verwacht omdat ouderen meer geneigd zijn zich te richten op positieve ervaringen op het werk en negatieve ervaringen te vermijden, beter zijn in het reguleren van hun emoties, en realistischer verwachtingen hebben van de werkgever dan jongeren. De meta-analyse toonde aan dat dit inderdaad het geval was voor vertrouwen en betrokkenheid: de negatieve relaties tussen contractbreuk deze attitudes waren minder sterk voor ouderen dan voor jongeren. Het omgekeerde was echter het geval bij baantevredenheid; hier waren de relaties juist sterker voor ouderen. Hoofdstuk 3 bevatte een longitudinale veldstudie onder medewerkers van een verzekeringsmaatschappij. Dit onderzoek toonde aan dat, in lijn met resultaten van hoofdstuk 2, jongeren sterker reageren op psychologisch contractvervulling in relatie tot bevlogenheid en verloopintentie, geldend zowel voor vervulling van sociaal-emotionele als ontwikkelingsgerelateerde psychologische contracten. Leeftijd heeft dus een modererende rol in de relaties tussen contractbreuk en uitkomsten, waar jongeren sterker reageren op contractbreuk en –vervulling, behalve waar het gaat om baantevredenheid.

2) *Hoe beïnvloedt leeftijd de inhoud van het psychologisch contract?* Hoofdstuk 3 onderzocht de relaties tussen leeftijd en verschillende typen psychologisch contracten. Gebaseerd op inzichten uit levenslooptheorieën werden twee typen onderscheiden: sociaal-emotionele en ontwikkelingsgerelateerde psychologisch contract. Terwijl leeftijd niet samenhangt met het eerste type was leeftijd negatief gerelateerd aan ontwikkelingsgerelateerde psychologisch contract. Oudere werknemers vinden dat hun werkgever minder verplicht is te zorgen voor ontwikkeling dan jongere werknemers. Leeftijd hangt dus samen met de inhoud van het psychologisch contract, waarbij significante verschillen gevonden werden in ontwikkelingsaspecten.

3) *Hoe is leeftijd gerelateerd aan reciprociteit binnen het psychologisch contract?* Hoofdstuk 4 onderzocht onder tijdelijke werknemers in de leeftijd tussen 20 en 80 jaar in hoeverre leeftijd reciprociteit in het psychologisch contract beïnvloeden. De notie van reciprociteit in het psychologisch contract houdt in dat wanneer werkgevers beloftes maken aan de werknemer, de werknemer zich verplicht voelt om iets terug te doen voor de werkgever. Werkgeversverplichtingen hangen dus positief samen met werknemersverplichtingen. De kans is echter groter dat de werknemers verplichtingen hoger zijn als de werkgever beloftes doet die belangrijk zijn voor de werknemer. Op basis van levenslooptheorieën werd verwacht dat financiële en ontwikkelingsaspecten sterkere effecten hebben onder jongeren, omdat jongeren

meer waarde hechten aan deze aspecten in het werk. Verder werd verwacht dat sociaal-emotionele aspecten sterkere effecten hebben onder ouderen. Hoofdstuk 4 toont aan dat wanneer de werkgever zijn verplichtingen vervuld ten aanzien van financiële en ontwikkelingsaspecten, dit een sterker effect heeft op waargenomen werknemersverplichtingen onder jongeren dan ouderen. Anderzijds heeft vervulling van sociaal-emotionele verplichtingen een sterker effect op waargenomen werknemersverplichtingen onder ouderen dan onder jongeren. Reciprociteit in het psychologisch contract is dus afhankelijk van de leeftijd van de werknemer.

4) Hoe hangt leeftijd samen met interacties tussen lange termijnrelaties en korte termijnrelaties?

Hoofdstuk 5 en 6 onderzochten hoe lange termijnrelaties tussen werkgever de effecten van psychologisch contractbreuk op uitkomsten beïnvloeden. Bovendien werd onderzocht hoe leeftijd een effect had. In hoofdstuk 5 werd beargumenteerd dat de lange termijnrelaties tussen werknemer en werkgever (vertrouwen in de werkgever), als een buffer functioneert tegen de negatieve effecten van psychologisch contractbreuk (procedurele rechtvaardigheid) op verloop. De studie toonde aan dat dit het geval was, maar alleen onder oudere werknemers. Psychologisch contractbreuk leidde onder jongeren altijd tot een hoger verloop, losstaand van de mate van vertrouwen in de werkgever.

