

The London School of Economics and Political Science



**Investigating the Dynamic Nature of Psychological Contracts: A
Study of the Coevolution of Newcomers' Psychological Contracts and
Social Networks**

Ceren Erdem

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Declaration

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Abstract

My thesis examines how employees' psychological contracts form and evolve over time conjointly with their social network ties. It comprises three separate papers, one conceptual and two empirical, written with the purpose of capturing the antecedents of psychological contracts through pre-entry expectations and social relationships of newcomers.

Paper 1 is a conceptual piece that theorizes the concurrent formation of newcomers' social relationships and psychological contracts from a sensemaking perspective. I develop propositions explaining how newcomers make sense of information they gather from pre-entry to post-socialization. The key contribution of this paper is the establishment of a testable two-way process model, which captures the dynamic nature of psychological contracts, and how and why social relationships are important building blocks of the psychological contract.

Paper 2 is a qualitative empirical study that investigates the pre-entry expectations and content dimensions of millennial employees' anticipatory psychological contracts. The key contribution of this paper is the conceptualization of pre-entry time in the psychological contract formation process. The importance of pre-entry expectations in shaping employees' initial psychological contracts are conceptually acknowledged but widely overlooked in empirical studies. This qualitative study empirically investigates pre-entry expectations and role of these in shaping the content dimensions of

anticipatory psychological contracts, which guide millennials' behavior and sensemaking once they join the organization.

Paper 3 is a quantitative empirical study that examines the mechanisms of *homophily* and *assimilation* driving the coevolution of newcomers' psychological contract formation and social network ties. This study challenges earlier views of the unidirectional influence of social interactions on the psychological contract. As a key contribution, through introducing a novel simulation methodology (SIENA), this study shows psychological contracts are both the products and predictors of employees' social network ties.

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Chapter 1

Introduction

1.1. Chapter Overview

My thesis aims to extend our knowledge regarding the formation of psychological contracts, conceptually and empirically highlighting their dynamic nature and investigating how they coevolve with the social network ties of employees. I am ultimately interested in the broader inquiry of how employees' psychological contracts dynamically form over time. The majority of the research in the field of psychological contracts has focused on psychological contract violation and its attitudinal and behavioral aftermath (e.g. Coyle-Shapiro & Kessler, 2000; Robinson, 1996; Robinson & Morrison, 1995; Robinson & Morrison, 2000). However, the formation of the psychological contract has been relatively overlooked. This subject is important because the lack of empirical evidence regarding the formation of the psychological contract creates debates and ambiguities in the field (Rousseau, 2001). In three distinct papers, my thesis addresses variety of research questions through conceptual inquiry and qualitative and quantitative research methods. I employed a mixed method research approach to examine the contributors to the formation of employees' psychological contracts from multiple complimentary perspectives.

I organized this introduction chapter into several sections. Firstly, I provide a brief review of the early conceptualizations of the psychological contract. Secondly, I review key theoretical approaches employed in the study of psychological contract formation. Thirdly, I highlight how my thesis extends the theory of psychological contract formation. Fourthly, I clarify current debates and gaps in the psychological contract literature along with how my thesis contributes to filling these knowledge

gaps. Fifthly, I describe the overall research design and methodological contributions of my thesis before concluding with the overall structure.

1.2. Early Conceptualization of the Psychological Contract

The psychological contract literature has expanded dramatically over the past thirty years, after Rousseau (1989) reconceptualized the construct and defined it as employees' beliefs regarding the terms of exchange agreement between themselves and their organization. The concept of was born in the 1960s, and various scholars contributed to the early conceptualization of psychological contracts after that time. The concept and terminology of psychological contracts have their roots in the early work of Argyris (1960), who was the first to use the term *psychological work contract* to define an implicit understanding between employees and their foremen. In his work, Argyris (1960) mainly focused on the exchange of tangible and economic resources to fulfill both parties' needs and argued that employees would perform better in exchange for high wages and job security,.

Following Argyris (1960), Levinson, Price, Munden, Mandl, and Solley (1962) contributed to the literature by introducing a more detailed definition of the psychological contract: "a series of mutual expectations of which the parties to the relationship may not themselves be dimly aware but which nonetheless govern their relationship to each other" (p. 21). As evident in the definition, Levinson et al. (1962) led the way toward the conceptualization of the psychological contract, in terms of not only tangible resources but also intangible resources, such as expectations. Levinson et al. (1962) also highlighted the obligatory quality of the mutual expectations and the

reciprocity norm as means of fulfilling each party's needs (Coyle-Shapiro & Parzefall, 2008). Levinson et al. (1962) pioneered the concept of promissory obligations that governs the contemporary psychological contract studies. What distinguishes Levinson (1962) from Argyris (1960) is the appreciation of the complex and intangible nature of psychological contracts, in which some expectations are shared but some are not, but are open to negotiation and change (Coyle-Shapiro & Parzefall, 2008).

Developing this further, Schein (1965) focused on the match of mutual expectations and the importance of their fulfillment for both the employee and the organization. In his argument, Schein emphasized that achieving positive or negative organizational outcomes (such as employee satisfaction, commitment, performance, labor unrest, and worker alienation) are products of the agreement or disagreement between an employee and an employer in terms of matching expectations and their fulfillment (Schein, 1978). The works of Schein (1965, 1978, 1980) were the first in the literature to understand employee outcomes as products of perceptions regarding (un)fulfillment of mutual expectations. Before Schein, negative employee outcomes were solely understood as products of poor pay, unpleasant employment conditions, or long working hours. Another salient contribution that Schein made to the psychological contract literature was stressing the importance of considering both employees' and employers' perspectives regarding mutual expectations equally. Schein's (1980) approach is clear in the following statement: "We cannot understand psychological dynamics if we look only to the individual's motivation or only to the organizational

conditions and practices. The two interact in a complex fashion that demands a systems approach, capable of handling interdependent phenomena” (p. 99).

Although these researchers contributed substantially to the early conceptualization of psychological contracts, there was no consensus between scholars regarding the definition of the psychological contract until the late 1980s (Coyle-Shapiro & Parzefall, 2008). However, in her eminent article, Rousseau (1989) reconceptualized the construct and focused on two main dimensions: individual beliefs and promissory obligations. The research field moved forward after this point, and the number of psychological contract studies has increased dramatically.

In her definition, Rousseau specifically distinguished individual- from organizational-level exchange relationships. Rousseau (1989) reconceptualized the psychological contract as the individual employees’ beliefs regarding mutual obligations between the employee and employer. In her reconceptualization of the psychological contract, Rousseau emphasized individuals’ sense of promissory obligations. Two distinct points make Rousseau’s work original and different compared to those of earlier contributors. Firstly, Rousseau’s conceptualization differs from Schein’s in that the psychological contract is an individual-level phenomenon for Rousseau but an organizational-level reality for Schein. Secondly, it differs from Levinson et al.’s (1962) study in comparing expectations to obligations. Schein acknowledges the obligatory quality of expectations but conceptualizes expectations as the consequences of needs. In Rousseau’s (1989) conceptualization, obligations are

products of perceived promises, with the assumption that unmet obligations would naturally have more serious and destructive effects than unmet expectations.

By conceptualizing the psychological contract at the individual level, Rousseau (1989) emphasized the “psychological” in the psychological contract and investigated the concept as individuals’ mental models of the exchange relationship between themselves and their employer (Coyle-Shapiro & Parzefall, 2008, p. 10). After this point, most of the studies conducted in the psychological contract field have followed Rousseau’s (1989) conceptualization of the psychological contracts.

1.3. Approaches to Psychological Contract Formation

In the psychological contract literature there are three basic research streams: formation, content and violation. The majority of research has focused on the predictors and consequences of psychological contract violation. Although the content of psychological contracts has not received an equal amount of attention as violations, there is consensus among researchers regarding the forms and content of psychological contracts: transactional, relational, balanced, and transformational (Rousseau, 2000). Among these three research streams, the formation of the psychological contract has received the least theoretical and empirical attention (De Vos et al., 2003). The lack of a theory of psychological contract formation creates ambiguities and debates within the field. Over and above the lack of a theory of psychological contract formation, the findings regarding the outcomes of perceptions regarding psychological contract violations call for deeper investigation into the formation of psychological contracts

(Rousseau, 2001). What follows next is a brief review of the theoretical approaches focusing on psychological contract formation.

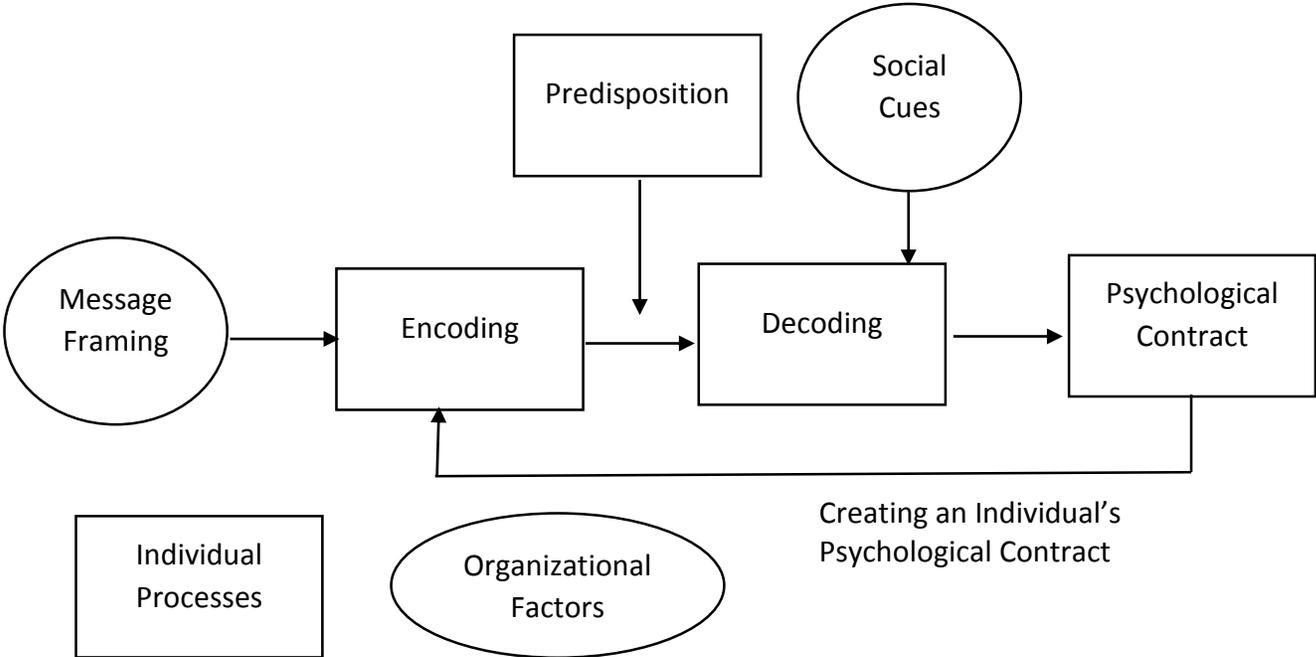
1.3.1. Psychological contract formation as a mental schema

Highlighting the fundamental necessity of a theory in the psychological contract formation literature, Rousseau (1995, 2001) postulated that psychological contracts are grounded in individuals' mental models of the employment relationship, so that employees' psychological contracts are forms of mental schemas. Schemas are mental models that organize experiences in meaningful ways and make it possible for people to deal with ambiguity and predict future events (Rousseau, 1995). Thus, theories of cognitive psychology concerning mental models of individuals may also favor psychological contract research.

Individuals develop their schemas early in life through experiences and the influences of their social environment, such as their family, school, and peer group (Coyle-Shapiro & Parzefall, 2008; Rousseau, 1995, 2001). Once schemas are formed, they are resistant to change. People do not continuously seek information. Because of intermittent information processing, people frequently see what they expect to see and what fits into their already developed schemas (Rousseau, 1995, 2001). People only seek information when they think they need to. Rousseau (1995) highlighted that active information seeking is triggered by events such as starting a new job or being in an unfamiliar social environment. Therefore, it is expected that information-seeking behavior occurs during the initial phases of the employment relationship. Newcomers either incorporate newly gathered information into their existing schemas or create new

schemas concerning their new work environment (Rousseau, 1995). This also depends on the individuals' previous employment experiences. However, individuals can have different cognitive structures resulting from diverse past experiences (Rousseau, 2001). Thus, organizational experiences that fit into one person's schema may not fit into another's, which may cause the development of completely different psychological contracts even when individuals receive the same information (Rousseau, 2001). Rousseau's (1995) model illustrates how the mental schemas of individuals' psychological contracts are created (See Figure 1). According to Rousseau (1995), two important factors operate while an individual forms psychological contracts: external messages and social cues. An individual's predispositions, individual processes and organizational factors are other aspects influencing the formation process.

Figure 1: Creating an individual's psychological contract



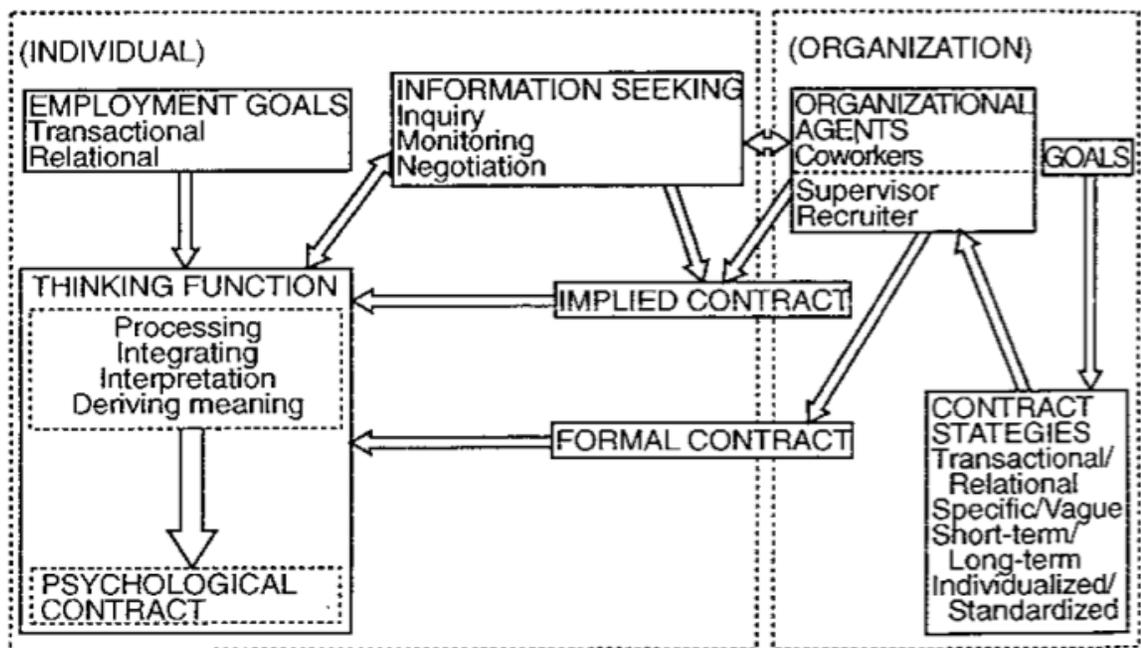
Source: Rousseau (1995, p. 33)

In the model above (Figure 1), Rousseau (1995) defined external factors as messages and signals that an organization sends to convey future commitments through communications with managers, recruiters, and coworkers. Social cues are information that newcomers acquire from coworkers and work groups. Encoding refers to the process of individuals interpreting organizational events, messages, and social cues as promises. Decoding refers to the individuals' judgement regarding whether the organizational promises made to them are fulfilled or not. Individual predispositions reflect the individuals' characteristics and affect how individuals encode and decode the information in creating and evaluating their psychological contracts. Specifically, cognitive biases, information-processing approaches, and career motives are the most influential predispositions in psychological contract formation (Rousseau, 1995).

Similar to Rousseau's (1995) model, Shore and Tetrick (1994) drew upon cognitive psychology and schemas and proposed that similar to mental schemas, psychological contracts help employees to go through ambiguous times and predict the complex employment relationship. However, Shore and Tetrick (1994) included the organizations' goals and highlighted that both potential employees and organizational agents start the employment relationship with a set of expectations. However, expectations are not the only factors in shaping the individuals' psychological contracts. The dynamic nature of the interactions between parties, different goal orientations, and environmental conditions are some of the other factors that make the exchange relationship unique for each individual (Shore & Tetrick, 1994).

In their model (see Figure 2), Shore and Tetrick (1994) described organizational agents (coworkers, supervisors, and recruiters) as important contract makers who have direct influence on the formation of psychological contracts. This notion is evident in the following statement: “coworkers may share their perceptions of the fairness of the supervisor and the trustworthiness of the organization, so that the new hire is able to revise their contract or at least estimate the likelihood of violation” (p. 101).

Figure 2: Schematic representation of the development of the psychological contract



Source: Shore and Tetrick (1994, p. 96)

As evident in both Rousseau’s (1995) and Shore and Tetrick’s (1994) models, perceptions of others with whom newcomers work and interact closely may have a fundamental influence on the formation of their psychological contract.

1.3.2. Psychological contract formation as a sensemaking process

De Vos, Buyens, and Schalk (2003) conceptualized newcomers' psychological contract formation as a sensemaking process. Sensemaking refers to cognitive processes that individuals employ to cope with surprise and ambiguity, such as the organizational entry and socialization periods (Louis, 1980; De Vos et al., 2003). Moreover, sensemaking guides individuals to measure how close their expectations are to the reality (Weick, 1995) and may thus reduce the likelihood of perceived psychological contract breach.

The sensemaking process starts prior to organizational entry when future employees start forming their expectations (De Vos, De Stobbeleir, & Meganck, 2009). During organizational entry and socialization, newcomers experience a series of events that may trigger them to evaluate their existing expectations and form new expectations, perceptions and beliefs (De Vos & Freese, 2011). In fact, De Vos et al. (2003) acknowledged that their conceptualization of psychological contract formation as a sensemaking process is comparable to Rousseau's (1995) conceptualization as individuals' cognitive schemas.

Although distinct in their approaches, De Vos and colleagues' (De Vos et al., 2003; De Vos, Buyens, & Schalk, 2005; De Vos et al., 2009; De Vos & Freese, 2011) conceptualization of psychological contract formation as a sensemaking process and Rousseau's (1995) conceptualization of psychological contract formation as a cognitive schema complement each other in many ways. In a series of studies, De Vos and colleagues (De Vos et al., 2003, 2005; De Vos et al., 2009; De Vos & Freese, 2011)

suggested that information seeking is a sensemaking tool and that sensemaking is a process of evaluating and creating cognitive schemas. In a more recent study, De Vos and Freese (2011) investigated how the psychological contract related information-seeking changes over the first year of employment. The findings of this study suggested that the intensity of psychological contract related information-seeking reduced after the initial weeks of the employment relationship. Likewise, Rousseau (1995) also highlighted that people seek information when they think they need to, but they become resistant to change once this information is incorporated into their cognitive schemas.

1.3.3. Psychological contract formation as attachment behavior

Nelson and Quick (1991) argued that instinctual attachment behavior is the foundation upon which psychological contracts are built. They highlighted that newcomers may form attachment links with other organizational members through social interactions. These attachment links may help newcomers to develop relational psychological contracts and reduce the feelings of isolation, uncertainty and stress due to organizational entry.