Hoofdstuk 6 ging dieper in op het potentiële buffereffect van lange termijnrelaties tussen werknemer en werkgever op de effecten van contractbreuk. Enerzijds kunnen lange-termijnrelaties (in dit hoofdstuk geconceptualiseerd als sociale uitwisselingsrelatie, waargenomen steun van de werkgever, en vertrouwen in de werkgever) functioneren als een buffer voor de negatieve effecten van contractbreuk op inrol en extrarol prestaties (buffereffect). Anderzijds kan de lange termijnrelaties de effecten ook versterken (intensiveringseffect). De studie zoals in hoofdstuk 6 beschreven toont aan dat wanneer werknemers een sterke relatie hebben met de werkgever (uitgedrukt in een sterke sociale uitwisselingsrelatie, veel steun van de organisatie, en hoog vertrouwen in de organisatie) dit de effecten van contractbreuk op prestaties versterkt; de relaties zijn sterker negatief dan wanneer werknemers een zwakke relatie hebben. Kortom, wanneer contractbreuk optreedt voelen werknemers met een sterke relatie met de werkgever zich verraden en revancheren zich door zich minder in te zetten voor hun organisatie. De studie vindt dus steun in het intensiveringseffect.

Implicaties en Aanbevelingen

In hoofdstuk 7 zijn de resultaten van de studies samengevat en werden de implicaties van de studies voor zowel theorie als praktijk besproken. Het proefschrift laat zien dat leeftijd een

belangrijke rol in het psychologisch contract tussen werknemers en hun organisatie speelt. Leeftijd heeft vier mogelijke effecten. Ten eerste reageren ouderen over het algemeen minder sterk op contractbreuk dan jongeren in relatie tot werkgerelateerde uitkomsten zoals vertrouwen in de werkgever, betrokkenheid bij de organisatie, bevlogenheid in het werk, en verloopintentie. Het proefschrift toont aan dat de relaties tussen contractbreuk en uitkomsten contingent zijn, en verschillen op basis van demografische kenmerken zoals leeftijd. Ten tweede hebben jongere werknemers andere percepties van werkgeversverplichtingen dan oudere werknemers; zij hebben vooral hogere verplichten ten aanzien van ontwikkeling dan oudere werknemers. De hoogte van sociaal-emotionele verplichtingen hangen niet samen met leeftijd: jongere als oudere werknemers vinden in gelijke mate dat de werkgever verplicht is hiervoor te zorgen. Ten derde toont het proefschrift aan dat reciprociteit in het psychologisch contract een andere betekenis heeft voor jongeren dan voor ouderen. Terwijl waargenomen verplichtingen ten aanzien van de organisatie onder jongeren vooral gestimuleerd worden door financiële en ontwikkelingsaspecten in het werk, worden deze onder ouderen het meest gestimuleerd door sociaal-emotionele aspecten. Tenslotte toont het proefschrift aan dat een sterke relatie met de werkgever onder ouderen als een buffer kan functioneren tegen de negatieve effecten van contractbreuk op verloop. Terwijl dit voor jongeren geen rol speelt in de beslissing van werkgever te veranderen nadat ze oneerlijk behandeld zijn, blijven ouderen die een sterke relatie hebben met de organisatie bij hun werkgever.

Het proefschrift toont verder aan dat een indeling van verschillende factoren in het psychologisch contract op basis van theorie een nuttige en belangrijke aanvulling op bestaand onderzoek biedt. Op basis van levenslooptheorie en *Resource Exchange Theory* werden verschillende factoren onderscheiden, en was het mogelijke specifieke hypothesen ten aanzien van de invloed van leeftijd op deze factoren op te stellen. Tenslotte biedt het onderscheid tussen het buffereffect en het intensiveringseffect ten aanzien van de rol van lange termijnrelaties tussen werkgever en werknemer in de relaties tussen contractbreuk en werkuitskomsten handvatten voor toekomstig onderzoek. Het proefschrift is de eerste studie waarin een dergelijk onderscheid wordt gemaakt tussen mogelijke effecten van lange termijnrelaties als moderatoren.

Hoofdstuk 7 besluit met de praktische implicaties van het proefschrift. Het proefschrift toont aan dat oudere werknemers minder verwachtingen hebben ten aanzien van ontwikkeling dan jongere werknemers. Aangezien onderzoek heeft aangetoond dat ontwikkeling een cruciale voorwaarde is om werknemers langdurig gemotiveerd aan het werk te houden, is het aan te raden dat organisaties in hun werknemers blijven investeren, en ook oudere

werknemers motiveren deel te nemen aan cursussen en trainingen. Tevens toont het proefschrift aan dat werknemers zich meer inzetten voor de organisatie wanneer zij het gevoel hebben dat belangrijke aspecten in het werk vervuld worden. Het is daarom verstandig voor organisaties om de beschikbare personeelsregelingen zo in te zetten dat werknemers het gevoel hebben dat hun werkgerelateerde behoeftes vervuld worden.

Verder is het belangrijk voor organisaties om te voorkomen dat werknemers contractbreuk waarnemen, aangezien dit diepgaande effecten heeft op werkmotivatie en werkprestaties. Dit kan bereikt door realistische verwachtingen te scheppen onder de werknemers, bijvoorbeeld bij recruitment van nieuwe werknemers en tijdens functionerings- en beoordelingsgesprekken. Wanneer werknemers het gevoel hebben dat hun psychologisch contract gebroken is, zullen jongere werknemers zich distantiëren van de organisatie, door bijvoorbeeld op zoek te gaan naar een nieuwe baan. Oudere werknemers zijn minder geneigd dit te doen, terwijl hun baantevredenheid wel sterk wordt beïnvloed door contractbreuk. Aangezien baantevredenheid tot slechtere werkprestaties kan leiden, is het belangrijk om contractbreuk zo veel mogelijk te voorkomen, ook onder ouderen.

Tenslotte is het voor organisaties die hun werknemers langer in dienst willen houden en gemotiveerd aan het werk willen houden goed om zich te richten op het bewerkstelligen van een lange termijnrelatie met hun oudere werknemers. Door zich te richten op een relatie met de oudere werknemer die gekenmerkt wordt door vertrouwen, een hoge mate van sociale uitwisseling en steun aan de werknemer, zal de oudere werknemer langer en gemotiveerd aan het werk kunnen blijven.

Glossary

- *Affective Commitment*: An affective or emotional attachment to the organization, such that the strongly committed individual identifies with, is involved in, and enjoys membership in, the organization (Allen & Meyer, 1990).
- *Job Satisfaction*: The function of the perceived relationship between what one wants from one's job and what one perceives it as offering (Locke, 1969).
- *Organizational Citizenship Behaviors*: Individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization (Organ, 1988).
- *Perceived Organizational Support (POS)*: employees' belief concerning the extent to which the organization cares about them and values their contributions to the organization (Rhoades & Eisenberger, 2002).
- *Procedural Justice*: Perceived fairness of the procedures used to make decisions (Lind & Tyler, 1988).
- *Psychological Contract*: Individual beliefs, shaped by the organization, regarding terms of an exchange agreement between individuals and their organization (Rousseau, 1995).
 - *Breach*: The cognition that one's organization has failed to meet one or more obligations within one's psychological contract in a manner commensurate with one's contributions (Morrison & Robinson, 1997).
 - *Fulfillment*: The extent to which one's psychological contract with the organization is fulfilled (Lambert, Edwards, & Cable, 2003).
 - *Employer Economic Obligations*: Obligations with respect to money and goods organizations offer to their employees.
 - *Employer Socio-emotional Obligations*: Obligations with respect to affiliation and services organizations offer to their employees.
 - *Employer Developmental Obligations*: Obligations with respect to status, information, and development organizations offer to their employees.
 - *Employee In-role Obligations*: Employees' felt obligations with respect to working hard and efficiently and cooperation with colleagues.
 - *Employee Citizenship Obligations*: Employees' felt obligations with respect to helping coworkers and the broader firm.
 - *Employee High Performance Obligations*: Employees' felt obligations with respect to proactive contributions enhancing organizational performance in the long run.

- *Social Exchange Relationship (SER)*: the obligations between employee and organization, based on mutual investment in the relationship, a long-term duration, and the emphasis on non-financial exchanges (Shore, Tetrick, Lynch, & Barksdale, 2006).
- *Trust*: An individual propensity to trust and an individual's expectations about a trustee's future behavior (Dunn & Schweitzer, 2005).
- *Turnover Intention*: The subjective probability that an individual will leave his or her organization within a certain period of time (Zhao, Wayne, Glibkowski, & Bravo, 2007).
- *Turnover*: An event where an employee leaves an organization to work for another organization.
- *Work Engagement*: A positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption (Schaufeli & Bakker, 2004).