Nelson and Quick (1991) discussed that secure social relationships are the basis for the successful adaptation of newcomers into organizations and the formation of positive psychological contracts. They founded their line of reasoning upon the attachment theory of Bowlby (1982), who suggested that attachment is an instinctual human need and mainly needed in times of distress, anxiety, and anger, such as organizational entry and socialization (Nelson & Quick, 1991). Bowlby (1982), who had studied attachment in infants, argued that children who cannot develop secure

attachment ties with their parents at developmental years are at risk. However, after Bowlby's (1982) study, other scholars have shown that the need for attachment does not solely exist in infants but also exists in adults (Hazan & Shaver, 1987; Kobak, 1985; Main & Goldwyn, 1985). Drawing upon these findings, Nelson and Quick (1991) applied Bowlby's infant-parent attachment theory to newcomers. The scholars defined organizational socialization as a stressful and uncertain period that triggers newcomers' need of attachment to feel secure. By analogy, they considered newcomers as an "organizational child" and insiders as "parental figures" with whom newcomers form secure attachments, which provide the solid foundation upon which psychological contracts are then formed (Nelson & Quick, 1991, p. 59).

In the next section, I highlight the overall contribution of my thesis to the theory of psychological contract formation and to the general debates and knowledge gaps in the literature.

1.4. Overall Contribution of This Thesis

1.4.1. Contribution to the theory of psychological contract formation

As evident in the earlier theoretical approaches, social relationships are crucial contributors to the process of psychological contract formation. Rousseau (1995) conceptualized the importance of social relationships through the influence of social cues in the creation of individuals' psychological contracts (see Figure 1). Similarly, Shore and Tetrick (1994) conceptualized the importance of social relationships through the influence of interactions between newcomers and organizational agents on the

formation of psychological contracts (see Figure 2). More recently, De Vos and colleagues (De Vos et al., 2003, 2005; De Vos et al., 2009; De Vos & Freese, 2011) conceptualized the importance of social relationships as the source of information-seeking behavior, which triggers newcomers' sensemaking during the organizational socialization period, in which psychological contracts are dynamically formed. Finally, Nelson and Quick (1991) conceptualized the importance of social relationships through the lens of developmental attachment theory, which suggests that newcomers instinctually feel the need to attach with others within the organization. Only after secure attachments are formed will newcomers be able to form positive psychological contracts.

It is evident that all of these scholarly attempts to capture the formation of psychological contracts encountered practical challenges, since the empirical evidence regarding the formation of psychological contracts and the role of social relationships in this formation process is limited. In my thesis, newcomers' social relationships are defined as social interactions that they engage with other organizational agents (De Vos & Freese, 2011). During pre-entry time social relationships refer to interactions with recruiters, interviewers and potential supervisors/managers (as in Paper 2). After organizational entry, social relationships refer to interactions with fellow newcomers, coworkers, supervisors/managers and other organizational stakeholders. Specifically in Paper 3, I study newcomers' social relationships with fellow newcomers through newly forming friendship and advice relationships.

In my thesis, I follow Weick's (1995) sensemaking approach and Rousseau's (1995) cognitive schemas approach. As mentioned above and as De Vos and colleagues suggested, these two approaches complement each other: fundamentally, sensemaking is a process of evaluating and creating cognitive schemas (De Vos et al., 2003; De Vos et al., 2009; De Vos & Freese, 2011). However, my approach also extends Nelson and Quick's (1991) attachment theory as a means of further explaining how social relationships influence the formation of psychological contracts. Furthermore, I aim to contribute to the theory of psychological contract formation by introducing a novel simulation methodology called SIENA, which is in particular employed in Chapter 4 (Paper 3). SIENA allows the statistical modelling of individuals' social network ties and behavior in a novel way to capture the coevolution of these two constructs. The specifications and assumptions of SIENA will be further elaborated in Chapter 4 (Paper 3).

Moreover, my thesis extends and challenges earlier approaches regarding the unidirectional influence of social relationships on the formation of psychological contracts. The theoretical model in Chapter 2 (Paper 1) and the framework in Chapter 4 (Paper 3) postulate that the relationship between social relationships and psychological contracts is not unidirectional but bidirectional. This proposed bidirectional relationship between social relationships and psychological contract is empirically supported by the findings of Paper 3. In other words, just as social relationships influence the formation of psychological contracts, psychological contracts also influence the formation of social relationships. Therefore, I argue that

these two constructs are codependent. If we desire to thrive by understanding the dynamic nature of psychological contract formation, we should explore the bidirectional relationship between social relationships and psychological contracts further.

Overall, my thesis contributes to the theory of psychological contract formation, both conceptually and empirically, by reconceptualizing and providing empirical evidence regarding the role of social relationships in the process of psychological contract formation. The findings of this thesis shows that the relationship between social relationships and psychological contract is bidirectional. These findings challenge prior studies that suggest social relationships have a unidirectional influence on the psychological contract processes (e.g. De Vos et al., 2005; Rousseau, 1995; Shore & Tetrick, 1994; Thomas & Anderson, 1998). Therefore, I reconceptualise and provide empirical evidence that newcomers' social relationships are not only the antecedents but also the products of psychological contracts.

In addition to the continuing investigation into the influence of social relationships within the psychological contract literature, there are also other debates to advance the field. What follows is an overview of these recent debates and knowledge gaps in the psychological contract literature. I will then summarize the contributions of my thesis's three papers separately. Table 1 also outlines the contributions of my thesis paper by paper.

1.4.2. Recent debates and gaps in the psychological contract literature

Although the concept of the psychological contract has been profoundly studied both conceptually and empirically, there are still significant gaps in our knowledge regarding the actual formation process of psychological contracts. As discussed above, the majority of the research to date concerning psychological contracts are predominantly focused on the process and aftermath of psychological contract violation (Rousseau, 2001; Bankins, 2015). However, in her eminent article, Rousseau (2001) highlighted that it is difficult to capture the dynamics of psychological contracts entirely without understanding their formation, and she invites organizational scholars to study the formation of psychological contracts further.

Psychological contract research has vastly contributed to the understanding of the employee–employer relationship, but it provides only a limited vision of how employees actually influence their own psychological contracts (Seeck & Parzefall, 2008). Seeck and Parzefall (2008) point out the incongruity of this gap in the literature, since recent work relationships suggest that employees negotiate personalized deals, modify and craft their work, and have autonomy in defining their roles (Rousseau, 2005). Yet, employee agency has been underestimated within the psychological contract literature. Employee attitudes and behaviors have been viewed as dependent variables of employer actions, mostly as reactions to breaches and violations of psychological contracts.

More recently, there have been debates regarding the between-person perspective that dominates the study of psychological contracts. An example of the

between-person perspective is investigating why some employees perform worse than others, using concepts such as psychological contract breach and fulfillment. Despite the efficacy of such findings, we know little about the within-person processes, i.e., the circumstances under which people form their psychological contracts or recover from psychological contract breach; the temporal nature of employees' expectations, perceptions, attitudes, and beliefs; or the dynamic nature of psychological contract formation over time.

In line with these issues, there have been recent calls to adopt a temporal and dynamic lens in organizational research (Roe, 2008; Shipp & Cole, 2015). In psychological contract research specifically, few scholars have urged researchers to recognize the dynamic nature of psychological contracts by focusing on within-person processes (Conway & Briner, 2002; Griep, Vantilborgh, Baillien, & Pepermans, 2016; Rousseau, Hansen, & Tomprou, 2016; Tomprou, Rousseau, & Hansen, 2015). Among these within-person approaches, there is an emphasis on how the psychological contracts are formed and change over time or how reactions to psychological contract evaluations unfold and change over time. As a result, this perspective allows for more fine-grained answers to the fundamental questions of *why*, *when*, and *how* psychological contracts form and shape employees' attitudes, perceptions, beliefs, and behavior.

In my thesis, I aimed to respond to these debates and contribute to the knowledge gaps within the psychological contract literature. What follows is a detailed explanation of these contributions in each paper. Please also see Table 1 for an outline of the gaps and contributions concerning each paper.

Table 1: Outline of the Contributions of Papers 1, 2 and 3

	Knowledge Gaps	Contributions
Paper 1	<ul style="list-style-type: none"> - Formation of the psychological contract - Influence of social relationships - Dynamic nature of psychological contracts - Role of employee agency 	<ul style="list-style-type: none"> - Investigates the antecedents of psychological contracts - Conceptualizes how and why social relationships are important building blocks of psychological contracts - Introduces a theoretical model that conceptualizes structuration theory and cybernetics principle as the driving forces behind the coevolution of social relationships and psychological contracts - Puts the individual at the center of his or her own psychological contract formation process
Paper 2	<ul style="list-style-type: none"> - Formation of anticipatory psychological contract - Role of pre-entry time in psychological contract research 	<ul style="list-style-type: none"> - Extends previous work on pre-entry expectations and emphasizes the importance of anticipatory psychological contracts - Conceptualizes the role of time as generational differences in workplace and draws attention to the importance of pre-entry time - Extends the earlier research on millennials and earlier generations at work and shows that the expectations of millennials are different from those of earlier generations - Offers insights into effective recruitment, selection and newcomer adaptation
Paper 3	<ul style="list-style-type: none"> - Formation of the psychological contract - Influence of social relationships - Dynamic nature of psychological contracts - Within-person processes of the psychological contract 	<ul style="list-style-type: none"> - Explores the antecedents of psychological contracts through the lens of social networks - Investigates the influence of newcomers' friendship and advice networks on the newcomers' psychological contract expectations and perceptions of employer obligations - Postulates and tests a theoretical framework, which captures the mechanisms driving the coevolution of newcomers' psychological contracts and network ties - Challenges prior studies that suggest a unidirectional impact of social relationships and social cues on the psychological contract processes and shows that the relationship is actually bidirectional - Conceptualizes psychological contract formation as an emergent construct

1.4.3. Contributions of Papers 1, 2 and 3

Paper 1 is a conceptual paper that introduces a theoretical model of the coevolution of psychological contracts and social network ties. This conceptual paper contributes to the psychological contract literature in four ways. First and foremost, in line with the Rousseau's (2001) assertions, this paper draws attention to the antecedents of psychological contracts by postulating a theoretical model, which captures how and why the nature of social relationships are important building blocks of psychological contracts. Weick's (1995) sensemaking theory is drawn upon to explain how newcomers make sense of the different data they gather from different types of social relationships. In line with recent critiques of the application of sensemaking (e.g. Maitlis & Christianson, 2014; Sandberg & Tsoukas, 2015), I adopt and explore a temporally-extended notion of sensemaking by incorporating its prospective element. Secondly, this paper extends earlier research by explaining how and why the nature of newcomers' relationships with certain insiders influences newcomers' psychological contract formation differently. Thirdly and most originally, by focusing on the unfolding, ongoing, and continuous episodes of action and cognition (Weick, 1995), as well as inclusion of prospective sensemaking and cybernetics principle, this paper moves the literature beyond examining the joint formation of social relationships and psychological contracts and the extent to which they influence each other's evolution simultaneously. Finally, unlike earlier studies that extensively positioned employees as relatively passive recipients of psychological contract breach and violation (Bankins, 2015), in this paper, I put the individual at the center of his or her psychological contract

formation process. In harmony with Seeck and Parzefall's (2008) statements, understanding of the role of agency is truly scarce in the literature on in psychological contracting processes. The sensemaking theory and the process approach allow us to explore how newcomers employ their agency in the ongoing journey of psychological contract formation.

Paper 2 is a qualitative study concerning the pre-entry expectations and anticipatory psychological contracts of millennial employees. The aim of Paper 2 is to contribute to the field in three ways. First and foremost, in line with my overall purpose, this paper draws attention to the antecedents of psychological contracts by inductively exploring the content of millennials' pre-entry expectations. This paper extends the previous work on pre-entry expectations (e.g. De Vos et al., 2009; Herriot, 1989; Sturges & Guest, 2001) by investigating the shaping role of pre-entry expectations on the process of psychological contract formation. Researchers noted that in the absence of promises, psychological contract beliefs can be based on more general expectations (Montes & Zweig, 2009). In Paper 2, I argue that potential employees will form their anticipatory psychological contracts mainly through their pre-entry expectations since there will be an absence of promises prior to organizational entry given the limited contact between parties. Secondly, this paper offers further insights into the effective management of selection, recruitment and organizational socialization practices through better understanding of millennial candidates' expectations. Thirdly and finally, this paper contributes to the literature through considering the role of pre-entry time on the formation of psychological contracts. It extends the earlier research on

millennials and generations at work by combining the above three aspects within the context of millennials, whose expectations are different from those of previous generations at the workplace (Bennett, Pitt, & Price, 2012; Glass, 2007; Karakas, Manisaligil, & Sarigollu, 2015; Shaw & Fairhurst, 2008).

Paper 3 is a quantitative investigation of the coevolution of newcomers' psychological contract formation and social network ties. This paper integrates between-person and within-person processes of psychological contract formation. The conceptual framework and findings of this study make four significant contributions to the literature. Firstly, it extends the earlier sociological perspectives to study newcomers' psychological contract formation (De Vos et al., 2005) and socialization processes (Morrison, 2002). It investigates the influence of newcomers' friendship and advice networks on newcomers' psychological contract expectations and perceptions of five distinct employer obligations, which emerged as content dimensions in Paper 2. Secondly, in line with the overall purpose of my thesis, this paper empirically investigates the antecedents of psychological contracts. It postulates and tests a theoretical framework, which captures the mechanisms driving the coevolution of newcomers' psychological contracts and network ties. Thirdly, the framework and findings extend and challenge prior studies that suggest unidirectional impacts of social relationships and social cues on the psychological contracts (e.g. De Vos et al., 2005; Rousseau, 1995; Shore & Tetrick, 1994; Thomas & Anderson, 1998). The framework postulates a bidirectional influence and coevolution between social relationships and psychological contract formation. Finally, I conceptualize psychological contract

formation as an emergent construct. *Emergence* is widely conceptualized and studied in group, team, and leadership studies but is widely disregarded in psychological contract studies. Psychological contract researchers anticipated that psychological contracts exist and focused on their consequences. However, *from where, why, and how* psychological contracts emerge are rarely specified or studied. The framework and findings of this study offer answers to these questions.

1.5. Overall Research Design

In this section, I explain the overall research design of my thesis. I follow a pragmatic approach as a philosophical perspective. What follows next is a discussion of pragmatism as a philosophical position and why and how it supports the research methods chosen for my thesis. I will also discuss the quality of the research and ethical issues as well as provide a reflective debate regarding how my background potentially influenced my approach to the research.

1.5.1. Pragmatic approach

In my thesis, I do not follow a qualitative or quantitative paradigm but a mixed-methods approach. My approach is concerned with the competence of different methodologies (qualitative or quantitative) to address specific research questions that I aim to answer. Numerous researchers have adopted pragmatism as their philosophical position since its birth in the 19th century (Shook & Margolis, 2008). Ontologically, pragmatist researchers disagree with traditional dualism, which supports the existence of only two fundamental principles in a particular domain. Rather, pragmatists

postulate that there are numerous realities within a particular domain (Onwuegbuzie, Johnson, & Collins, 2009). Epistemologically, pragmatists posit that knowledge is both socially constructed and constructed in the reality of the world (Onwuegbuzie et al., 2009); therefore, pragmatism supports the use of mixed methods. Pragmatism suggests that suitable methodologies should be chosen depending on the research questions that one aims to answer (Morgan, 2007).

Some researchers suggest that qualitative and quantitative methods should not be mixed, since they cannot answer the same research questions or study the same facts (Guba & Lincoln, 1994; Sale, Lohfeld, & Brazil, 2002). On the other hand, numerous researchers argue the opposite and suggest that the division between qualitative and quantitative methods is not substantial, since these two approaches are actually interrelated in different phases of research itself (Brannen, 2005).

As a researcher, I strongly believe that research questions — not the philosophical questions — should drive the choice of methodology. As Morgan (2007) suggests, my approach is compatible with pragmatism because it offers a practical and result-driven perspective that encourages researchers to choose mixed methods to better answer their research questions. Moreover, I also believe that not only the choice of methodology (qualitative, quantitative, or mixed methods) but also the choice of techniques used within qualitative (e.g., thematic analysis, content analysis), quantitative (e.g., multiple regression, structural equation modelling, simulations) and mixed methods should be driven by their competence in answering the research questions.

For example, in Chapter 4 (Paper 3), I investigate how newcomers' psychological contracts and social networks coevolve during the socialization period. Since coevolution is a dynamic phenomenon, I chose a methodology that can capture this dynamism. Although modelling social networks simulations is not a common technique in the field of psychological contracts, it was the suitable and competent technique to answer my research question regarding capturing the dynamic nature of the hypothesized coevolution. On the other hand, in Chapter 3 (Paper 2), I am interested in understanding the most salient content dimensions of millennials' psychological contracts and their pre-entry expectations. For this purpose, I chose an inductive approach and qualitative methodology to allow unexpected themes to emerge. Established psychological contract measures (see Rousseau, 2000) are widely used for understanding perceived breaches or the perceptions of particular employer obligations but not to understand the formation of expectations regarding these employer obligations. Moreover, these measures were designed to understand the psychological contracts of current employees, not specifically designed to measure the anticipatory psychological contracts of future employees. There is also another consideration regarding the potentially different expectations among different generations. Glass (2007) suggested that what millennials expect today is quite different than members of earlier generations who actually hire or manage them in the workplace. For example, if I conducted a quantitative survey study utilizing established psychological contract measures, I would have never captured millennial graduates' expectations of a high levels of autonomy from their first employer or that they value intangible recognition considerably more than they do tangible recognition.

As evident in the examples provided above and consistent with the pragmatic approach (Morgan, 2007), I unite theory and data both deductively (Chapter 4 – Paper 3), and inductively (Chapter 3 – Paper 2). As a researcher who employs a pragmatic approach, I follow the requirements to answer my research questions in the best possible way, since some questions call for an inductive approach, some call for a deductive approach; others call for qualitative methods, for quantitative methods, or for both (Morgan, 2007).

I am also aware that what I think is important and relevant is fundamentally influenced by my educational and personal background. Buchanan and Bryman (2007) highlighted that a researcher's background influences his/her choice of methodological approach. Similarly, Morgan (2007) also argued that acknowledging the researcher's background is important in a pragmatic approach. Therefore, I am taking this opportunity to reflect on my personal and educational background, which I believe was influential in my choice of research questions and methodological approaches in my thesis.

1.5.2. A reflective debate on my background and how it impacts my research approach

Before I started my PhD program in organizational behavior, I had an engineering education from my undergraduate studies. In my university, it was obligatory for engineering students to have one technical and one service-sector summer internship. For my technical internship, I worked for two months in the production planning department of a major white goods producer. The offices were

located in the production plant and were separated from the assembly lines with large glass windows, so I could actually watch the employees working on the assembly line. As a nineteen-year-old university student, I was fascinated and extremely touched to watch others around my age working ten hours a day on the assembly line. All of them had their specific tasks, such as putting a button or a label on the passing parts of a washing machine. I could not focus on anything else besides watching those employees, especially the young ones, doing the same task all day long. Of course, I knew before my internship that people physically work in production. However, this was the first moment when I really appreciated the central role of employees in generating value for the corporation.

One of my duties as an intern was to take notes during daily morning meetings between the production planning and technical production departments where they discussed the targets for the day. It was dreadful for me to see that the core of each discussion was to increase production by keeping the costs the same or even by lowering them. In those meetings, all I could think about was that young girl working on the assembly line; now she would have to work harder to put buttons on more washing machines. After this internship experience, I knew that I would never be able to work as a production planning engineer in a firm. I was not built for it. However, I also knew that I had developed a new interest in learning more about the people side of organizations. I started choosing my elective courses mostly from the psychology department at my university. That internship was the triggering event in my career when I moved from industrial engineering to industrial psychology.

During my master's program, I was exposed to the literature on psychological contracts in Professor Neil Anderson's class. The concept immediately caught my attention, since it provided an explanation for my negative feelings during my internship experience. The intensity of my feelings were due to the gulf between my expectations and the reality of the production plant. My expectations were formed before I was offered the internship position, and influenced by the two rounds of interviews I had with the company. Especially during the second interview with the manager of the production planning department, I developed the understanding that the company was responsible. In answering one of my questions, the manager told me that the company cares about employees and offers good working conditions. However, I later realized that he was talking about the engineers and not the workers on the assembly line. The management of the company would not mind putting more pressure on the workers to increase production by one more unit. This was so disappointing for me to see. I remember feeling anger and a desire to quit.

In Professor Anderson's class, I learned that my psychological contract had been breached. This triggered my interest, and I started reading more about psychological contracts. After writing my master's dissertation on the subject, I decided to pursue a PhD in the field. While I was doing my master's, the majority of my friends started working in various companies. They were constantly complaining about how disappointed they were, how different their experiences were from what they expected, and so on. Since I started seeing all work-related phenomena from a psychological contract perspective, these conversations with my friends who had

recently joined their first full-time jobs motivated me to focus on the formation process of psychological contracts, which is the overarching theme of my PhD thesis.

During the first term of my PhD studies, I had the privilege of attending Professor Martin Kilduff's seminar designed specifically for junior PhD students, during which I was exposed to social networks literature. I was amazed to see how much the social networks approach has to offer to the study of psychological contracts. Social networks tools make it possible to study the nature of relationships, relationship patterns, and the perceptions embedded in these patterns (Kilduff & Brass, 2010). After Professor Kilduff's seminars, I decided to marry these two literatures and adopt a social networks approach to understand the dynamic emergence of newcomers' psychological contracts at workplace. I am grateful to both Professor Neil Anderson and Professor Martin Kilduff for the influence they had on my research.

My inclination to use pragmatism as a research approach has been undoubtedly influenced by two factors. Firstly, it was influenced by the fact that I have a bachelor's degree in engineering and focused on science subjects throughout my high school years. Secondly, I have always had an unstoppable curiosity regarding human nature and behavior. I believe the combination of these two factors also influenced my inclination for pragmatism and mixed methods. In the next section, I discuss the approach I employed to ensure the quality of the research.

1.5.3. Quality of research

Greene, Caracelli, and Graham (1989) emphasized that the use of mixed methods enhances the validity of research. Mixed methods may widen our

understanding of the phenomena under investigation more than the sole use of qualitative or quantitative methods (Johnson, Onwuegbuzie, & Turner, 2007). As Morse, Barret, Mayan, Olson, and Spiers (2002) stated, research is worthless without the rigor. Therefore researchers should put priority on warranting the rigor of their methods, qualitative or quantitative. In this section I discuss the techniques I followed in my thesis to ensure the quality of research with quantitative and qualitative methods that I used.

Researchers have provided numerous criteria to assess the quality of research for both quantitative and qualitative methods. However, the most established criteria have been provided for quantitative methods. On the other hand, researchers have not yet reached a consensus regarding how to assess the quality of qualitative research (Golafshani, 2003; Mays & Pope, 2000). This issue arises because of the divergent epistemological approaches of researchers toward qualitative methods. One group of researchers argue that qualitative research is concerned with a different research paradigm than quantitative research; therefore, the quality of qualitative methods cannot be assessed with established criteria such as reliability and validity (Guba & Lincoln, 1994; Lincoln, Lynham, & Guba, 2011). Another group of researchers argue that qualitative and quantitative research methods can and should be assessed concerning the same quality criteria such as validity and reliability. However, the means of assessment can be adapted to the distinguishing characteristics of the qualitative methods (Golafshani, 2003; Mays & Pope, 2000; Morse et al., 2002). I follow the latter epistemological approach and agree that every method, regardless of

whether it is qualitative or quantitative, should be assessed for its reliability and validity.

In order to ensure construct validity of the quantitative research methods applied in Chapter 4 (Paper 3), I utilized established scales to measure the expectations and perceptions of newcomers. In Chapter 4, I provided the original sources of each scale used to collect data from participants. In order to ensure the reliability of the scales used, internal consistency scores (Cronbach's alpha) were calculated (Brewer, 2000). I also provided sample items for the reader; however, the whole scales used and items adopted are exhibited in Appendix 3. Regarding the generalizability or external validity of the quantitative study, I discussed the context of newcomers and the limitations in the relevant section of Chapter 4. Moreover, all the results reported with regards to simulation models have overall minimum convergence ratios under 0.25 and individual *t*-ratios under 0.1, as recommended by SIENA developers Ripley, Snijders, Boda, Vörös, and Preciado (2017).

As I mentioned earlier, a consensus does not exist among researchers regarding how to assess the quality of qualitative research methods. I follow the epistemological approach that recommends assessing qualitative research for its reliability and validity. However, no agreement exists also among researchers regarding the best way to assess the rigor of qualitative research. Numerous studies suggest slightly different approaches to assessing the reliability and validity of qualitative methods (e.g. Golafshani, 2003; Mays & Pope, 2000; Tracy, 2010). Golafshani (2003) discussed how in quantitative research reliability and validity assess the credibility of the research. She added, however, in quantitative research, credibility depends on the construction

of the instrument, whereas in qualitative research, credibility depends on the capability of the researcher (Golafshani, 2003). Therefore, Golafshani (2003) argued that, in qualitative research, it is not reasonable to treat reliability and validity separately as in quantitative research. On the other hand Morse et al. (2002) used the term verification to explain the mechanisms that should be used throughout the process of qualitative research in order to assure its reliability and validity. In order to ensure the rigor of qualitative methods applied in Chapter 3 (Paper 2), I followed Morse et al.'s (2002) verification strategies that are depicted in Table 2 below.

Table 2: Verification Strategies for Qualitative Research

Verification strategy	Description
Methodological coherence	Rigor in qualitative research requires ensuring congruence between the research question and the components of the method.
Appropriate sample	Sample should consist of participants who best represent or have knowledge of the research topic.
Concurrent collection and analysis of data	The concurrent collection and analysis of data forms a mutual interaction between what is known and what one needs to know. This pacing and the iterative interaction between data and analysis is the essence of attaining reliability and validity.
Thinking theoretically	Thinking theoretically requires macro-micro perspectives, inching forward without making cognitive leaps, constantly checking and rechecking, and building a solid foundation.
Theory development	Theory development in qualitative research involves moving with deliberation between a micro perspective of the data and a macro conceptual/theoretical understanding.

Source: Morse et al. (2002, p. 18)

To ensure methodological concurrence, I developed the interview protocol (Appendix 2) by going back and forth between the interview questions and the research questions. I made sure every component of the interview protocol focused on the research questions of the study and aimed to capture the depth of the research questions while allowing enough freedom for the participants at the same time. Regarding the appropriate sample, I choose all the participants from millennials who were actively looking for their first full time jobs. I excluded any participant from the study if he or she declared that he or she was not actively searching for a job at the time interviews were conducted. This way I ensured all participants best represent the topic of the study, future millennial employees who actively form their anticipatory psychological contracts through active job searching and experiences of job interviews with potential employers. I executed data collection and data analysis concurrently. Therefore, as suggested by Morse et al. (2002), I managed to keep constant track of what I know and what I needed to know. This helped me to grasp the importance of iteration with qualitative data collection and analysis and ensured the attainment of reliability and validity of the research process. As with the need of concurrent data collection and analysis, a qualitative researcher should be able to think theoretically, knitting together macro and micro perspectives. In order to ensure theoretical thinking, I always revisited the available theory and considered the bigger picture throughout the preparation, data collection, and analysis phases, before moving from one micro step to another. Hence, I contributed to the theory development of psychological contract formation and anticipatory psychological contracts besides building a solid foundation for my arguments and conclusions.

In the next section, I discuss which ethical issues were predicted and which ethical procedures were followed to address any ethical issues.

1.5.4. Ethical issues

It is not surprising that some ethical issues may arise when researchers collect information from human subjects. With my thesis, the ethical issues I predicted were specifically related to ensuring confidentiality to the participants and getting consent to use the information that they provided. Before participation, anonymity of their identities was assured to the study participants. All the ethical issues addressed in this section are in compliance with the ethics code of the London School of Economics and Political Science.

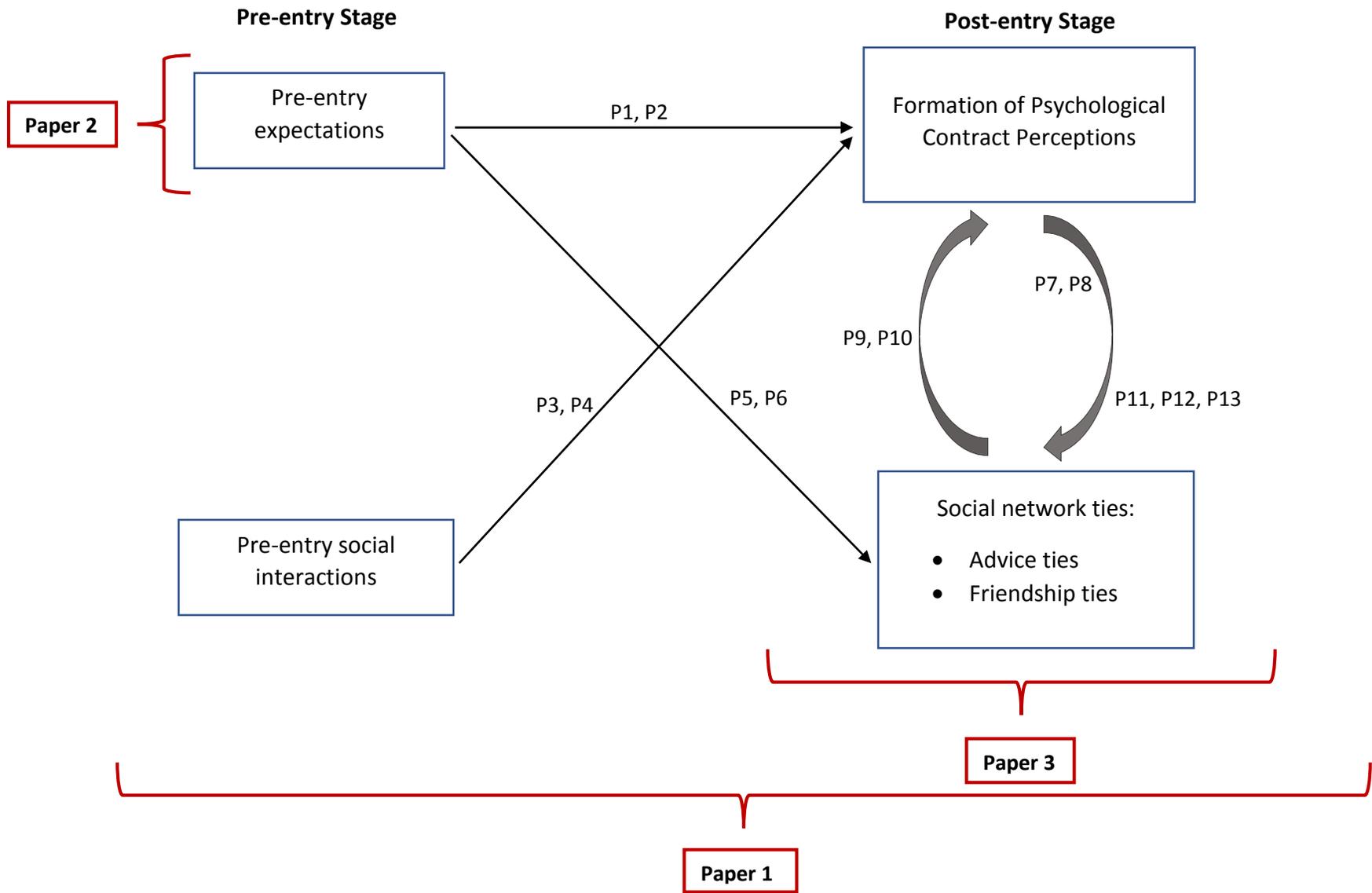
First of all, each participant volunteered to take part in this research. I made sure that they were all well informed regarding the general aims and the procedures of this research before they participated. With survey studies, participants provided written informed consent forms to show their agreement to participate. Regarding interviews, their consent was asked to record the interview, and after the recording started they were asked to declare their consent one more time. I did not reveal in my thesis any information regarding the identity of the participants. I assigned numbers to the study participants along with their gender (i.e., Male 1, Female 1). I did not share any identifying information of the employer nor share any identifying information with the employer of the participants.

What follows is a brief summary of the structure of my thesis.

1.6. Structure of this thesis

I structured my thesis in three separate papers, one conceptual and two empirical. Chapter 2 includes the conceptual paper, whereas Chapter 3 and Chapter 4 include qualitative and quantitative empirical studies, respectively. Drawing upon different theoretical frameworks and addressing different research questions, each paper is distinct and independent from each other. However, they all contribute to the overarching aim of my thesis, which is to investigate the antecedents and dynamic nature of psychological contract formation. Please see Table 1 for the summary of these knowledge gaps and in what ways each paper of my thesis contributes to extending our knowledge regarding these gaps. Please also see Figure 3 for an overall picture of how the three papers of my thesis are related to each other.

Figure 3: The model development in Paper 1 and how Papers 2 and 3 contribute to different sections of the model



Chapter 2 of my thesis includes Paper 1. Paper 1 is a conceptual piece that posits the simultaneous formation of newcomers' social relationships and psychological contracts from a sensemaking perspective. The paper introduces a two-way process model of the coevolution of psychological contracts and social relationships from pre-entry to post-entry periods, in which different mechanisms of sensemaking drive the coevolution at different periods of employment. The key contribution of this paper is the establishment of this theoretical model, which captures the dynamic nature of psychological contracts and how and why the social relationships are important building blocks of the psychological contract. The model is depicted in Figure 3. As illustrated in Figure 3, Papers 2 and 3, which are included in Chapters 3 and 4, respectively, investigate different elements and periods of the model developed in Paper 1 (Chapter 2).

Chapter 3 includes Paper 2, which investigates the pre-entry period. The paper is particularly concerned with the pre-entry expectations of future employees, which is hypothesized as one of the contributors of the coevolution in model development of Paper 1 (please see Figure 3). Paper 2 is a qualitative empirical study that investigates the pre-entry expectations and content dimensions of millennial employees' anticipatory psychological contracts. The key contribution of this paper is the conceptualization of pre-entry time in the psychological contract formation process. I focus on the importance of pre-entry expectations in shaping employees' initial psychological contracts. The importance of pre-entry expectations is acknowledged conceptually but widely overlooked in empirical studies. In this qualitative study, I

empirically investigate the pre-entry expectations and the shaping role of these expectations on the content dimensions of anticipatory psychological contracts, which will then guide millennials' behavior and sensemaking once they join the organization.

Chapter 4 includes Paper 3, which is a quantitative empirical study that examines the mechanisms of *homophily* and *assimilation* driving the coevolution of newcomers' psychological contract formation and social network ties. In relation with Paper 1, this paper contributes to the explanation of the coevolution between newcomers' psychological contracts and social network ties during the organizational socialization period (please see Figure 3). However, the hypotheses of Paper 3 are based on different theoretical mechanisms of homophily and assimilation as the driving forces behind the coevolution. Paper 3 tests these mechanisms through a novel network simulation methodology. Moreover, this study challenges the earlier views on the unidirectional influence of social interactions on the psychological contract. The key contribution of this study is the introduction of a novel simulation methodology (SIENA) to the study of psychological contracts (SIENA stands for statistical investigation of empirical network analysis). Through utilizing SIENA, this study shows psychological contracts are both the products and predictors of employees' social network ties.

Chapter 5 is a discussion chapter that synthesizes the overall findings of my thesis. It also emphasizes the theoretical and methodological contributions along with the theoretical and practical implications. Chapter 5 closes with limitations, recommendations for future research and concluding thoughts.

1.7. Conclusion

This introduction chapter reviews the early conceptualizations of psychological contracts as well as the approaches to studying psychological contract formation. It introduces the research context and the general aims of my thesis. It discusses the recent debates and knowledge gaps in the literature and explains how the three distinctive papers aim to contribute to these knowledge gaps. It also summarizes the overall research design along with defining quality of research and ethical considerations. The next chapter introduces Paper 1.

Chapter 2

Paper 1: The Role of Social Networks in Psychological Contract

Formation: A Sensemaking Model

2.1. Chapter Overview

Chapter 2 of my thesis includes Paper 1. Psychological contracts have been viewed and studied as an explanatory framework for the employment relationship to predict and understand employee attitudes and behaviors. Extensive work has focused on the outcomes of the contract's operation, but there remains a paucity of research examining its formation and the role of 'others' in the development process. While important work has drawn on social network theorizing to explore how social interactions shape contract perceptions, the relationships posited remain largely unidirectional, highlighting another overarching limitation in the contract literature: a lack of dynamic theorizing. To address these gaps, I adopt a process-based lens to calibrate a co-evolutionary model of psychological contract formation that explicates the reciprocal relationship between newcomers' social networks and their psychological contract development.

2.2. Introduction

The psychological contract consists of a perceived agreement of promises based on the obligations between the focal individual and his or her organization (Rousseau, 1995). The concept has been viewed and studied as an explanatory framework for the employment relationship to predict and understand employee attitudes and behaviors such as turnover, job satisfaction, commitment, and organizational citizenship behavior (Coyle-Shapiro & Kessler, 2000; Rousseau, 1995). Scholars largely agree that the

psychological contract embodies an unfolding and dynamic process in which it is formed, developed, changed, met or unmet, and revised (Conway & Briner, 2005).

Although the concept has been critiqued and matured both theoretically and empirically since the late 1980s (e.g. Bankins, 2015; Coyle-Shapiro & Kessler, 1998; Robinson, 1996; Rousseau, 1989; Rousseau, 1995; Shore & Tetrick, 1994; Tomprou & Nikolaou, 2011), significant gaps exist in our knowledge regarding the actual formation process of psychological contracts. The plethora of research on the psychological contract has to date predominantly focused on the process of contract violation and its attitudinal and behavioral aftermath (Rousseau, 2001; Bankins, 2015). This rich theoretical and empirical work has contributed substantially to our understanding of the properties of the psychological contract and its relevant outcomes.

In her eminent article, Rousseau (2001) invited organizational psychology researchers to study psychological contract formation in depth. She added, “Understanding the dynamics of the psychological contract in employment is difficult without research into its formation” (p. 511). In echoing this sentiment, a few essential questions can be directed to the psychological contract literature: When does the contract formation start and how does it evolve over time? Who is influential in the formation process? What is the role of individuals in forming their psychological contracts?

While it is largely agreed in the literature that the psychological contract unfolds through a dynamic process in which its terms are formed, changed, met or unmet and revised over time (Conway & Briner, 2005), our understanding of the contract as a process requires much further work. A long-standing criticism of the contract literature is its predominant focus upon linear cause-and-effect relationships (Conway & Briner, 2005), particularly as recent scholarship demonstrates that much more complex relationships underlie the functioning of the psychological contract (e.g. Griep & Vantilborgh, 2018). This challenges researchers to adopt more processual, cyclical and recursive theoretical lenses and methodologies to model this complexity, and work toward this end has begun (Rousseau, Hansen, & Tomprou, 2018).

Further, gaps remain in our knowledge of how psychological contracts form and the role of others within that process. Contract formation involves identifying and refining the obligations exchanged by newcomers and organizational insiders during the ‘phases of pre-employment, recruitment, early socialization and later experiences’ (Rousseau, 2001, p.512). For example, De Vos et al. (2003) show contract formation involves individuals altering their contracts both in response to feedback from others and proactively on their own, while Thomas and Anderson (1998) demonstrate that changes in new recruits’ expectations are towards the insider norms of experienced colleagues.