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Appendix A: Scales to measure the Psychological Contract (Dutch version)

Werkgeversverplichtingen

De volgende stellingen gaat over verplichtingen van (uw organisatie) *ten opzichte van u*. Wilt u aangeven hoe vaak iedere uitspraak op u van toepassing is door steeds het best passende cijfer (van 1 tot 5) te omcirkelen?

1	2	3	4	5
Helemaal niet	Een beetje	Enigszins	In sterke mate	In zeer sterke mate

	<i>In welke mate vindt u dat (uw organisatie) verplicht is te zorgen voor:</i>					
	<i>Financieel</i>					
1	Salarisverhoging om koopkracht te kunnen behouden	1	2	3	4	5
2	Eerlijk salaris in vergelijking met werknemers in andere organisaties die hetzelfde werk doen	1	2	3	4	5
3	Eerlijk salaris voor de verantwoordelijkheden van het werk	1	2	3	4	5
4	Secundaire arbeidsvoorwaarden die vergelijkbaar zijn met werknemers die hetzelfde werk doen in andere organisaties	1	2	3	4	5
5	Beloning op basis van uw prestaties	1	2	3	4	5
	<i>Sociaal-Emotioneel</i>					
6	De vrijheid om mijn werk goed uit te voeren	1	2	3	4	5
7	Flexibele werktijden	1	2	3	4	5
8	Veilige werkomgeving	1	2	3	4	5
9	Respectvolle behandeling	1	2	3	4	5
10	Balans tussen werk en privé	1	2	3	4	5
	<i>Ontwikkeling</i>					
11	Participatie in besluitvorming	1	2	3	4	5
12	Interessant werk	1	2	3	4	5
13	Carrièrebegeleiding en mentoring	1	2	3	4	5
14	Een uitdagende baan	1	2	3	4	5
15	Steun om nieuwe vaardigheden aan te leren	1	2	3	4	5
16	Up to date training en ontwikkeling	1	2	3	4	5
	<i>Anders</i>					
17	Baanzekerheid op lange termijn	1	2	3	4	5

Werknemersverplichtingen

De volgende stellingen gaat over verplichtingen van u *ten opzichte van (uw organisatie)*. Wilt u aangeven hoe vaak iedere uitspraak op u van toepassing is door steeds het best passende cijfer (van 1 tot 5) te omcirkelen?

1	2	3	4	5
Helemaal niet	Een beetje	Enigszins	In sterke mate	In zeer sterke mate

	<i>In welke mate vindt u dat u de volgende zaken aan (uw organisatie) verplicht bent:</i>					
<i>Inrol</i>						
1	Hard en efficiënt werken	1	2	3	4	5
2	Goed samenwerken met collega's	1	2	3	4	5
3	Collega's assisteren	1	2	3	4	5
4	Kwalitatief goed werk leveren	1	2	3	4	5
5	Informatie delen met collega's	1	2	3	4	5
6	Goed kunnen opschieten met collega's	1	2	3	4	5
<i>Citizenship</i>						
7	Indien nodig extra uren te werken	1	2	3	4	5
8	Vrijwillig taken uitvoeren die geen deel uitmaken van de taakomschrijving	1	2	3	4	5
9	Flexibel zijn over wat wel en niet deel is van uw werk	1	2	3	4	5
10	Flexibel zijn in werkuren	1	2	3	4	5
11	Onbetaald doorwerken om een taak af te ronden	1	2	3	4	5
12	Een overplaatsing naar een andere functie binnen uw organisatie accepteren	1	2	3	4	5
<i>High Performance</i>						
13	Zoeken naar een betere manier om het werk uit te voeren	1	2	3	4	5
14	Zoeken naar manieren om de wijze van werken op uw afdeling te verbeteren	1	2	3	4	5
15	Zoeken naar manieren om kosten te besparen Initiatief nemen om aan cursussen mee te doen	1	2	3	4	5
16	Aanpassen aan veranderingen in de manier waarop het werk wordt uitgevoerd	1	2	3	4	5
<i>Anders</i>						
17	Op de hoogte blijven van ontwikkelingen binnen uw organisatie	1	2	3	4	5
18	Ruim van tevoren aangeven als u een baan bij een andere organisatie heeft aangenomen	1	2	3	4	5
19	Vertrouwelijke informatie van uw organisatie beschermen	1	2	3	4	5
20	Minimaal twee jaar bij uw organisatie blijven	1	2	3	4	5
21	Initiatief nemen om deel te nemen aan training	1	2	3	4	5

Contractvervulling

De volgende stellingen gaat over in welke mate (uw organisatie) zijn verplichtingen *ten opzichte van u* over het algemeen is nagekomen. Wilt u aangeven hoe vaak iedere uitspraak op u van toepassing is door steeds het best passende cijfer (van 1 tot 5) te omcirkelen?