Rousseau et al.’s (2018) phase-based model of contract dynamics draws on self-regulation theory to suggest how goals, affect and time serve to shape beliefs about obligations, while recognizing further work is needed to understand the social context

of the development process. Drawing specifically on social network research Ho and Levesque (2005), Ho, Rousseau, and Levesque (2006) and Dabos and Rousseau (2013) show that individuals' social network positions, such as their friendship versus advice ties, influence the type of contract obligations they perceive and that individuals' social referents also influence their perceptions of contract fulfillment. While the role of organizational insiders has been particularly focused upon, the role of extra-organizational information sources is also acknowledged (e.g. Tomprou & Nikolaou, 2011). While this work importantly demonstrates that newcomers are indeed sensitive to interactions with, and information gleaned from, insiders (and potentially outsiders), there remains room to explore how this process informs contract formation from a bi-directional and dynamic perspective.

Social network theory offers an important lens through which to explore how the type, number, structure and relational content of an individual's connections to others influences contract development. But while social network theory has been very fruitfully applied in contract research (e.g. Dabos & Rousseau, 2013; Ho & Levesque, 2005; Ho et al., 2006), it usually investigates network effects once people are embedded in organizations, arguably beyond the contract formation stage. This work can also reflect a dominant, but often implicit, position in the contract literature: that individuals are generally passive contracting participants, with their agency neither explicitly accounted for nor conceptualized (Seeck & Parzefall, 2008). It is only relatively recently that individuals have been centrally positioned as proactive agents in the construction of their contracts (Bankins, 2015; Tomprou et al., 2015).

Overall, although other bodies of literature are increasingly exploring how one phenomena may reciprocally influence the development of another through co-evolutionary and agentic processes (e.g. Tasselli, Kilduff, & Menges, 2015), the application of this dynamic perspective to the psychological contract, and particularly its formation, remains nascent. While important work has explored the role of social influences in shaping contract perceptions (e.g. Dabos & Rousseau, 2013; Ho, 2005) the integration of network theorizing remains largely one-way, with a relative absence of dynamic theory to investigate the likely *co-evolving* nature of individuals' contract perceptions and their social network ties. This leaves the complexity of these relationships under-theorized and largely untested. It is at this juncture that lies the contribution of this paper.

In this paper, I propose that newcomers are active agents of the psychological contract formation process. They actively seek contract-related information and form social relationships with insiders who are the informal sources of information (Rousseau, 1995; Morrison, 2002). Newcomers' pre-entry expectations will influence who they choose to form their initial social relationships with, and eventually the nature of their social relationships with insiders will be influential on newcomers' newly formed and/or changing psychological contract-related perceptions. Grounded in a structuration perspective (Giddens, 1976), I draw on a range of dynamic concepts to theorize how newcomers' pre-entry expectations influence who they choose to form social network connections with, which in turn influences their developing contract terms over time. Given the co-evolutionary focus of this paper, I also theorize how the

network structures within which individuals are embedded also shape their contract perceptions. Put simply, this paper proposes that newcomers' psychological contracting and social network relationships initiate each other's formation and co-evolve during early socialization stages.

The model offers critical, process-oriented contributions to the psychological contract literature and focuses attention on the 'antecedents of the psychological contract' (Rousseau, 2001, p. 512) by postulating how and why social relationships are an important building block for contract formation. By drawing on a bi-temporal understanding of sensemaking (Weick, 1995), both its retrospective and prospective nature, and cybernetic theory I explain how newcomers make sense of the different information received from different social network connections and how they assimilate this through a feedback-feedforward process. By focusing on the unfolding, ongoing and continuous episodes of action and cognition in sensemaking (Weick, 1995), this paper helps move the contract literature beyond examining uni-directional relationships between social networks and contracts to comprehensively theorize how they influence each other's evolution simultaneously in early socialization stages.

Although psychological contract researchers have highly developed the understanding of personnel psychology and the exchange relationship between employee and employer, they provided a very limited view of how employees actually influence their psychological contracts (Seeck & Parzefall, 2008 p. 476). Seeck and Parzefall (2008) emphasized the strangeness of this gap in the literature, as recent conceptualizations of contemporary work relationships suggest employees negotiate

personalized deals, modify and craft their work, and have a certain level of autonomy in defining their roles (Rousseau, 2005). However in psychological contract literature employee agency has been overlooked, attitudes and behaviors of employees have been viewed as dependent variables of employer actions (Bankins, 2015), mostly as reactions to breaches and violations of psychological contracts. Hence, most of the psychological contract studies do not succeed in capturing *the role of an individual* in forming his or her psychological contract; therefore, they fail to capture the individual conditions and inclinations as widely promised (Seeck & Parzefall, 2008). Employing the agency perspective offers a foundation on which to study psychological contract formation given that it is a process in which individuals are active agents who vigorously seek contract-related information and consciously evaluate, revise, and re-evaluate their psychological contracts (Rousseau, 1995). For the purpose of this paper, human agency is defined as capacity of an agent to act in the world, through making choices and imposing these choices on the world (Seeck & Parzefall, 2008).

Psychological contract researchers hitherto have proposed competing frameworks, each advancing our understanding of how both parties (employee and the employer) view their relationship (Sherman & Morley, 2015). Some researchers have utilized social exchange theories as useful tools to explain psychological contracts (e.g. Coyle-Shapiro & Conway, 2004; Robinson, Kraatz, & Rousseau, 1994), focusing on the obligations exchanged (or not exchanged) between the parties. This rich research, indeed, facilitates our understanding of the distinction of transactional and relational contracts, as an economic/social split is native to exchange theory (Shore, Tetrick,

Lynch, & Barksdale, 2006). A number of researchers have used schema theory, which was conceptualized by Rousseau (1995, 2001). Rousseau (1995) discussed how organizational messages, predispositions, and social cues influence individuals' interpretation and judgement of information, which will then be stored in employees' cognitive schemas in the form of psychological contracts. Another prominent cognitive framework put forward in the literature is sensemaking theory. Sensemaking has been used to assess psychological contracts, especially to understand how employees interpret, respond, and give meaning to information they gathered from organizational agents (e.g., De Vos & Freese, 2011; Tomprou & Nikollaou, 2011; Bankins, 2015). In this study I also adopted sensemaking theory for the following three reasons.

First of all, sensemaking mainly occurs when individuals deal with ambiguity and uncertainty (Louis, 1980; Maitlis, 2005; Maitlis & Christianson, 2014; Weick, 1995; Weick, 2012). Organizational entry is described as an anxiety-producing period of changes, surprises, and disparities (Louis, 1980). Newcomers try to reduce the uncertainty they experience through making sense of information they receive from different organizational sources, commonly through social interactions with insiders (Saks & Ashforth, 1997). Secondly, the enactment property of Weick's (1995) sensemaking suggests that in organizations people combine action and cognition to create "their own environments" (p. 31).

In this paper, I 'temporally stretch' Weick's (1995) sensemaking beyond its retrospective focus (sense is made based on interpreting 'what has passed') to also incorporate a prospective component. Cybernetic theories suggest that through self-

regulating processes individuals seek feedback from their environment and compare this to a 'reference standard or goal' (Direnzo & Greenhaus, 2011, p.571), generating a negative or positive feedback loop (discrepancy). Any discrepancy identified results in action taken to address it (Direnzo & Greenhaus, 2011). While feedback is a retrospective process, focused on evaluating past performance (Tadepalli, 1992), cybernetic theory also recognizes adaptive cognitions and behaviours through a prospective, feedforward process (Tadepalli, 1992). Feedforward control focuses on the 'continuous evaluation of plans', identifies how current behaviour enables goal achievement and detects and corrects disturbances prior to discrepancies occurring (Tadepalli, 1992). My motivation for Paper 1 is to bring a new lens to the study of psychological contracts where newcomers are agents of their environments, in which they continuously engage in action through building social interactions with insiders and cognitively form their psychological contracts through prospective (pre-entry) and retrospective (post-entry) sensemaking. Lastly, sensemaking is a suitable framework to study process-oriented dynamic psychological contracts, as it is iterative and ongoing as explained above. Therefore, sensemaking allows telling the process story of the coevolving psychological contracts and social relationships in the work environment.

In this paper, I aim to contribute to the field psychological contract in four ways. First and foremost, in line with the Rousseau's (2001) assertions, this paper draws attention to the antecedents of psychological contracts by postulating a theoretical model, which captures how and why the nature of social relationships are important

building blocks of psychological contracts. Weick's (1995) sensemaking theory is drawn upon to explain how newcomers make sense of the different data they gather from different types of social relationships they form at work. Secondly, this paper extends earlier research by explaining how and why the nature of newcomers' relationships with certain insiders influences newcomers' psychological contract formation differently. Thirdly and most originally, by focusing on the unfolding, ongoing, and continuous episodes of action and cognition (Weick, 1995), as well as inclusion of prospective sensemaking and cybernetics principle, this paper moves the literature beyond examining the joint formation of social relationships and psychological contracts and the extent to which they influence each other's evolution simultaneously. Finally, unlike earlier studies that extensively positioned employees as relatively passive recipients of psychological contract breach and violation (Bankins, 2015), in this paper, I put the individual at the center of his or her psychological contract formation process. In harmony with Seeck and Parzefall's (2008) statements, understanding of the role of agency is truly scarce in the literature on psychological contracting processes. The sensemaking theory and the process approach allow us to explore how newcomers employ their agency in the ongoing journey of psychological contract formation.

This paper is organized as follows: First, structuration theory and cybernetics principle are defined along with sensemaking (prospective and retrospective) in the psychological contract literature. Second, a theoretical model positing the coevolution of psychological contract formation and newcomers' social networks is presented with

the propositions asserted. Finally, a discussion provides theoretical and practical implications as well as limitations and suggestions for future research before concluding.

2.3. Literature Review

2.3.1. Theorizing Co-Evolution: Structuration Theory, Cybernetics and Sensemaking

2.3.1.1. Structuration Theory

Giddens' (1976, 1991) structuration theory is a conceptual driving force for addressing questions regarding the reciprocal individual-environment relationship, as it forms the basis for exploring 'bottom-up and top-down influence processes between individual agency and social structure' (Tasselli et al., 2015). Agency is situated at the micro-level and refers to individual actors and their choices and behaviors (Borgatti, Brass, & Halgin, 2014). Structure, although construed broadly, relates to influences such as rules, regulations, social structures and other macro-level 'supra-structures' that individuals are unavoidably embedded within and that facilitate and constrain micro-level behavior (Borgatti et al., 2014).

A key tenet of structuration theory, highlighting its utility for theorizing co-evolutionary processes, is that it does not afford primacy to either agency or structure in generating outcomes (Giddens, 1991). Instead, a 'dual feedback-feedforward' mechanism mutually generates each aspect, such that agents are both shaped by, and shape, structures and structures conversely shape, and are shaped by, agents in a

reciprocal and ongoing cycle (Jenkins, 2014). For this paper, this means social network characteristics form the focal ‘*structure*’ component within which individuals operate and can both facilitate and constrain individuals’ goal attainment through their psychological contract development. Conversely, individuals’ contracts are not only shaped by the network structure in which they are embedded but, via exercising the ‘*agency*’ component, through creating the networks they operate within to best achieve their psychological contract goals. In grounding the co-evolutionary model in structuration theory, the ‘agency’ (psychological contract) and ‘structure’ (social network) components of the model are conceptualized.

2.3.1.2. Sensemaking

Sensemaking is the process in which people make sense of events and situations that are ambiguous, confusing, and unexpected (Maitlis & Christianson, 2014; Sandberg & Tsoukas, 2015). First conceptualized by Karl Weick, sensemaking has become a critical perspective from which to study organizations (Maitlis & Christianson, 2014), especially when organizational members encounter ambiguity and uncertainty (Louis, 1980). In his classic book, *Sensemaking in Organizations*, Weick (1995) defined sensemaking “as a process that is (1) grounded in identity construction, (2) retrospective, (3) enactive of sensible environments, (4) social, (5) ongoing, (6) focused on and by extracted cues, and (7) driven by plausibility rather than accuracy” (p. 17). According to Weick (1995), these seven distinguishing characteristics are original to sensemaking and set it apart from other explanatory processes like attribution, interpretation, and understanding.

Conway and Briner (2005) emphasized that the seven properties of Weick's (1995) sensemaking are iterative and reciprocal in nature. Not all the steps must take place and some steps might happen simultaneously or through feedback loops. In addition to the suitability of the sensemaking approach to studying psychological contracts as a process (Conway & Briner, 2005), the features of the sensemaking approach also promote studying (1) the simultaneous formation processes of social relationships and psychological contracts and (2) the dynamic feedback loops in between through their concurrent formation processes.

Next, I summarize Weick's (1995) seven properties and how each of them can be utilized to understand the psychological contract formation process as well as the proposed coevolution between psychological contracts and social relationships. Later, I emphasize the recent critiques of the sensemaking perspective and I introduce the concept of *prospective* sensemaking that temporally stretches Weick's conceptualization.

Weick's seven properties of sensemaking. The first property of sensemaking posits that sensemaking is *grounded in identity construction*. For that reason, how we make sense is affected by our identities and, in return, sensemaking affects our identities (Weick, 1995; Conway & Briner, 2005). Weick (1995) suggested that "sensemaking begins with the sensemaker" (p. 18), whose identity is constituted through the process of interactions and is constantly redefined (Conway & Briner, 2005). These assertions are also in line with the early research of Elton Mayo (1945), who articulated that social needs are prime motivators of human behavior and social

relationships are prime formers of identity. Applying the first property of sensemaking to psychological contracts, hitherto, we know that employees perceive psychological contract breach as a threat to their identity (Conway & Briner, 2005). Identity is a product of social interactions (Mayo, 1945; Weick, 1995), and newcomers continue forming their work identities as well as their psychological contracts during the socialization period through social interactions with other organizational members. Thus, the first property of sensemaking, that it is grounded in identity construction, offers a platform to investigate how social interactions shape employees' identities at work, which influences the formation process of their psychological contracts. This property also sheds light on the simultaneous formation of social relationships and psychological contracts, since identity formation cannot be separated from social interactions (Weick, 1995).

The second property of sensemaking is that it is *retrospective* (i.e., people make sense of events that have already happened to them). Weick (1995) defined retrospection as the most distinguishing property of sensemaking. According to Weick (1995), all sensemaking is retrospective. Therefore, people always make sense of past events or situations and their memories will also affect how they make sense today. The assistance of the retrospective property of sensemaking to this conceptual piece is twofold. Firstly, the retrospective property of sensemaking emphasizes the significance of cognitive biases regarding how people give meaning to things (Conway & Briner, 2005). Rousseau (1995) highlighted that cognitive biases, as a part of individual predispositions, affect how "encoded" (interpreted) information will be used during

creation of psychological contracts (p. 43). Secondly, the retrospective property of sensemaking drives the predicted simultaneous formation between psychological contracts and social relationships. Newcomers retrospectively make sense of their experiences and interactions during organizational entry and socialization (De Vos et al., 2005). Therefore, I anticipate that newcomers will make retrospective sense of information they gather from social interactions. This will then affect formation of new perceptions, thus contributing to the formation of newcomers' psychological contracts. At the same time, if the newly forming perceptions do not match what was expected, then newcomers will seek information from other organizational members through forming new social relationships, making the existing relationships stronger, or exiting existing relationships (De Vos & Freese, 2011). Therefore, this paper contributes to the theory of psychological contracts by explaining the cognitive processes behind the formation of psychological contract perceptions through retrospective sensemaking of information received from social interactions, which are formed prior to entry and during organizational socialization.

The third property is that sensemaking is *enactive of sensible environments*; in other words, people actively construct the environment that they sense (Weick, 1995). According to Weick (1995), individuals are part of their environments; however, the environment is not fixed and constantly changes as people cognitively sense and actively form their environments. He added that "people create their environments as those environments create them" (p. 34). As evident in these assertions, the enactment

property conceptualizes individuals as *active agents* who constantly sense their environment and, through actions, create their environments.

The enactment property of sensemaking is central to this paper as it clearly explains the two-way relationship between individuals' cognitions and how they act in their social environments, as well as how these two co-create each other. The influence of social interactions on psychological contracts has been acknowledged (e.g., Thomas & Anderson, 1998; Morrison, 2002). However, it has not been considered that the relationship between social interactions and psychological contracts can be bidirectional. The enactment property of sensemaking allows us to investigate the potential influence of newcomers' psychological contract perceptions on social interactions, as individuals combine cognition and action to create their own social environments (Weick, 1995). As the most original contribution of Paper 1, this conceptual piece moves the literature beyond exploring how newcomers' cognition leads to action. In other words, it explains how newcomers' forming psychological contracts influences the formation of newcomers' social relationships.

A fourth property sensemaking is that it is *social*; in other words, meaning is socially constructed. Weick (1995) emphasized "those who forget that sensemaking is a social process miss a constant substrate that shapes interpretations and interpreting" (p. 39). Apparent in Rousseau's (1995) trademark work, interpretations of organizational messages delivered by organizational members are amongst the main antecedents of psychological contracts. People's behavior is contingent on the behavior of others, whether they are physically present or imagined (Weick, 1995; Conway &

Briner, 2005). The social property of sensemaking promotes how others impact individual interpretations, therefore affecting formation of psychological contracts and eventually determining employee behavior.

Sensemaking is *ongoing*, the fifth property. “Sensemaking never starts. The reason it never starts is that pure duration never stops. People are always in the middle of things, which become things, only when those same people focus on the past from some point beyond it” (Weick, 1995, p. 43). Referring back to the retrospective property, sensemaking happens when people “chop moments out” from the ongoing flow of events (which has already happened) and try to extract cues from those moments (Weick, 1995, p. 43). Therefore, the ongoing property of sensemaking offers a platform to study psychological contract formation as a process that is dynamic, unfolding, and ongoing (Conway & Briner, 2005).

The sixth property of sensemaking is that it is *focused on and by extracted cues*. Cues are relevant information that the sensemaker picks from the ongoing flow of preceding events (Weick, 1995). Conway and Briner (2005) emphasized that cues are “building blocks” of the sense made from events and they establish “frames of reference” for potential sensemaking of the future (p. 150). As discussed in the introduction chapter, these assertions of sensemaking are almost synonymous with Rousseau’s (1995) conceptualization of psychological contracts as cognitive schemas. Rousseau (1995) proposed that psychological contracts are grounded in individuals’ mental models as schemas, which organize knowledge in a systematic way, help people to deal with ambiguity, and predict what should happen next. In Rousseau’s (1995)

model depicted in Figure 1, social cues are also one of the building blocks of employees' schemas as psychological contracts. The influence of social cues on how employees perceive their environment is conceptually acknowledged; however, Conway and Briner (2005) invited researchers to investigate an important question related to extracted cues: "what cues are extracted and why, and how these cues are presented and embellished as part of the sensemaker's story of events" (p. 150). As one of the contributions, in my thesis I aimed to answer these questions by studying characteristics of social relationships between newcomers and other organizational members and investigating whether having certain types of relationship (friendship or advice) influences the type of cues extracted, and if so, why.

The final property of sensemaking is that it is *driven by plausibility rather than accuracy*. As evident in the term, the seventh property suggests that sensemaking is pragmatic and satisfies the needs of the sensemaker rather than grasping accurate events that are happening in the world (Weick, 1995). Psychological contracts are exactly the same; they are subjective and perceived rather than objective and accurate (Rousseau, 1995, 2001, 2005). Therefore, the final property of sensemaking aids understanding of the subjective and perceived nature of psychological contracts.

2.3.1.3. Recent critiques toward mainstream sensemaking

In their recent critical review, Sandberg and Tsoukas (2015) discussed the hitherto conceptual challenges of the sensemaking perspective. One of the issues about which they raised attention was that the sensemaking perspective has been most

commonly applied to episodes triggered by disruptive events. The authors emphasized that this is not surprising, since major disruptive events are considered vital for organizational survival. Likewise, we also see this trend in psychological contract studies that apply the sensemaking perspective. A majority of this research has focused on how employees make sense of psychological contract breach as a major disruptive event, which is also related to survival in organizations (e.g. Bankins, 2015; Conway & Briner, 2005; Morrison & Robinson, 1997). However, recent critiques of the sensemaking perspective discuss that studying sensemaking solely after disruptive events conflicts with the calls for approaching sensemaking as a “continuous” and “ongoing” process (Sanberg & Tsoukas, 2015, p. 22; Maitlis & Christianson, 2014, p. 67; Weick, 2012, p. 146). Echoing these sentiments, the current study conceptualizes the sensemaking perspective as an unfolding and ongoing process of psychological contract formation rather than focusing on disruptive events (such as contract breach). This paper argues that sensemaking happens continuously, regardless of whether there are discrepancies, and guides individuals’ actions (enactment property) to form their own environment by interacting with other organizational members. Next section explains the theoretical basis of the anticipated continuous sensemaking and how it forms the foundation for proposed coevolution between psychological contract and social networks.

2.3.2. Prospective Sensemaking: The Basis for Contract↔Network Co-Evolution

With ‘agency’ and ‘structure’ components in place, I draw on a temporally expanded conceptualization of sensemaking, and incorporate cybernetic principles, to explain the interactive (feedback-feedforward) nature of agency and structure in shaping the co-evolution of newcomers’ psychological contracts and social networks. Based on Weick’s (1995) seminal work, individuals engage in sensemaking to construct plausible meanings from uncertain situations, making it a dynamic conceptual tool to explore unfolding processes (Conway & Briner, 2005). Sensemaking is utilized in contract research to understand how employees interpret, respond and give meaning to information gathered (De Vos & Freese, 2011) and events experienced. The *enactment*, individuals combine action (through agency) and cognition, and *social* (interactions shape interpretation) properties of sensemaking reinforce its likely role in co-evolutionary processes.

Given structuration theory is premised on feedback and feedforward mechanisms (Giddens, 1991; Stones, 2005), I ‘temporally stretch’ Weick’s (1995) sensemaking beyond its retrospective focus (sense is made based on interpreting ‘what has passed’) to also incorporate a prospective component. Prospective sensemaking involves considering ‘the probable future impact of certain actions and especially non-actions, on the meaning construction process’ (Gioia, Thomas, Clark, & Chittipeddi, 1994: 378), generating interpretations that project images of future states (Gephart, Topal, & Zhang, 2010). Given sensemaking involves action and agency, the literature

increasingly recognizes that individuals can take a variety of temporal orientations (Maitlis & Christianson, 2014), in retrospect and prospect, as ‘anticipating what may come next is a distinguishing aspect of the temporality of human existence’ (Sandberg & Tsoukas, 2015: 24). Because this paper considers psychological contracts as goal-directed, necessitating a future-focused orientation, incorporating a prospectively-oriented sensemaking stance is required and timely.

2.3.2.1. Cybernetics principle

Finally, to explain how retrospective and prospective sensemaking interact to inform co-evolution I draw on cybernetic principles. Cybernetic theories suggest that through self-regulating processes individuals seek feedback from their environment and compare this to a ‘reference standard or goal’ (Direnzo & Greenhaus, 2011: 571), generating a negative or positive feedback loop (discrepancy). Any discrepancy identified results in action taken to address it (Direnzo & Greenhaus, 2011). While feedback is a retrospective process, focused on evaluating past performance (Tadepalli, 1992), cybernetic theory also recognizes adaptive cognitions and behaviors through a prospective, feedforward process (Tadepalli, 1992). Feedforward control focuses on the ‘continuous evaluation of plans’, identifies how current behavior enables goal achievement and detects and corrects disturbances prior to discrepancies occurring (Tadepalli, 1992).

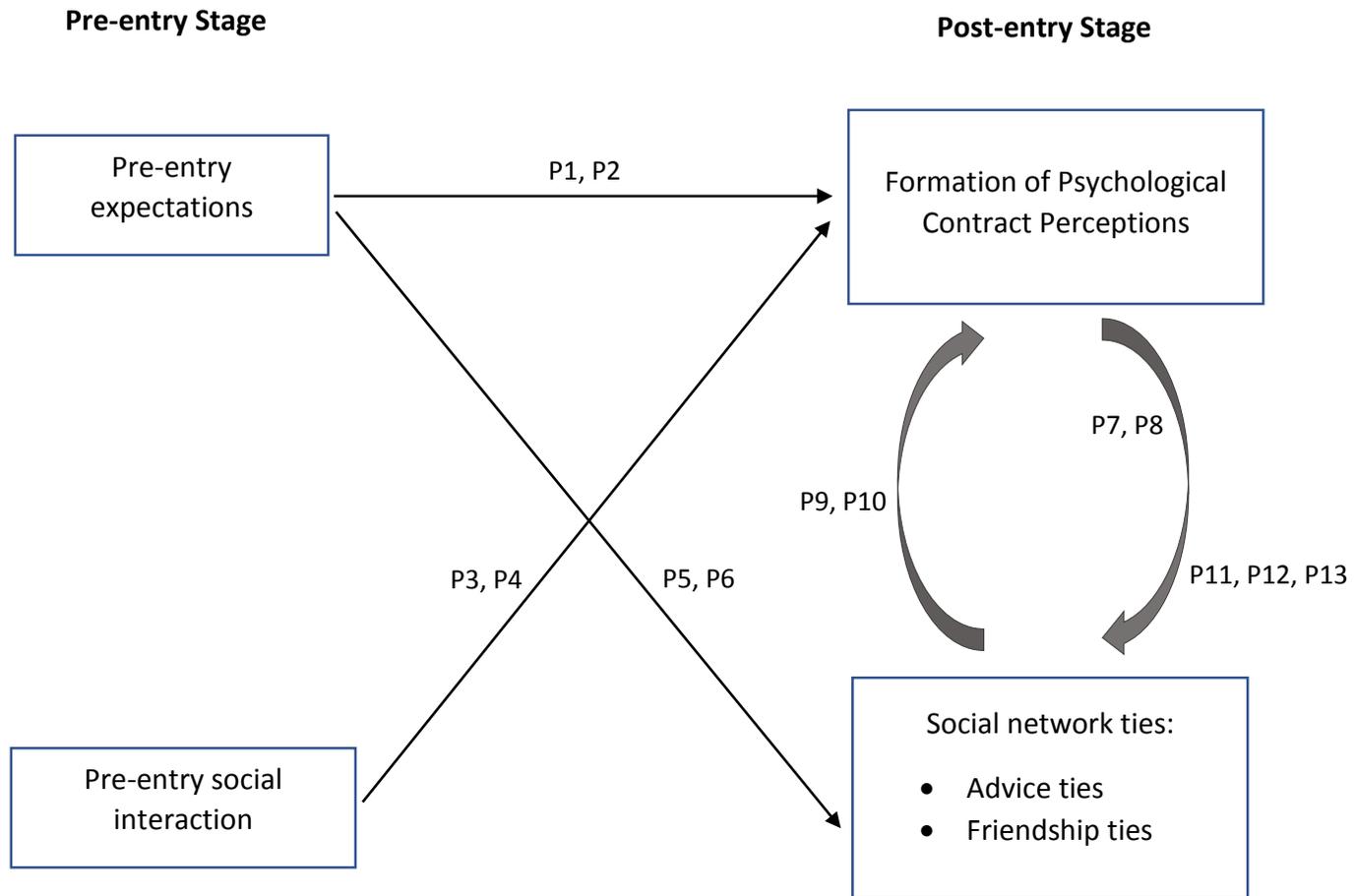
Therefore, in the theoretical model I suggest that individuals’ psychological contracts form the goal-directed ‘standard’ against which environmental information is compared. At the micro-, or agency, level it is the contract that identifies the plans

and goals forming the basis for *prospective sensemaking* through a *feedforward* process. In this process individuals exert their agency, taking their goals as a basis for social network development. At the macro-, or structure, level I suggest that information gained through social network interactions and the position of individuals in those networks then provides critical *feedback*, forming the basis for *retrospective sensemaking*. Here, individuals gain an understanding of how and whether their network characteristics, and the social capital generated, are facilitating the fulfillment of their goal-based contracts. Overall, it is the intersection of these feedback-feedforward loops, underpinning the retrospective and prospective sensemaking process, that will inform how individuals evaluate information received to shape subsequent behaviors and outcomes (Fang, Evans, & Landry, 2005) and ultimately guide the co-evolution of their psychological contracts and social networks (Erdem & Bankins, 2018).

2.4. Theoretical Model and Propositions

This section introduces the co-evolutionary process model of newcomers' psychological contract and social network development through the lens of sensemaking. The focus is on organizational newcomers who are new to the organization, new to employment relationships generally and are predominantly entering relatively junior roles, as the dynamic aspects of psychological contracting are most apparent in this cohort (Rousseau, 1995, 2001). The theoretical model is depicted in Figure 4.

Figure 4: Co-evolutionary process model of newcomers' psychological contract formation and social relationships



I develop propositions through two critical stages of newcomer socialization: the pre-entry stage and the post-entry stage. Expectations that individuals form regarding their future employer ‘independently from the specific context of an employment relationship’ is defined as pre-entry expectations. (De Vos et al., 2009p. 290). On the other hand, anticipatory psychological contracts start forming during the pre-entry stage in the weeks (and possibly months) before joining an organization, when an individual has accepted a position but have not joined an organization yet, therefore they can only anticipate their experiences (Louis, 1980). The post-entry stage occurs over the first 6-10 months following organizational entry and is ‘critical in shaping the individual’s long-term orientation to the organization’ (Louis, 1980, p.231). While a third socialization stage, acquisition, exists towards the end of the first year of employment, this is generally characterized by greater stability and reduced sensemaking (De Vos et al., 2003) as individuals have largely moved from ‘newcomer’ to ‘insider’ (Louis, 1980, p. 231). Therefore, in this paper and in my thesis in general, I focus on the pre-entry and post-entry stages as they involve the use of extensive sensemaking and intensive information-seeking (Thomas & Anderson, 1998).

For each socialization stage I develop propositions focused on how psychological contracts shape individuals’ social network development (PC->network) and then, reciprocally, how individuals’ social networks shape psychological contracts (network->PC). What follows is two general mechanisms that form the foundation of propositions that posit the coevolution between psychological contracts and social networks.

The Psychological Contract: 'Agency' and the Micro Change Mechanism

(PC → Network). I theorize psychological contracts to be goal-oriented schemas (Dabos & Rousseau, 2013), reflecting the perceived obligations forming the basis for exchange between employer and employee. At the 'agency' level I posit that a goal-directed, teleological mechanism drives the way in which psychological contracts influence social networks (contract->network). Van de Ven and Poole's (1995, p.511) teleological 'motor' describes change as driven by goal attainment, with individuals being agentic, purposive and goal-directed drivers of change in a focal outcome.

Dabos and Rousseau's (2013) work shows how goals can be embedded within psychological contracts. They identify that contract terms can comprise resources that are finite and competitively sought by other employees (such as promotions) and noncompetitive resources widely available across an organization (such as supportive work relationships). This further aligns with Rousseau's (2000) original relational-balanced-transactional contract typology, whereby contracts premised upon the receipt of competitive resources align with balanced (flexible, development-focused) and transactional (limited scope, economic exchange) contract content and contracts premised upon the receipt of non-competitive resources align with relational (long-term, support-focused) contract content. Further, according to Shea and Fitzsimons (2016p. 45), 'goals are cognitive representations of desired end-states' and broadly encompass: individual advancement (individually-oriented towards achievement) and interpersonal affiliation (oriented towards forging connections with others).

Overall, individuals' agency and behaviors are directed toward goal fulfillment, manifested through their psychological contracts, which influences how they then shape their social network configurations (Erdem & Bankins).

Social Network Characteristics: 'Structure' and Macro Change Mechanisms

(Network → PC). Social tie connections significantly affect our access to a range of resources and information, as well as the attitudes, beliefs (Morrison, 2002) and psychological contracts (Ho, Rousseau & Levesque, 2006) that we form.. While a range of generative mechanisms have been identified to explain these outcomes (Contractor & Monge, 2002), social network effects broadly operate via two mechanisms - *selection* and *influence*. This reflects an enduring question in network research, do we create ties with others who are like us (selection), or do we become more like those we are connected to (influence)?

Overarching both selection and influence is the mechanism of social capital generation. Social capital refers to the value individuals generate and extract from their social networks, including relational (such as social support) and instrumental/material (such as informational, financial) resources (Burt, 2000). At early organizational socialization stages, research suggests that newcomers will particularly seek to build and access social capital, as they likely begin their tenure with little (Fang, Duffy, & Shaw, 2011). Indeed, Seibert, Kraimer, and Liden (2001) identify that, in terms of career development and mobility, the effect of social capital manifests through access to information, resources and sponsorship, offering enhanced role and work performance and career satisfaction (Morrison, 1993). The generation and accumulation of social capital is also critical for goal attainment

(Sandefur & Laumann, 1998), aligning with the above teleological (micro-level) change mechanism.

2.4.1. Pre-entry Stage

In this thesis, the expectations that individuals form regarding their future employer is defined as pre-entry expectations. These pre-entry expectations influence individuals' perceptions and thus their psychological contracts after organizational entry (De Vos, De Stobbeleir, & Meganck, 2009).

At this pre-entry stage, individuals will form pre-entry expectations 'independently from the specific context of an employment relationship' (De Vos et al., 2009: 290); that is, individuals are not yet situated in an employment relationship and so form their pre-entry expectations drawing inferences, via prospective sensemaking particularly, about what may occur within it. Prior to entering an organization, individuals are unlikely to have extensive (or indeed any) intra-organizational networks, meaning they are likely to rely on extra-organizational networks as sources of information (Erdem & Bankins, 2018).

Throughout the theoretical framework I develop and draw on the notion of pre-entry expectations. I draw on Rousseau's (2001, p.511) seminal work on the 'building blocks' of psychological contracts and use her notion of schemas. Schemas refer to the 'cognitive organization or mental model of conceptually related elements' and at this stage of socialization would be termed 'pre-employment schemas' (Rousseau, 2001 p. 513-516). The contract itself is often referred to as an employment-related schema (Shore & Tetrick, 1994) and may be constituted by relatively few and simple components with limited linkages

(‘novice’ schemas) or a greater quantity and complexity of components and linkages (‘expert’ schemas) (Rousseau, 2001). I suggest that pre-employment schemas will inform individuals’ degree of pre-employment expectations. That is, individuals with ‘simpler’ pre-employment schemas (‘novices’) will have higher and potentially unrealistic pre-entry expectations, compared to ‘experts’ who hold more complex pre-employment schemas and thus have lower and potentially more realistic pre-employment expectations.

In line with the above-mentioned micro-level teleological change motor, I suggest that individuals with specific pre-entry expectations, and hence higher certainty regarding future employment relationships, because they have more fully formed employment-related goals to guide perceptions of reciprocal obligations with the employer (the psychological contract). For example, De Vos et al. (2005) suggest that individuals possessing individual advancement goals related to promotion and financial rewards will search for information related to their goals, actively seek information regarding their employers’ obligations in this area (balanced and transactional contract content). Therefore I posit that they will form relatively more realistic psychological contract perceptions regarding what their employer owe to them. Conversely, other individuals may have more general pre-entry expectations, potentially driven by minimal (or no) work experience at this career stage and/or not have particularly well-formed career goals, and hence lower certainty regarding future employment relationships. Therefore, I posit that they will form relatively un-realistic psychological contract perceptions regarding what their employer owe to them. Indeed, Rousseau (2001) suggests that individuals with

more or less prior work experience will hold different employment schemas. Thus I propose that:

P1: Newcomers' with specific pre-entry expectations will form more realistic psychological contract perceptions regarding what their employer owes to them.

P2: Newcomers' with general pre-entry expectations will form less realistic psychological contract perceptions regarding what their employer owes to them.

Upon organizational entry, how newcomers' form their psychological contract perceptions is not only influenced by pre-entry expectations but also by the social interactions in which they engaged prior to entry. The psychological contract and socialization literatures acknowledge the impact of initial interactions (with organizational agents, recruiters and interviewers) on newcomers' psychological contract expectations (e.g., Rousseau, 2001; Thomas & Anderson, 1998; Morrison, 2002; Louis, 1980); however, the literature does not pass the acknowledgement stage.

The *focus on and by extracted cues* property of sensemaking is utilized to explain the underlying mechanisms between pre-entry social interactions and formation of psychological contract perceptions upon organizational entry. Cues refer to the applicable bits of information that the sensemaker picks from the flow of previous events (Weick, 1995). Social cues are the building blocks of the sense made and create the "frames of reference" for future sensemaking (Conway & Briner, 2005, p. 150). For newcomers, the flow of previous events refers to the

recruitment and selection prior to their organizational entry. The information provided at these pre-entry social interactions are vital for newcomers since these interactions can offer higher certainty regarding future employment relationships. With the help of frequent and accurate information provided at these pre-entry social interactions, newcomers can form more realistic perceptions regarding what their employer owes to them (Erdem & Bankins, 2018). Thus I propose;

P3: Newcomers who had more social interaction at the pre-entry stage will form more realistic psychological contract perceptions regarding what their employer owes to them.

P4: Newcomers who had less social interaction at the pre-entry stage will form less realistic psychological contract perceptions regarding what their employer owes to them.

2.4.2. Post-entry Stage: Organizational Socialization

“Organizational socialization is the process by which an individual comes to appreciate the values, abilities, expected behaviors, and social knowledge essential for assuming an organizational role and for participating as an organizational member” (Louis, 1980, p. 229). Hughes (1958) used the term *reality shock* to characterize the ambiguous and uncertain nature of entering a new organizational setting. To cope with the reality shock, newcomers engage in heavy information seeking from the organization’s other members during the socialization period (De Vos & Freese, 2011). Saks and Ashforth (1997) suggested that the information insiders provide can reduce the uncertainty experienced by newcomers.

I suggest that whether individuals have specific or general pre-entry expectations will drive the social networks individuals utilize at this pre-employment stage. In particular, the level of uncertainty generated through having specific or general pre-entry expectations, and more or less specific career goals, will likely impact the prospective sensemaking process particularly (Fang et al., 2005). If individuals are very clear about their career goals, which will inform their pre-entry expectations, then they will have specific information to seek regarding what their future employer will offer them. That is, these individuals will exhibit higher certainty about the information they will seek, but still have some degree of uncertainty about whether their future employer will fulfill their pre-entry expectations. Therefore, individuals with specific pre-entry expectations will likely to seek more specific information and so be more likely to target advice ties to access expert knowledge and more accurate and nonredundant information that these ties provide (Krackhardt, 1992).