1	2	3	4	5
Helemaal niet	Een beetje	Enigszins	In sterke mate	In zeer sterke mate

	<i>In welke mate vindt u dat (uw organisatie) heeft gezorgd voor:</i>					
<i>Financieel</i>						
1	Salarisverhoging om koopkracht te kunnen behouden	1	2	3	4	5
2	Eerlijk salaris in vergelijking met werknemers in andere organisaties die hetzelfde werk doen	1	2	3	4	5
3	Eerlijk salaris voor de verantwoordelijkheden van het werk	1	2	3	4	5
4	Secundaire arbeidsvoorwaarden die vergelijkbaar zijn met werknemers die hetzelfde werk doen in andere organisaties	1	2	3	4	5
5	Beloning op basis van uw prestaties	1	2	3	4	5
<i>Socio-Emotioneel</i>						
6	De vrijheid om mijn werk goed uit te voeren	1	2	3	4	5
7	Flexibele werktijden	1	2	3	4	5
8	Veilige werkomgeving	1	2	3	4	5
9	Respectvolle behandeling	1	2	3	4	5
10	Balans tussen werk en privé	1	2	3	4	5
		1	2	3	4	5
<i>Ontwikkeling</i>						
11	Participatie in besluitvorming	1	2	3	4	5
12	Interessant werk	1	2	3	4	5
13	Carrièrebegeleiding en mentoring	1	2	3	4	5
14	Een uitdagende baan	1	2	3	4	5
15	Steun om nieuwe vaardigheden aan te leren	1	2	3	4	5
16	Up to date training en ontwikkeling	1	2	3	4	5
<i>Anders</i>						
17	Baanzekerheid op lange termijn	1	2	3	4	5

Appendix B: Scales to measure the
Psychological Contract
(English version)

Employer Obligations

The following statements are about the obligations of your organization towards you. Please indicate for each statement to which extent it applies to you, on a scale from 1 (not at all) to 5 (to a very great extent)?

1	2	3	4	5
Not at all	A little	Somewhat	To a great extent	To a very great extent
To which extent do you believe your organization is obligated to provide you with:				
<i>Economic</i>				
1	2	3	4	5
1	2	3	4	5
3	2	3	4	5
4	2	3	4	5
5	2	3	4	5
<i>Socio-Emotional</i>				
6	2	3	4	5
7	2	3	4	5
8	2	3	4	5
9	2	3	4	5
10	2	3	4	5
<i>Developmental</i>				
11	2	3	4	5
12	2	3	4	5
13	2	3	4	5
14	2	3	4	5
15	2	3	4	5
16	2	3	4	5
<i>Other</i>				
17	2	3	4	5

Employee Obligations

The following statements are about your obligations towards your organization. Please indicate for each statement to which extent it applies to you, on a scale from 1 (not at all) to 5 (to a very great extent).

1	2	3	4	5
Not at all	A little	Somewhat	To a great extent	To a very great extent

	<i>To which extent do you believe you are obligated towards your organization to:</i>					
<i>In-role</i>						
1	Work hard and efficient	1	2	3	4	5
2	Cooperate well with colleagues	1	2	3	4	5
3	Assist colleagues	1	2	3	4	5
4	Deliver quality in your work	1	2	3	4	5
5	Share information with colleagues	1	2	3	4	5
6	Get along well with colleagues	1	2	3	4	5
<i>Citizenship</i>						
7	Work extra hours if necessary	1	2	3	4	5
8	Volunteer tasks that are not part of your job	1	2	3	4	5
9	Be flexible about what is part of the job	1	2	3	4	5
10	Be flexible in work hours	1	2	3	4	5
11	Work unpaid hours to finish a task	1	2	3	4	5
12	Accept a transfer to another project/department	1	2	3	4	5
<i>High Performance</i>						
13	Look for better ways of doing the job	1	2	3	4	5
14	Look for better ways of working within the department	1	2	3	4	5
15	Look for ways to save costs	1	2	3	4	5
16	Adapt to changes in the way how the work is done					
<i>Other</i>						
17	Inform of development within the organization	1	2	3	4	5
18	Advance notice when leaving	1	2	3	4	5
19	Protect proprietary information	1	2	3	4	5
20	Stay a minimum of 2 years	1	2	3	4	5
21	Take initiative for training	1	2	3	4	5

Employer Fulfillment

The following statements are about how well your organization has fulfilled its obligations towards you. Please indicate for each statement to which extent it applies to you, on a scale from 1 (not at all) to 5 (to a very great extent).