Conversely, individuals with more general pre-entry expectations will have higher levels of uncertainty influencing their prospective sensemaking toward future employment relationships. Therefore, these individuals will exhibit uncertainty regarding both the information they seek upon organizational entry and whether the future employer can fulfill their pre-entry expectations. This higher level of uncertainty, compared to those with specific pre-entry expectations, means for these individuals to gain information from others they must divulge higher levels of vulnerability, insecurity and a lack of knowledge and will also be searching for more general, rather than necessarily specific, information. Research shows when individuals face high uncertainty and need to disclose a lack of knowledge,

they are more likely to rely on trusted others through leveraging bonding social capital (Mizruchi & Stearns, 2001). Hence, they will be more likely to utilize friendship connections, characterized by higher levels of trust, comfort, support, reciprocity and norms of self-disclosure (Shah, 1998). Therefore, I propose that;

P5: Individuals with specific pre-entry expectations at the pre-entry stage are more likely to form advice ties at post-entry.

P6: Individuals with general pre-entry expectations at the pre-entry stage are more likely to form friendship ties at post-entry stage.

Psychological contract terms and network development. The type of psychological contract individuals hold will influence the psychological contract with their employer and will attune them to organizational information that is most relevant for goal achievement (De Vos et al., 2005). Therefore, the types of goals individuals hold when entering an organization will inform the type of psychological contracts and the type of networks they develop. Given the focus is on individuals who are new to employment relationships, I suggest they will often be developing their intra-organizational networks 'from scratch'. I posit that both individuals with specific or general pre-entry expectations will hold some type of goals (broadly and weakly held or more specifically and strongly held, respectively), therefore I theorize for both types of individuals.

I posit that individuals who develop relational psychological contracts will look to develop friendship ties. Since these individuals focus on achieving interpersonal affiliation such as, from a PC perspective, generating mutual support, care, consideration and loyalty through the development of relational contract

content. Friendship ties generate the bonding social capital required to achieve these types of outcomes and ‘deliver’ these types of resources across an individual’s network. For example, given that friendship ties centre on mutual trust, affect and frequency of interaction, this type of network structure will facilitate the achievement of psychological contract terms that are focused on interpersonal affiliation goals, thus formation of relational psychological contracts (Shea and Fitzsimons, 2016). Therefore, I propose;

P7: Individuals holding more relational psychological contracts, will seek to develop friendship ties in their workplace social networks.

Conversely, if a newcomer develops more transactional/balanced psychological contracts, they will likely seek to identify and cultivate advice tie relationships. Since these individuals’ goals focus on individual advancement, and, therefore, more balanced and possibly transactional contract content. Advice ties generate the bridging social capital that generates the resources needed to achieve these types of job-related goals. For example, in a similar vein, Ho and Levesque (2005) found that employees look to structurally equivalent others when assessing job-related psychological contract obligations, as these individuals are located in comparable positions in the organizational hierarchy. Because developing advice ties usually facilitates access to a greater diversity of information, more accurate and timely information and a wider range of people, this will provide individuals with access to knowledge that can facilitate the identification of career progression and development opportunities. Therefore, I propose;

P8: Individuals holding more balanced and/or transactional psychological contracts, will seek to develop advice ties in their workplace social networks.

Friendship/Advice ties and formation of newcomers' psychological contracts:

Granovetter (1979) found that people who utilized weak ties at the work place had higher levels of satisfaction in their new roles than individuals who had utilized strong ties (Lin, Ensel, & Vaughn, 1981). Building on this, I suggest individuals who activate advice ties, which are formed of weak ties, upon organizational entry will have more accurate psychological contracts because of their access to fuller, more diverse and overall more accurate and less redundant information through their expert advice ties, and so be less likely to experience perceptions of contract breach.

For individual who utilized friendship ties, which are formed of strong ties, the content of the information (accuracy and redundancy) is likely to be poorer compared to information sourced through advice ties. Therefore, I suggest that individuals who activate friendship ties will have less accurate post-entry psychological contracts and so will be more likely to experience perceptions of contract breach. This theorizing complements propositions 4 and 5 and the theorized co-evolving nature of contract content and organizational social networks. That is, the type of contract content will influence the type of network connections formed and, conversely, the type of networks formed and activated will influence the type of contract content. Therefore, I propose;

P9: Newcomers who activated advice ties will have more accurate psychological contracts and therefore experience less psychological contract breach during the socialization period.

P10: Newcomers who activated friendship ties will have less accurate psychological contracts and therefore experience more psychological contract breach during the socialization period.

On the other hand, newcomers need to feel attached to their organization and be part of their immediate work groups for the socialization to be effective (Bauer & Green, 1998; Bauer, Morrison, Callister, & Ferris, 1998; Morrison, 2002; Nelson & Quick, 1991). Social networks scholars suggested that friendship networks influence individuals' attitudes and sense of support and attachment (Brass, 1995). Thus, newcomers' friendship ties will provide the support, sense of belonging, and identity that are required for effective socialization and newcomer integration (Morrison, 2002).

Friendship ties have their roots in liking and affection for another individual (Carley & Krackhardt, 1996; Krackhardt, 1992; Schulte, Cohen, & Klein, 2012). Friendship provides emotional and social support and is enduring, affect based and reciprocal (Schulte et al., 2012; Umphress, Labianca, Brass, Kass, & Scholten, 2003). As mentioned above, social networks scholars emphasized that friendship provides individuals with a sense of belonging and identity (Ibarra, 1992; Krackhardt, 1992; Morrison, 2002; Podolny & Baron, 1997). Krackhardt (1992) highlighted that people desire to be similar to their friends and tend to adjust their attitudes, behaviors, and perceptions according to the people they perceive as their

friends. Therefore, newcomers' sensemaking process can be influenced by particular insiders with whom they form or would like to form friendship ties at work based on their initial liking and affection.

Unlike friendships ties, advice ties are relatively short-term, transactional, and non-reciprocal (Umphress et al., 2003; Schulte et al., 2012). Here, social network scholar mean that advice givers do not need reciprocate their advice seekers through sending an advice tie back. It is transactional in terms of a tie sent. In other words, unlike friendship relations, in which ties are sent both ways (friend <-> friend), it is a one way relationship in the context of advice exchanged (advice seeker -> advice giver). For job- and role-related information and advice, newcomers essentially need to form interpersonal relationships with organizational insiders who have knowledge and expertise regarding the newcomers' specific tasks and whom they can approach again and again to ask questions and seek for relevant advice (Morrison, 2002). As advice ties are non-reciprocal and are not based on shared social values, newcomers who form advice ties most probably will not develop feelings that they need to reciprocate to their advice givers in a certain way. As a result, newcomers will probably not digest their advisers' perceptions as their own as much as they would those of their friends (Morrison, 2002). Therefore I propose;

P11: Newcomers' psychological contract perceptions will become closer to the perceptions of those with whom they have advice ties.

P12: Newcomers' psychological contract perceptions will become closer to the perceptions of those with whom they form friendship ties.

P13: The association between newcomers' friendship ties and psychological contract perceptions will be stronger than the association between newcomers' advice and psychological contract perceptions.

2.5. Discussion

This theoretical paper is an attempt to answer the scholarly calls for psychological contract researchers to start investigating the building blocks of dynamic psychological contracts (Conway & Briner, 2005; De Vos et al., 2003, 2005; De Vos & Freese, 2011; Rousseau et al., 2016; Rousseau, 2001; Tomprou & Nikolaou, 2011). Rousseau (2001) emphasized that “understanding the dynamics of the psychological contract in employment is difficult without research into its formation” (p. 511). In Paper 1, I conceptualize how newcomers play an active role in forming their psychological contracts dynamically by forming social relationships with other members of the organization who can provide psychological contract related cues (Rousseau, 1995).

Psychological contract formation refers to a sensemaking process with an amalgam of promises exchanged between the newcomers and other organizational members during the pre-employment, organizational socialization and post-socialization phases (Rousseau, 2001). Especially during recruitment and socialization, newcomers engage in active information seeking, mainly from organizational insiders. Almost all researchers who study psychological contract formation have acknowledged the role of social relationships in the development of psychological contracts (De Vos et al., 2003, 2005; Rousseau, 2001; Thomas & Anderson, 1998; Tomprou & Nikolaou, 2011). However, there are still significant

knowledge gaps regarding *how*, *why*, and *which* social relationships influence psychological contract formation and to what extent. As Conway and Briner (2005) emphasized, further investigation needs to be done on what social cues are extracted and why. In this paper, I distinguish between friendship and advice network relationships, since these two types of relationships offer different types of social cues and social capital, and thus influence psychological contract formation in different ways. The study of social networks offers a platform for organizational scholars to understand different dynamics of different relationships, in which different social cues are embedded (Morrison, 2002).

Moreover, contrary to much established research that characterizes employees as passive recipients of psychological contract breach (Bankins, 2015), Paper 1 puts newcomers at the center of the psychological contract formation process, in which they actively engage with others in the organization and enact their own social environments. In doing so, this paper extends the efforts of earlier studies of Thomas and Anderson (1998), who studied the influence of insiders on the psychological contracts of British Army recruits and Ho (2005), who studied influence of social ties on the perceptions of psychological contract fulfillment.

Going one step beyond Thomas and Anderson's (1998) study, this paper postulates a theoretical model of concurrent formation of psychological contracts and social relationships, conceptualizing that these two constructs are both predictors and products of each other. Pre-entry expectations and interactions with organizational agents (e.g., recruiters, interviewers) influence newcomers' sensemaking after organizational entry (e.g., Thomas & Anderson, 1998). During early socialization, newcomers form psychological contract perceptions based on

the information they received from their interactions. Likewise, pre-entry expectations and interactions will influence how newcomers decide on what types of information they need to survive during the ambiguous socialization period, which triggers networking behavior among newcomers. In this paper I argue that newcomers tend to form different types of social relationships, depending on specify of their pre-entry expectations and content of their newly forming psychological contracts, with other organizational members whom they believe are sources of relevant information (advice) or support (friendship).

2.5.1. Theoretical implications

This paper introduces a two-way process model of the coevolution of newcomers' psychological contracts and social relationships that assist newcomers in dealing with the ambiguity and uncertainty of entering a new organization. The model and its predicted effects contribute to the psychological contract and socialization literatures in numerous ways.

Firstly, it adds to the paucity of research that similarly draws attention to the influence of social interactions on newcomers' psychological contracts, such as Thomas and Anderson's (1998) study with new army recruits. Indeed, sensemaking theory (Weick, 1995) is drawn upon to explain how newcomers make sense of the different information they receive from different types of social relationships in forming their psychological contract.

Secondly, in line with recent critiques of the application of sensemaking (e.g. Maitlis & Christianson, 2014; Sandberg & Tsoukas, 2015), I adopt and explore a temporally-extended notion of sensemaking by incorporating its prospective

element. In contrast to much research focusing on sensemaking only after disruptive events, I position sensemaking as an ongoing process occurring continuously during psychological contract formation, which itself is ongoing and unfolding (Conway & Briner, 2005).

Thirdly, this paper draws scholarly attention to the antecedents of psychological contracts. As Rousseau (2001) and De Vos et al. (2003) argued, despite so much attention being paid to the outcomes of psychological contract breaches and violations, little attention has been paid to the formation of the psychological contract. This is of supreme importance if we are to ascertain a complete and more precise picture of how psychological contracts operate within employment relationships (Rousseau, 2001).

Finally, the current study places newcomers at the center of their own psychological contract formation process. In line with Seeck and Parzefall's (2008) allegations, understanding of the role of employee agency is truly scarce in the psychological contracting process. Earlier studies extensively position employees as relatively passive recipients of psychological contract breach (Bankins, 2015). In this paper, in grounding the theoretical model in structuration theory I do not place primacy on agency or structure in the co-evolutionary process, allowing for individuals to be positioned as active contributors, rather than passive reciprocators (Bankins, 2015), to their contracting process (Seeck & Parzefall, 2008).

2.5.2. Limitations and future research

As one of the limitations, the current theoretical model does not include newcomers' predispositions. Therefore, future conceptual and empirical research

should integrate how different predispositions influence the development of psychological contracts.

In addition to the inclusion of newcomers' predispositions to the model, another fruitful avenue for future research is to investigate whether new graduate newcomers differ from more experienced newcomers in forming psychological contracts. In Paper 1, I acknowledged that 'novice' and 'expert' psychological contracts differ, however, this distinction is not currently integrated in the theoretical model. We know that previous work experiences influence individuals' psychological contracts (Herriot, 1989, 1995; Herriot, Manning, & Kidd, 1997) and that older employees respond less negatively to psychological contract breach (Bal & Smit, 2012). Therefore, we can assume that prospective and retrospective sensemaking of younger and more experienced employees will differ; thus, they might form different social relationships and psychological contracts.

Related to the points above, as another limitation, the current theoretical model does not distinguish between post-entry experiences that match or mismatch newcomers' pre-entry expectations. Studies of psychological contracts that follow the sensemaking approach recommend that sensemaking can be more extensive if individuals' post-entry experiences do not match their pre-entry expectations (Tomprou & Nikolaou, 2011). Therefore, for the future research, the inclusion of categories regarding met and unmet pre-entry expectations can be extremely useful for understanding perceptions regarding psychological contract breach early into the employment relationship.

Moreover, (un)met expectations might also influence the networking behavior of newcomers. I assume that if their pre-expectations are met, newcomers might quickly absorb their new role in the organization and might not be motivated to reach out others as much as if their pre-entry expectations have not been met. In the latter case of unmet pre-entry expectations, newcomers might struggle to make sense of their new environment and might be more motivated to reach out to others for relevant social cues. Future research should investigate the mechanisms of sensemaking, networking behavior, and psychological contract formation among newcomers in different categories of met and unmet pre-entry expectations.

I believe future scholars will be also interested in further exploring the significance of the sensemaking perspective in different stages of psychological contract processes. For example, Weick (1995) argues that identities are constructed out of interaction and “to shift among interactions is to shift among definitions of self” (p. 20). Along these lines, further research can investigate how newcomers’ interactions shift when they move from being newcomers to insiders after socialization as well as how this influences the shift in their work identities and thus their psychological contracts.

Finally, researchers could explore whether the network positions of newcomers in their advice and friendship networks will influence the formation of their psychological contract perceptions. Ho et al. (2006) investigated the relationship between social network position and psychological contract beliefs, and found that informal network ties shape individuals’ beliefs. Therefore, it would be promising to apply this knowledge to the psychological contract formation

process and investigate how newcomers' position in their friendship and advice networks influences the formation of psychological contract perceptions.

2.5.3. Practical implications

This research suggests that newcomers' social relationships can positively contribute to the formation of psychological contracts, which is one of the main determinants of employee behavior in organizations (Rousseau, 1995). In return, this study also suggests that psychological contract related expectations and perceptions guide how and why newcomers choose to form certain social relationships with certain insiders. From a practical perspective, one interpretation is that managing social relationships is an efficient way of managing newcomers' psychological contracts. Effective management of psychological contracts from the beginning of the employment relationship has numerous potential benefits to firms, such as reduced perceptions of psychological contract breach and intentions to quit as well as increased commitment, satisfaction, citizenship behavior and performance (Rousseau, 2001).

Another practical implication of this research would be that creating a common understanding of the norms and culture among employees will contribute to the formation of coherent psychological contracts from day one of the employment. Consistent communication of these common norms with newcomers via existing organizational members will influence the formation of consistent psychological contracts. I expect that this would also reduce the potential perceptions regarding psychological contract breach.

Finally, in relation to the above points, this research suggests that managing psychological contracts will also help firms to manage social relationships among employees, since these two constructs are codependent. Therefore, companies can create pleasant and welcoming work environments and reduce unnecessary discrepancies among coworkers.

2.6. Conclusion

This paper answers scholarly calls for a greater focus on the formation process of employees' psychological contracts (Conway & Briner, 2005; De Vos, 2005; De Vos et al., 2003; De Vos & Freese, 2011; Rousseau et al., 2016; Rousseau, 2001; Tomprou & Nikolaou, 2011). It is proposed that newcomers' psychological contracts and social network ties are codependent. The theoretical model conceptualizes that these two constructs as being both the predictors and products of each other. Through the mechanisms of prospective and retrospective sensemaking, social relationships shape newcomers' psychological contract formation; and in return, newcomers' newly forming psychological contracts shape their choices of social network ties. The theoretical model integrates two key phenomena that are vital for newcomers' sensemaking to reduce the ambiguity and uncertainty of organizational socialization: psychological contracts (Rousseau, 1995, 2001) and social relationships (Morrison, 2002). This framework extends our understanding of the influence of social relationships on psychological contract formation as well as emphasizes the importance of psychological contracts in shaping newcomers' social relationships.

Chapter 3

Paper 2: A Grounded Investigation of Pre-entry Expectations and Millennial Graduates' Anticipatory Psychological Contracts

3.1. Chapter Overview

Chapter 3 of my thesis includes Paper 2, which is an inductive qualitative study particularly concerned with the pre-entry expectations of millennials. The findings of this study suggest that millennials predominantly focus on five expectations prior to employment. These five expectations include (1) opportunities for career advancement, (2) autonomy, (3) recognition, (4) organizational support and (5) fairness. The key contribution of this paper is the conceptualization of pre-entry time and generational differences in the psychological contract formation process. It shows the importance of pre-entry expectations in shaping employees' anticipatory psychological contracts (Mabey, Clark, & Daniels, 1996).

3.2. Introduction

More diversity of generations is represented in today's workforce than at any other time in history (Glass, 2007). This multigenerational workforce offers diverse opportunities, advantages, and skills. However, having different generations work together may create challenges and conflict in the workplace as a result of different work styles and expectations that are unique to each generation (Bennett et al., 2012).

The concept of generation has two basic meanings. Generation may refer either to a familial generation or to a social generation, that is, a cohort of people born in the same date range (Pyöriä, Ojala, Saari, & Järvinen, 2017). However, a cohort does not form a generation by feature of its age alone, other than in a statistical sense. In the sociological use of the concept, a generation is thought to consist of a stratum who are born within a limited time range and who share not

only the same date of birth but also similar sociocultural experiences (Edmunds & Turner, 2002; Eyerman & Turner, 1998).

Defining generations and exploring their differences is a subject of much current debate that involves both political and economic interests. In the employment context, one area of special interest has been the recent generational shift, which has seen the arrival in the workplace of the first digital natives, “native speakers” of the digital language (Abrams & von Frank, 2014; Howe & Strauss, 2009; Ng, Lyons, & Schweitzer, 2012; Zemke, Raines, & Filipczak, 1999).

At present, employees entering the workforce belong to Generation Y, commonly referred to as millennials. There are many definitions of millennials considered in the literature. Wey Smola and Sutton (2002) define millennials as those born between 1979 and 1994. In employment studies, millennials are generally considered as individuals who were born in or after the 1980s and who entered the labour market in the 2000s (e.g. Pyöriä et al., 2017). In terms of millennials’ common sociocultural experiences that cluster them as a generation, they are higher educated than earlier generations, highly competent users of information and communication technologies (ICTs), and accustomed to the world of social media (Deal, Altman, & Rogelberg, 2010; Hershatter & Epstein, 2010; Kowske, Rasch, & Wiley, 2010).

Earlier research suggests that millennials are independent, entrepreneurial thinkers who appreciate flexibility and hate micromanagement (Martin, 2005). They thrive on challenging work and demand immediate feedback and responsibility (Martin, 2005; Shaw & Fairhurst, 2008). On the other hand,

millennials have been described as the “look at me” generation, which implies that they are overly self-confident and self-absorbed (Myers & Sadaghiani, 2010, p. 225). In some work places, they can be portrayed as lacking in loyalty and work ethic by other organizational members, especially by those who belong to other generations, such as baby boomers and Generation X (Myers & Sadaghiani, 2010).

So does Millennials who are now entering the labour market, differ from the generations that went before? There is not a consensus regarding the answer of this question amongst the researchers yet. Scholars have opposing views regarding the notion that millennials are different and have different work values than earlier generations. Scholars who favour the notion that millennials differ from earlier generations suggest that young people do not value traditional wage employment to the same extent as their parents (Cogin, 2012; Myers & Sadaghiani, 2010); expect to be able to work under a new management culture, to contribute to innovation at the workplace level, and to reconcile work and leisure in novel ways (Chou, 2012; Twenge, Campbell, & Freeman, 2012).

For example, Wey Smola and Sutton (2002) conducted a survey study revisiting the issue of generational differences and the causes of those differences. They obtained survey data from more than 350 individuals across the United States. They analyzed current generational differences in worker values and compared the results to a similar study conducted in 1974. Their results suggest that that generational work values do differ.

On the other hand, there are scholars who disagree with the above notion and argue that millennials differ from earlier generations is a far-fetched idea (e.g. Mencl & Lester, 2014; Pyöriä et al., 2017). For instance, Pyöriä et al. (2017) tested

the notion that younger generations, most notably the millennials, value work less than older generations do. They analyzed Finland's Quality of Work Life Surveys from 1984 to 2013, focusing on labour market entrants aged from 15 to 29. They addressed two main themes: (1) the value given to work, (2) leisure and family life, and work commitment. They found that the value given to work has remained consistently high for the past three decades, regardless of age. Leisure and family life have gained increasing importance, not only among the millennials but also among older generations. However, millennials are found to be more prepared to change to a different occupational field than older employees. Overall they concluded that Millennials are not less work-oriented than older generations however more open to switch occupational fields.

In Paper 2, my motivation was to conduct an inductive qualitative study to investigate whether expectations of current first-time job seekers are different than expectations of first-time job seekers from couple of decades before (millennials start entering the workforce in 2000s). The findings of Paper 2 suggest that current first-time job seekers, who belong to Millennial generation, predominantly focus on a fairly narrower set of expectations prior to employment and this is in contrast to the types of expectations identified by some previous literature in the area (e.g. Herriot & Stickland, 1996; Sturges & Guest, 2001). Therefore, I position myself closer to the scholars who argue that there are generational differences in the workplace. However, I also support the idea that we do not yet fully know whether the values of millennials really are as different as has been suggested since the representative surveys with extensive data sets and exploratory research on the work orientation of this generation are still scarce (Pyöriä et al., 2017). Therefore,

I believe more research should be conducted to draw final conclusions and Paper 2 contributes to the literature in this line.

Martin (2005) argues that guided by managers and supervisors who are willing to confront their challenges and understand their expectations, millennials have the potential to be the greatest performers in history. However, as suggested by previous research, millennials' expectations regarding employer obligations are extremely high compared to those of earlier generations (De Hauw & De Vos, 2010; Twenge & Campbell, 2008; Wey Smola & Sutton, 2002). Therefore, it is particularly important to understand the expectations of millennials for various reasons: (1) to attract the highest performing millennials among the available workforce, (2) to manage the adaptation and socialization period of millennials effectively, and (3) to motivate and retain them in the organization.

It is not surprising to see that the number of studies investigating the early psychological contract breach, especially during organizational socialization, has increased with the entrance of millennials into the workforce in the 2000s (e.g. Boswell, 2009; Lapointe, Vandenberghe, & Boudrias, 2013; Payne, 2015; Robinson & Morrison, 2000). Given the generational differences between millennials and their managers, supervisors, and existing organizational members, it is not surprising that millennials might feel that their expectations are not met. Unmet expectations can create perceptions of psychological contract breach, which may have detrimental effects on a number of employee outcomes, such as commitment, job satisfaction, performance, and intentions to stay (De Hauw & De Vos, 2010; Rigotti, 2009; Robinson & Morrison, 2000; Zhao, Wayne, Glibkowski, & Bravo, 2007).

It is important to note here that the pre-entry expectations of organizational newcomers have been examined in the literature for several decades, often in the form of *met expectations*. Porter and Steers (1973, p. 288) define met expectations as “the discrepancy between what a person encounters on the job in terms of positive and negative experiences and what he expected to encounter”. Based upon classical social psychological accounts of equity theory (Adams, 1963) and expectancy theory (Vroom, 1963), a large literature has developed around this concept. Unmet pre-entry expectations are associated with a variety of employee outcomes, including poorer employee job satisfaction, commitment, intention to leave, turnover behaviour and performance (Wanous, Poland, Premack and Davis, 1992). Providing a *realistic job preview* at the recruitment stage, which presents both positive and negative aspects of the job, may be an effective way to increase performance and reduce turnover at a later time (Phillips, 1998), with perceptions of organisational honesty and reduced expectations key to this relationship (Earnest, Allen and Landis, 2011). However, research into the *content of pre-entry expectations* and their creation is limited (Sturges & Guest, 2001). This is how conceptualizing ‘pre-entry time’ and investigating the *content* of these pre-entry expectations are key contributions of Paper 2.

Nonetheless, there a limited number of studies examining specific content dimensions of millennial pre-entry expectations, generally from a quantitative perspective. Ng, Schweitzer, and Lyons (2010) performed a large scale survey of including various items relating to expectations of US millennials looking for their first job. Rapid advancement, new skill development and meaningful life outside of work emerged as the most endorsed expectations. Terjesen, Vinnicombe, and

Freeman (2007) used repertory grid interviews to elicit organisational attributes (rather than expectations), with graduate job seekers. Those rated most important by newcomers were organizations that invest heavily in training, care about employees as individuals and provide clear opportunities for progression, variety in work have a dynamic and forward-looking approach. De Hauw & De Vos (2010) examined millennials' anticipatory psychological contracts in relation with their pre-entry expectations using seven dimensions (career development, job content, social atmosphere, financial rewards, work-life balance, training and job security), finding that only those related to work-life balance and social atmosphere were lowered during times of recession.

In sum, whilst a limited number of studies have been conducted to examine expectations (De Hauw & De Vos, 2010; Ng et al., 2010) and perceptions (Terjesen et al., 2007) of millennials job-seekers, these studies are generally based upon deductive survey methods. As a further contribution, Paper 2 follows an inductive approach to investigate whether millennials work expectations are different than earlier generations. The exploratory qualitative study in Paper 2 reports the findings of an inductive interview series examining the pre-entry work expectations of millennial job-seekers. The findings suggest that millennials predominantly focus on a fairly narrow set of five expectations prior to employment: (1) opportunities for career advancement, (2) autonomy, (3) recognition, (4) organizational support and (5) fairness. This is in contrast to the types of expectation identified by some previous literature in the area, and suggests various routes to the management of inexperienced millennial organizational newcomers. This is particularly important to have a healthy start to the employment relationship and to prevent potential

negative feelings regarding unmet expectations, which may lead to negative employee outcomes and harm organizations (De Hauw & De Vos, 2010).

3.3. Literature Review

3.3.1. Anticipatory psychological contracts

An extensive body of literature has shown that the psychological contract is an important explanatory framework to predict the antecedents of employee outcomes, such as organizational commitment, organizational citizenship, performance, turnover and job satisfaction (Rousseau, 1995). As discussed in Paper 1, the psychological contract represents a dynamic process that unfolds throughout employees' tenure with an organization (Conway & Briner, 2005). The contract formation process starts prior to employment and unfolds from the pre-employment stage onwards (Anderson & Thomas, 1996; Shore & Tetrick, 1994). Therefore, to study psychological contract formation, it is important not solely to understand new and current employees' psychological contracts but also to have insight into the psychological contract expectations of future employees that precede the employment relationship (De Vos et al., 2009).

Anderson and Thomas (1996) used the term 'anticipatory psychological contract' to explain the type of psychological contract that starts forming before the employment relationship. Anticipatory psychological contracts, start forming during the pre-entry stage in the weeks (and possibly months) before joining an organization, when an individual has accepted a position but have not joined an organization yet, therefore they can only anticipate their experiences (Louis, 1980) The anticipatory psychological contract is an important framework for

understanding the expectations of potential employees (De Hauw & De Vos, 2010; De Vos et al., 2009; Rousseau, 2001). The pre-entry expectations potential employees function as frames of reference through which they evaluate their experiences once they join the organization (Mabey et al., 1996).

Rousseau et al. (2018) formulate a dynamic model of psychological contract phases, which include psychological contract formation. They argue that given the varying conceptualizations of the psychological contract, it is not surprising that empirical work has adopted divergent operationalizations and often conflates the terms expectations, obligations, and promises. Indeed, psychological contracts have been measured as employee beliefs about expectations (e.g. Sutton & Griffin, 2004), obligations (e.g. Bordia, Restubog, Bordia, & Tang, 2017; Coyle-Shapiro & Neuman, 2004), and promises (e.g. Lambert, Edwards, & Cable, 2003; Woodrow & Guest, 2017); and indeed, psychological contracts exist where no promises have been made (Arnold, 1996).

Researchers noted that in the absence of promises, psychological contract beliefs can be based on more general expectations (Montes & Zweig, 2009). In line with allegations of Rousseau et al. (2018) and Montes and Zweig's (2009), in Paper 2, I debate that the formation of anticipatory psychological contracts are mainly influenced by pre-entry expectations rather than promises or perceived obligations. Given the limited interaction between prospective employees and organizations at the pre-entry stage, hence relative absence of promises, in line with Montes and Zweig's (2008) allegations, I argue that offer holders form their anticipatory psychological contracts mainly based on their expectations.

Rousseau et al. (2018) stress that employees enter the organization with normative expectations about the experiences and resources that they should receive based on their pre-existing beliefs about employment relationships (Louis, 1980). They argue that these expectations give rise to perceived obligations, and are integrated into their psychological contracts. Scholars support their thinking with the following example:

“For instance, an employee may expect the new employer to provide flexible hours to accommodate parenting responsibilities because this is a known norm in other organizations. This expectation may create a perceived obligation for the organization to provide flexible hours, for example, to allow the employee to start and stop work a bit later so a child can be brought to daycare ... In the context of PC creation, we recognize that promises are one potential antecedent of perceived obligations and that the PC schema is also influenced by normative expectations, particularly those derived from sources external to the organization (e.g., societal norms and previous experiences of self and others)” (Rousseau et al., 2018, p.3)

As evident in above assertions of Rousseau et al. (2018), potential employees can perceive that their future employer owes them certain things not only based on what their employer promises them but also through sources external to the organization (including pre-entry beliefs and expectations). Therefore, pre-entry expectations and anticipatory psychological contracts are different constructs (as defined in revision 17 above). However, I argue that potential employees will form their anticipatory psychological contracts mainly through their pre-entry expectations since there will be an absence of promises prior to organizational entry

given the limited contact between parties. Therefore, the content of pre-entry expectations are studied in Paper 2 in order to understand what will be contributing to the content of anticipatory psychological contracts.

Prior research has shown that when newcomers' experiences after joining an organization do not match their pre-employment expectations, they are more likely to feel that their psychological contract has been breached, leading to reduced organizational commitment and increased turnover intentions (De Hauw & De Vos, 2010; Sturges & Guest, 2001). This is particularly relevant to millennials, since there is evidence suggesting that millennials' expectations are considerably higher than those of the members of earlier generations who actually hire them and/or manage them in the workplace (e.g. De Hauw & De Vos, 2010; Glass, 2007). This may create conflict between different generations and a mismatch between pre-entry expectations and post-entry experiences (Glass, 2007). Therefore, understanding the *pre-entry expectations* of millennials is essential to understand what contributes to the initial formation of today's newcomers' psychological contracts before (anticipatory psychological contract) and after organizational entry (De Hauw & De Vos, 2010; Rousseau, 1995). Understanding the initial formation of psychological contracts can reduce the potential discrepancies between pre-entry expectations and post-entry experiences by having a healthier start to the employment relationship (De Hauw & De Vos, 2010). A better understanding of millennial employees' pre-entry expectations can also provide salient information regarding the effective management of newcomers' psychological contracts (Rousseau, 1995), development of successful organizational socialization programs

(Louis, 1980), and implementation of well-informed human resources practices (De Vos et al., 2009).

3.3.2. Pre-entry expectations

Expectations are beliefs about a future state of affairs that can be categorized as either probabilistic or normative (Olson, Roese, & Zanna, 1996). Probabilistic expectations refer to beliefs about the likelihood of future events or what might happen, whereas normative expectations refer to beliefs about future events that should happen based on normative standards (Higgins, 1992). Rousseau et al. (2018) emphasize that this distinction has not been a focus in psychological contract research (Roehling, 2008), however, it is important to note that employees enter the organization with normative expectations about the experiences and resources that they will receive based on their pre-existing beliefs about employment relationships (Louis, 1980). Similarly, in my thesis, pre-entry expectations are defined as job-seekers' *beliefs* regarding what *should* happen in their future employment, 'independently from the specific context of an employment relationship' (De Vos et al., 2009, p. 290); that is, individuals are not yet necessarily accepted a job offer with a certain employer.

Although the influence of *pre-entry expectations* has been mentioned in literature on the psychological contract and organizational socialization, only a few scholars have studied the concept empirically (e.g. De Hauw & De Vos, 2010; De Vos et al., 2009; Sturges & Guest, 2001). Earlier studies that investigated pre-entry expectations focused on several dimensions, such as the influence of individual characteristics, i.e. career orientation (De Vos et al., 2009), impact of pre-entry expectations on organizational commitment and turnover intentions (Sturges &

Guest, 2001), and how previous work experiences of veterans shape expectations regarding their new employment (Herriot, 1989; Sherman & Morley, 2015).

Although a relatively small number of studies have focused on pre-entry expectations, this rich theoretical and empirical work has contributed to our understanding of the link between pre-entry expectations and different aspects of the employment relationship. However, there is still a significant gap in our knowledge regarding the shaping role of pre-entry expectations on the psychological contract (Sherman & Morley, 2015), especially regarding the pre-entry expectations of millennials (De Hauw & De Vos, 2010). Since a plethora of research on the psychological contract has primarily focused on the process and outcomes of contract violation (Bankins, 2015; Rousseau, 2001), it is not surprising that the pre-entry expectations of potential employees have been overlooked, as these expectations are mostly relevant at the initial formation stage of the psychological contract (Sherman & Morley, 2015), in which promises are scarce (Montes & Zweig, 2009). Therefore, understanding pre-entry expectations is essential for the overarching purpose of my thesis, which is to investigate the formation of psychological contracts.

In line with Rousseau's (2001) assertions regarding the importance of studying the formation of psychological contracts in depth and Martin's (2005) assertions regarding the need to know more about millennials' expectations toward work, a couple of essential questions can be directed toward the psychological contract literature on the function of pre-entry expectations of millennials during the formation stage:

- (1) What is the role of pre-entry expectations in shaping the anticipatory psychological contracts of millennials?
- (2) What are the content dimensions of millennials' anticipatory psychological contracts that will inform the formation of their psychological contracts upon organizational entry?

This paper proposes that it is impossible for individuals who are in the job market to entirely foresee the nature of their future employment. Therefore, it would require a major assumption to revise anticipatory psychological contracts of future employees on the same psychological contract dimensions of employees' who are already in an organization. Moreover, De Hauw and De Vos (2010) found that different dimensions of millennials' psychological contract expectations are influenced differently by generational and contextual factors. Their findings are also consistent with previous research suggesting that antecedents and consequences of psychological contracts differ according to the dimensions of the psychological contract (De Vos et al., 2009).

Consistent with earlier research suggesting that generational and contextual factors influence different dimensions of the psychological contract (De Hauw & De Vos, 2010; De Vos et al., 2009), the aim of the current paper is to discover which content dimensions are most salient for future employees, especially for millennials, who are a significant part of today's workforce, prior to organizational entry. Once these content dimensions are understood, I can focus on these dimensions of the psychological contract to further understand the antecedents of the psychological contract formation process (which will be discussed further in Chapter 4 – Paper 3). This is especially important since new recruits use their

anticipatory psychological contracts, which they have formed prior to employment and based on their pre-entry expectations, as a frame of reference through which they evaluate and make sense of their experiences once they join organizations (Mabey et al., 1996).

The aim of this paper is to contribute to the literature on psychological contracts in four ways. First and foremost, in line with the overall purpose of my thesis and Rousseau's (2001, p. 512) assertions, this paper draws attention to the "antecedents of psychological contracts" by inductively investigating the specific content dimensions of pre-entry expectations, which contribute to the formation of anticipatory psychological contracts. Secondly, this paper extends the previous work on pre-entry expectations (e.g. De Hauw & De Vos, 2010; De Vos et al., 2009; Herriot, 1989; Sturges & Guest, 2001) by explaining the shaping role of pre-entry expectations on the process of psychological contract formation. Thirdly, this paper holds the prospect of offering further insights into the effective management of selection, recruitment and organizational socialization practices through better understanding of the expectations of millennial candidates and new employees. Fourthly and finally, this paper extends earlier studies related to millennials, and generations at work in general, through combining the above three aspects within the context of millennials, whose expectations and values are quite different than those of previous generations in the workplace (Bennett et al., 2012; Glass, 2007; Karakas et al., 2015; Shaw & Fairhurst, 2008).

This paper is organized as follows: first, the link between expectations and content dimensions in the psychological contract literature is defined; second, the methodology and grounded analysis of the interview data are presented with the

results; and finally, the discussion provides theoretical and practical implications before the conclusion.

3.3.3. The link between pre-entry expectations and the content of anticipatory psychological contracts

There is strong evidence to suggest that the ability of organizations to retain new employees depends on how committed these newcomers feel to their employers (Sturges & Guest, 2001). It has also been suggested that newcomers' intentions to remain with a company are mainly developed during the organizational socialization period as a result of the development of a strong commitment in the same stage (Meyer, Bobocel, & Allen, 1991). Organizational commitment scholars emphasize that post-entry experiences regarding the extent to which pre-entry expectations have been met are salient factors that affect the commitment of newcomers by resulting in intentions to stay (Sturges & Guest, 2001). Hence, the future of the employment relationship between the newcomer and the organization depends on the fulfillment of pre-entry expectations that contribute to the effective formation of psychological contracts, leading to increased commitment and intentions to stay (Sturges & Guest, 2001).

The concept of fulfillment of pre-entry expectations comes from the study of Porter and Steers (1973) regarding met expectations. In their study, Porter and Steers (1973) classified their conceptualization of met expectations under four elements. The first element constitutes their key hypothesis that unmet expectations, at any stage of employment, lead to dissatisfaction, which in turn leads to turnover. Secondly, the scholars emphasize that when conducting research on expectations, researchers should consider the appropriate context. This element

of Porter and Steers's (1973) earlier conceptualization is also supported by the recent findings of De Hauw and De Vos (2010) and De Vos et al. (2009), suggesting that different contextual factors influence different dimensions of psychological contracts. The concern of the current study is the expectations held by graduating millennials while they are on the job market before they enter an organization. Porter and Steers's (1973) third element, in line with the second element, concerns the specific meaning of met expectations; for the purpose of the current study, this means defining whether there is a discrepancy between the initial expectations of graduates and their beliefs after joining their organizations. And finally, the fourth element emphasizes that expectations are subjective. For example, expectations that are relevant to graduating millennials might not be relevant to those of previous generations, and vice versa (Bennett et al., 2012; Glass, 2007; Karakas et al., 2015; Shaw & Fairhurst, 2008). Therefore, when studying psychological contracts of millennials, only expectations relevant to this group of employees should be included as content dimensions (Wanous, Poland, Premack, & Davis, 1992).