1	2	3	4	5
Not at all	A little	Somewhat	To a great extent	To a very great extent

	<i>To which extent has your organization in practice fulfilled its obligations regarding:</i>					
	<i>Economic</i>					
1	Pay increases to maintain standards of living	1	2	3	4	5
2	Fair salary compared to employees in other organizations	1	2	3	4	5
3	Fair salary compared to the responsibilities of the job	1	2	3	4	5
4	Fringe benefits	1	2	3	4	5
5	Pay for performance	1	2	3	4	5
	<i>Socio-Emotional</i>					
6	Freedom to do my job well	1	2	3	4	5
7	Flexible working scheme	1	2	3	4	5
8	Safe work environment	1	2	3	4	5
9	Respectful treatment	1	2	3	4	5
10	good work private balance	1	2	3	4	5
	<i>Developmental</i>					
11	Participation in decision making	1	2	3	4	5
12	Interesting work	1	2	3	4	5
13	Career support and mentoring	1	2	3	4	5
14	A job that is challenging	1	2	3	4	5
15	Support to learn new skills	1	2	3	4	5
16	Up to date training and development	1	2	3	4	5
	<i>Other</i>					
17	Long-term job security	1	2	3	4	5

Appendix C: Mutual Obligations of Younger and Older Workers

To present a schematic overview of how mutual obligations between employee and organization change over the life course, an analysis was carried out on the total dataset that was collected for the thesis. The total dataset consists of the mutual psychological contract obligations as reported by the respondents of the study described in Chapter 3 (T1, N = 727) and Chapter 4 (N = 292). A distinction was made between younger workers (younger than 35 years), middle-aged workers (35-49 years), older worker (50-65 years), and post-retirement workers. For each obligation the mean score of each age group was calculated (on a 5-point Likert-scale). Respondents had low obligations when their score was lower than 2.5, medium when they scores between 2.5 and 3.5, and high when their score was higher than 3.5. Finally, the correlation coefficient was calculated between each obligation and age, when measured as a continuous variable. Table C.1 presents the results of these analyses.

Table C.1: Perceived Mutual Obligations per Age Group (N = 1019)

		<i>Younger workers (<35 years)</i>	<i>Middle- aged workers (35-49 years)</i>	<i>Older workers (50-65 years)</i>	<i>Post- retirement workers (>65 years)</i>	<i>Significant relation with age</i>
Employer Obligations						
<i>Economic</i>						
1	Pay increases to maintain standards of living	MEDIUM	MEDIUM	MEDIUM	MEDIUM	0
2	Fair salary compared to employees in other organizations	MEDIUM	MEDIUM	MEDIUM	HIGH	++
3	Fair salary compared to the responsibilities of the job	MEDIUM	MEDIUM	MEDIUM	HIGH	++
4	Fringe benefits	HIGH	HIGH	HIGH	MEDIUM	0
5	Pay for performance	MEDIUM	MEDIUM	MEDIUM	MEDIUM	0
<i>Socio-emotional</i>						
6	Freedom to do my job well	HIGH	HIGH	HIGH	HIGH	0
7	Flexible work scheme	HIGH	HIGH	HIGH	MEDIUM	--
8	Safe work environment	HIGH	HIGH	HIGH	HIGH	--
9	Respectful treatment	HIGH	HIGH	HIGH	HIGH	++
10	Work private balance	HIGH	MEDIUM	HIGH	HIGH	0
<i>Developmental</i>						
11	Participation in decision making	MEDIUM	MEDIUM	MEDIUM	MEDIUM	-
12	Interesting work	HIGH	HIGH	HIGH	MEDIUM	--
13	Career support and mentoring	MEDIUM	MEDIUM	LOW	LOW	--
14	A job that is challenging	HIGH	MEDIUM	MEDIUM	MEDIUM	--
15	Support to learn new skills	HIGH	MEDIUM	MEDIUM	LOW	--
16	Up to date training and development	MEDIUM	MEDIUM	MEDIUM	LOW	--

Other						
17	Long-term job security	HIGH	HIGH	HIGH	MEDIUM	--
Employee Obligations						
In-role						
1	Cooperate well with colleagues	HIGH	HIGH	HIGH	HIGH	0
2	Deliver quality in your work	HIGH	HIGH	HIGH	HIGH	0
3	Share information with colleagues	HIGH	HIGH	HIGH	HIGH	0
Citizenship						
4	Volunteer tasks that are not part of your job	HIGH	HIGH	MEDIUM	MEDIUM	--
5	Be flexible in work hours	HIGH	HIGH	HIGH	HIGH	--
6	Accept a transfer to another project/department	MEDIUM	MEDIUM	LOW	MEDIUM	0
High Performance						
7	Look for better ways of doing the job	HIGH	HIGH	HIGH	HIGH	--
8	Look for better ways of working within the department	HIGH	HIGH	MEDIUM	HIGH	0
9	Look for ways to save costs	MEDIUM	MEDIUM	MEDIUM	HIGH	+
10	Adapt to changes in the way how the work is done	HIGH	HIGH	MEDIUM	MEDIUM	--
Other						
11	Advance notice when leaving	MEDIUM	MEDIUM	MEDIUM	HIGH	++
12	Protect proprietary information	HIGH	HIGH	HIGH	HIGH	0
13	Stay a minimum of 2 years	HIGH	HIGH	HIGH	MEDIUM	0
14	Take initiative for training	HIGH	MEDIUM	MEDIUM	MEDIUM	--

Note: Low = 1.5 – 2.5; Medium = 2.5 – 3.5; High = 3.5 – 4.5

-- = Strong negative relation; - = negative relation; 0 = no relation, + = positive relation, ++ = strong positive relation

The employer obligations are distinguished in four types: economic, socio-emotional, developmental, and other. With respect to economic obligations, most of these are stable throughout the career but fair salary becomes especially important among post-retirement workers. Further, respectful treatment becomes more important with age, whereas expectation of flexible work schemes and safe work environment decrease with age. On a general level, socio-emotional obligations are highly rated among all employees. Finally, age is negatively related to developmental obligations; older workers have medium or low expectations of receiving development, whereas younger workers have high expectations. Remarkably, age is

also negatively related to job security obligations. However, until official retirement age employees perceive high obligations of job security, whereas post-retirement workers have low expectations of job security.

Regarding employee obligations, four different types are distinguished: in-role, citizenship, high performance, and other. Perceptions of in-role obligations are rated highly throughout the career, and do not differ between the age groups. Citizenship obligations, on the other hand, decline with age. Although younger workers feel highly obligated to engage in citizenship behaviors, older workers and post-retirement workers feel less obliged to do this. The picture is less clear for high performance obligations; looking for better ways of doing the job and adaptation to changes are negatively related to age. Look for ways to save costs, however, is positively related to age. Finally, advance notice when leaving is also positively related to age, and initiative taking for training negatively to age.

Altogether, young employees have in general high expectations of their organization, and are willingly to work hard, and beyond their in-role obligations. Older workers and post-retirement workers, however, perceive high obligations from their employers that they are treated fairly and with respect.

Curriculum Vitae



Matthijs Bal was born 5th of July, 1981, in Leiderdorp, the Netherlands, as the sixth child of Leendert Bal and Elizabeth Bal-van der Straaten. After contemplating reading archeology, Dutch literature and economics, he decided to study psychology, which he started in 1999. He graduated in organizational psychology at Utrecht University, after which he started his PhD-project on “Psychological Contracts of Older Workers with their Organizations” at VU University Amsterdam, department of Management & Organization. In 2008, he spent three months as visiting scholar at Carnegie Mellon University in Pittsburgh, USA. Matthijs Bal currently works as an assistant professor at VU University Amsterdam. His current research focuses on older workers, motivation to continue working after retirement, psychological contracts of ethnic minorities, psychological contract interventions among middle managers in education, and the effects of reading fictional narratives on work behaviors. Matthijs Bal lives in Amersfoort. His interests outside academia include cycling, reading novels, visiting museums, listening to Electronic Body Music (EBM), and going to Bierfests in Germany (preferably Stuttgart).

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