On the other hand, future employees — in this case, millennials — develop their anticipatory psychological contracts that will guide their behavior and beliefs once they join the company based on pre-entry expectations (Mabey et al., 1996). By their very nature, anticipatory psychological contracts are subjective (Sherman & Morley, 2015); their formation entirely depends on the previous experiences of individuals who have no or very little contact with their organization at this stage. The irony is that individuals' anticipatory psychological contracts will act as a frame of reference through which newcomers will make sense of their new environment, although organizations' input in these anticipatory contracts is very

limited. Therefore, in line with Porter and Steers's (1973) final element, it is important for organizations to capture the most relevant content dimensions of potential employees' (in today's context, millennials') anticipatory psychological contracts. Researchers noted that in the absence of promises, psychological contract beliefs can be based on more general expectations (Montes & Zweig, 2009), which are pre-entry expectations in the case of anticipatory psychological contracts.

Psychological contract content dimensions refer to employees' perceptions of the particular terms that represent the nature of the exchange relationship between the employee and the employer (Rousseau & Tijoriwala, 1998). Although the content of psychological contracts has received considerable attention in the literature (Robinson et al., 1994; Rousseau, 1990), the content dimensions of anticipatory psychological contracts have been overlooked (Sherman & Morley, 2015), as so the content of pre-entry expectations (Sturges & Guest, 2001). However, it has been acknowledged that there are differences between the psychological contracts of veteran and novice employees (Herriot, 1989). Rousseau (2001) makes the distinction between the psychological contracts of veteran and novice employees and argues that veteran employees have more content dimensions than novice employees. She also adds that contents of veterans' psychological contracts align more closely with the organizational reality than contents of novices' psychological contracts do. Although novice employees' anticipatory psychological contracts are far less complex given the employees' lack of previous work experience, they are more likely to become similar to those of people already inside the company (Thomas & Anderson, 1998). Therefore, as discussed in Paper 1, the relationships formed between insiders and newcomers and the information

provided by organizational insiders during the socialization stage plays an important role in managing the formation of newcomers' psychological contracts (Bauer & Green, 1998). However, it is also important to consider that potential generational conflicts between incoming millennials and other generations existing in the workplace may also contribute (positively or negatively) to the formation of psychological contracts upon organizational entry. Therefore, understanding pre-entry expectations and anticipatory psychological contracts of millennials is becoming even more important than before given the fact that there are currently more generations working together in the workplace than ever before (Glass, 2007).

The issue regarding the 'expectations gap' in the newcomer context – a discrepancy between what a potential employee experiences on the job and what s/he expected to experience (Porter & Steers, 1973) – has become more relevant with critiques of the feasibility of making traditional career promises to recent graduates (De Hauw & De Vos, 2010; Sturges & Guest, 2001; Wey Smola & Sutton, 2002). The majority of this challenge has come from psychological contract researchers (e.g. Herriot, 1995; Rousseau, 1995), who argue that career promises associated with a hierarchical career path and a lifetime career in a single organization are outdated for new generations of employees (millennials); therefore, they have to be replaced by a 'new deal' (Sturges & Guest, 2001, p. 449). Therefore, it is expected that with the shift from traditional to 'new deal' job advertisements communicating contemporary organizational promises, the content dimensions of graduating millennials' anticipatory psychological contracts will shift as well.

Although the research into content dimensions of anticipatory and entry-level psychological contracts is very limited (Sherman & Morley, 2015), and we also have very limited insight into how exactly pre-entry expectations are created (Sturges & Guest, 2001), there are some influences that seem likely to be significant based on the characteristics of millennials. For example, there is strong evidence that new graduates endorse organizations based on the training opportunities (Arnold & Mackenzie Davey, 1994; Loughlin & Barling, 2001; Sturges, Guest, Conway, & Davey, 2002) and career management assistance they provide (Pitcher & Purcell, 1998; Wong, Gardiner, Lang, & Coulon, 2008). Furthermore, Rawlins, Indvik, and Johnson (2008) suggested that millennials are less focused on the financial side of their jobs but instead prefer to work for organizations that are responsible and can provide personal satisfaction. Dries, Pepermans, and De Kerpel (2008) found that millennials value meaningful work more than other generations. Cennamo and Gardner (2008) suggested that millennials place more importance on freedom-related work values.

It has also been found that information shared between fellow millennials and career guidance received from their universities are also influential in the creation of their pre-entry expectations and thus their anticipatory psychological contracts (Glass, 2007). It is not surprising that fellow millennials also affect each other's pre-entry expectations, since one of the distinctive features of millennials is that they are a digital generation who are connected with each other 24 hours a day (Glass, 2007; Martin, 2005; Shaw & Fairhurst, 2008).

Although there is evidence regarding what millennials value differently than earlier generations, there is a relative absence of theory and research regarding

content of their pre-entry expectations (Sherman & Morley, 2015). Therefore, the aim of this paper is to identify the pre-entry expectations of millennial graduates, which will influence the content dimensions of their anticipatory psychological contracts at the pre-entry stage, where they receive relatively less promises from their organizations; therefore form their anticipatory psychological contracts mainly based on their expectations (Montes & Zweig, 2009). This study adopts a qualitative approach and serves as the preliminary research for the empirical study in Chapter 4 (Paper 3) investigating the concurrent formation of newcomers' psychological contracts and social network relationships. As such, it is intended to explore themes that will feed into the subsequent stages of psychological contract formation and perceptions related to it at the later stages of the employment relationship, which will be discussed in Chapter 4 (Paper 3). On the other hand, Paper 2 is also a grounded inductive investigation to identify the scope of the pre-entry expectations element of the theoretical model postulated in Chapter 2 (Paper 1). Please see Figure 2.

3.4. Research Methods and Analysis

3.4.1. Methods

My exploration of the content dimensions of millennial graduates' anticipatory psychological contracts is grounded in a qualitative study of final-year undergraduate and master's students who are currently on the job market and actively seeking future employment. The purpose of this study is to contribute to the development of a theory of contract formation and identify the pre-entry expectations of recent graduates. The study is therefore designed to be open-ended

and to allow unexpected themes to emerge. My focus on the specific content dimensions of millennial graduates' anticipatory psychological contracts, which I will discuss in the next section, is a result of an inductive process and stems from the prevalence of this theme in the interviews, not from a deductive, a priori logic.

A qualitative inductive approach was a good fit for this study because my goal was to understand the initial process of psychological contract formation and uncover the new content dimensions that millennial graduates might have. I believe that without understanding the content dimensions that newcomers form prior to entering their organizations, the investigation of psychological contract formation would be incomplete given the dynamic, evolving, and ongoing nature of psychological contracts, which start forming before employment (Conway & Briner, 2005)

A mix of graduating undergraduate and master's students is a suitable group to study because they represent the millennial workforce of today. At the time of the study, they were on the job market actively seeking information regarding their future employment opportunities and forming expectations based on the information they gathered from different sources. Thus, I expected to encounter a range of content dimensions regarding their pre-entry expectations. Moreover, they were spending hours at school socializing with peers who shared the same expectations and worries, and they were also actively connected with each other online. Therefore, I expected them to be engaging in career-related conversations that contributed to the active formation of their pre-entry expectations during their job searches.

To understand the subjective nature of expectations and the anticipatory psychological contract, I conducted in-depth interviews with 32 graduating students who were on the job market at the time the interviews were conducted. The sample consisted of 14 females and 18 males aged between 21 and 26. Among the sample, 20 students were undergraduates, and 12 students were at the master's level. Although the interviews were conducted in the United Kingdom, the participants were from a mix of nationalities. There were six British, five Dutch, five Indian, five German, four French, four Turkish, two Chinese and one Swiss participants. To recruit participants, I sent an email about the research project to all graduating undergraduate and master's students of management at the LSE (please see Appendix 1). At the time of data collection, Department of Management students at LSE were specifically chosen because the nature of the jobs they were searching for was similar to that of the financial company where I was going to conduct my quantitative data for the empirical study in Chapter 4 (Paper 3). Hence, the current study was initially designed as a preliminary study to identify potential dimensions of new employees' psychological contracts. A total of 42 students replied to the invitation sent. Three of them did not show up at the time and place agreed for the interview. Out of 39 participants, six final-year undergraduate students were removed from the study since they stated that they were either planning to take a gap year or applying for a master's degree once they graduated.

The interviews were semi-structured to gain an 'authentic' understanding of the graduating students' expectations related to their future employment (Silverman, 1993). Each student was interviewed for approximately 45 minutes. The structure of the interview was divided into three parts. In the first part, I aimed

to aid participants to open up about their previous job/internship experiences which may have shaped their current expectations about their potential employers. They may not have been consciously aware of the influence of their previous experiences on their current expectations. By asking about their fondest and worst memories, I tried to make them think consciously about what would make them feel satisfied and/or violated by reflecting upon their real-life experiences. I believe starting the discussion by asking about their past experiences as opposed to asking about their current expectations helped them to engage more in the discussion since they could relate to the topic personally. In the second part, I asked them to role-play by imagining they were the past employer. The aim was to make participants put themselves in their previous employer's shoes and think about what they would do differently to make their employees' experience better. Again, I wanted them to think about their previous experience but this time from their previous employer's perspective. I believe this question helped them to reconsider what they would look for when choosing an employer. Put simply, the overall aim of the first two parts was to make them think consciously about their current expectations and how they might reflect on these expectations when searching for jobs. I expected this to happen since they were presently excited about new job opportunities and evaluating their options. The final part, the core of this study, was longer than the first two parts. In this part I asked openly about their current expectations. I ended the interview by asking them to define their ideal employer. For the full interview protocol, please see Appendix 2.

All interviews were taped and transcribed in full, and the data were analysed inductively in a manner informed by Glaser and Strauss's (1967) concept of

grounded theory. Content analysis was used to identify themes that emerged from the data. The coding process that this entailed was informed by the factors linked to psychological contract content identified in earlier research. The data analysis was conducted entirely by me.

3.4.2. Analysis

I used NVivo 11.0 for Mac to enter the codes, facilitate the coding process, investigate the relationships between codes, perform text searches, examine the frequencies of codes, and write memos. Using a grounded theory approach (Glaser & Strauss, 1967; Strauss & Corbin, 1998) to analyse the interview data, I first conducted several rounds of open coding. The graduates' expectations regarding the opportunities for career development emerged from this process as a strong theme. Moreover, students talked about their expectations regarding being valued and able to work independently. They also expressed their expectations regarding working in a welcoming environment and having a responsible employer.

I continued coding to refine my understanding of each of these broad categories, conducting several rounds of axial coding to relate these categories one to another and selective coding to integrate emerging notions around the main concept of psychological contract content dimensions (Strauss & Corbin, 1998). To develop a deep understanding of the content dimensions of graduates' anticipatory psychological contracts, in several rounds of coding, I focused on the students' past experiences (either from their internships or part-time pocket money jobs) as a potential source of the current expectations and constraints that these past experiences may have imposed. Throughout the coding process, I continuously switched between analysing the data and studying the relevant literature to ground

the emerging concepts and identify potential contributions. For example, as I worked on categorizing the emerging themes of graduate expectations, I investigated existing studies on newcomer expectations and the psychological contract content of new employees (e.g. De Hauw & De Vos, 2010; De Vos, 2005; De Vos et al., 2003, 2005; De Vos et al., 2009; Robinson et al., 1994; Rousseau, 1990) and then returned to the data to see if these fit under existing content dimensions. In this way, I realized that there were dimensions which did not fit under existing categories. Additional coding helped me locate the emerging sub-themes under general themes and determine how some of these mapped onto previously identified content dimensions while some fell outside. In the end, from a rich array of quotes and comments, 10 sub-themes were identified. These fall into five broad main themes that emerged as content dimensions of graduating students' pre-entry expectations. The five main themes that emerged, which dominated the data collected, are as follows: (1) opportunities for career advancement, (2) autonomy, (3) recognition, (4) organizational support, and (5) fairness.

3.5. Results

In this section, I will explain the themes identified after the rounds of data analysis and coding. As mentioned above, 10 sub-themes emerged under five main themes, which, I argue, shape the content dimensions of millennial graduates' anticipatory psychological contracts before entering their first jobs. The summary of sub-themes and main themes is depicted in Table 3 along with sample participant quotes. The participants were given numbers along with their gender to secure participant confidentiality.

Table 3: Summary of Themes and Sub Themes Emerged from Data Analysis

Theme	Sub Theme	Explanation	Example Quotes
Opportunities for Career Advancement	Opportunities for training and development	Expectations regarding investment in training to help developing relative skills	‘I prefer that my employer is invested in my self-development as an employee of that company but then should also provide training so I can gain new skills that I could use moving forward’. (Male 2)
	Progression opportunities	Expectations regarding chances of the career progression in the company.	‘I would like an employer who is encouraging people to take a responsibility to develop their ideas and to use the abilities and skills of their employees to improve their products and services. And also, in return, I expect them to help me with my career progression in the company’. (Female 13)
Autonomy	Being autonomous in how they execute their job	Expectations regarding being able to be autonomous in how they do their jobs.	‘I look for a job where I do have some flexibility. And I expect to have influence myself over the job, how it is designed, or maybe that’s more like what I do every day and I do have some autonomy’. (Female 6)
	Being autonomous in taking responsibility	Expectations regarding being autonomous when, where, and how they would like to take responsibility	‘For me, the biggest thing I expect to have would be having enough responsibility and being able to decide which responsibility I would have and when I would have them’. (Male 17)

Table 3 (continued): Summary of Themes and Sub Themes Emerged from Data Analysis

Theme	Sub Theme	Explanation	Example Quotes
Recognition	Acknowledgment of good work	Expectations regarding your good work being verbally acknowledged by future employer	‘I believe not being appreciated for my good performance would lower my motivation toward that job and maybe eventually would make me think of leaving. I would be useless if I do not get gratification intrinsically. I mean, both mental and as far as the psychological aspect is concerned, if you do not hear a good word or do not get anything after having worked a long time on something’ (Male 15)
	Feeling valued and respected	Expectations regarding being respected and valued by future employer	‘I expect my boss to interact with me. I do not want it to be just like, “you have to do this, and I do not care how you do it’. I expect him to get involved in what I am doing and appreciate if I am doing something good and say it out loud, so I would understand he really values me and tries to improve my performance. That would make me feel very motivated and committed’. (Male 18)

Table 3 (continued): Summary of Themes and Sub Themes Emerged from Data Analysis

Theme	Sub Theme	Explanation	Example Quotes
Organizational Support	Establishing a work environment with relational civility	Expectations regarding working in a friendly and supportive environment	‘I could sacrifice from starting with a high salary for the very good and friendly work environment in which people are happy to help each other’. (Female 10)
	Taking care of employees	Expectations regarding having an employer who cares about the wellbeing of his/her employees	‘I believe caring employer is a responsible employer. I do not mean responsible in the sense of CSR and all that stuff, but being responsible in the sense that you actually care about your employees. An employer like that would be my ideal employer’. (Male 18)
Fairness	Equal opportunities/Diversity	Expectations regarding having an employer who provides equal opportunities to all the employees	‘It should be clean. They should be giving equal opportunities to everybody. They should judge your work...they should judge you by your work, not by your background, or your family, or your contacts. It should be clean – the method of recruiting should be clean. This is a basic thing that everybody has to make’. (Male 6)
	Good ethics/Socially responsible employer	Expectations regarding having an employer who has good ethics and values justice	‘My employer should be a good guy. He should respect all citizens and all members of his firm. They should have good ethics and should be fair to people and society’. (Male 11)

3.5.1. Main theme 1: Opportunities for career advancement

Opportunities for career advancement emerged as the strongest theme from the data analysis. The theme emerged as the main expectation of the graduating students in 26 of the 32 interviews. Under the main theme of opportunities for career advancement, two sub-themes were identified. Participants talked about their expectations regarding (1) opportunities for training and development and (2) career progression. Participants also highlighted that lack of career advancement opportunities would be a reason to leave their potential employers, which implies that failure to meet this pre-entry expectation can result in perceptions of psychological contract breach earlier in employment relationships:

‘It is extremely likely that I would want to leave them if I get very routine tasks and I would feel that I am absolutely not learning from them and that I do not really have a chance of progression’. (Male 16)

Sub-theme 1: Opportunities for training and development

One of the strongest sub-themes of career advancement opportunities from the data is related to training and development. The final-year undergraduate and master’s students expect their employers to invest in training to help them develop relative skills to effectively execute their job and improve their overall skill set for future opportunities:

‘I prefer that my employer is invested in my self-development as an employee of that company but then should also provide training so I can gain new skills that I could use moving forward’. (Male 2)

Some students, especially final-year undergraduates, expect their first job to be a form of second school where they can continue learning through adequate training and move forward to their next goal:

‘My parents want me to go for a master’s in abroad, most probably in the United States, after I finish my degree. Opposite to their desire I want to start working after completing my degree because I believe I will learn more if I find the right job, or at least I expect so. Therefore, it is crucial for me that I find a job where they are willing to teach me and provide training so that I have the skills to move forward when it is time. I do not think a master’s can give me this but real work life in the right company can’. (Female 7)

‘I am not looking for an employer. I am looking for a place where I can learn, get the important training that I need for reaching my career goals and progress’.
(Male 3)

Some of the students also expressed that they expect to have a work environment in which learning and development are regarded as part of the job. Some of the participants who have this as part of their anticipatory psychological contracts expressed their expectations from an utter learning perspective, whereas others expressed it from a relatively more career-oriented development perspective.

Learning perspective:

‘The learning aspect is something that has just been very, very important my entire life and I think my employer should continue it as well’. (Female 4)

‘I have a desire to learn new things and make things better using the new knowledge. And yes... I have as well the desire to improve myself’. (Male 16)

‘I expect opportunities to grow. I expect opportunities to learn’. (Female 14)

Development perspective:

‘Before I apply to a job I make sure that there is an opportunity to have continuous development there’. (Male 11)

‘My employer would – this sums it up – would have expectation for me and would make sure that I would be able to develop throughout my work there’.
(Male 4)

‘I would like to work for someone that challenges and enables me to learn and advance’. (Female 5)

There are also students who see their future employers as their mentors. Hence, they explain their desire to learn and grow through the desire to have a mentor with certain characteristics; they expect to have mentors whom they can learn from:

‘He or she should be a farsighted person, decisive, a mentor. A person, a mentor who has something to teach, and I will be ready to learn from him or her’. (Male 7)

‘I prefer to work for somebody who has the ability to learn and to develop himself first. I would like to work for someone who can be my mentor and teach me good’. (Female 8)

‘My employers should be someone who encourages learning and going one step ahead all the time. Because I would like to develop myself more and I do not want to sit still’. (Female 1)

These quotes show us that millennials present a challenge to their managers and supervisors, since they continuously demand learning and improvement to be ready when it is time to move on to new, exciting opportunities elsewhere. They always look for the best way to do the job and think that it is their employers’ responsibility to provide them with factual training to make it happen (Martin, 2005). On the other hand, some millennials are more ambitious regarding their new job, would like to climb steps faster in their first job, and expect fast progression opportunities from their first employers, as explained in detail below.

Sub-theme 2: Progression opportunities

The second sub-theme of career advancement opportunities is related to progression opportunities. Final-year undergraduate and master's students expressed that the chances of career progression in a company are important for them. Participants explained that they look for jobs where they expect to progress to higher levels in time (they mostly expressed this as becoming a 'manager'). Therefore, during their job search and prior to entering an organization, they expect to find a job with progression opportunities. For example, the following participant articulated that the failure to fulfil this expectation might cause him to quit his job:

‘And the moment that I would pick up and say, “I’ve got to go” is when I hit that realization that there’s absolutely no way I will make any more progress in this. Or I cannot see myself doing this later on’. (Male 18).

Another participant shared her expectations regarding finding an encouraging employer who would support the progression of employees in return for efficient use of skills:

‘I would like an employer who is encouraging people to take a responsibility to develop their ideas and to use the abilities and skills of their employees to improve their products and services. And also, in return, I expect them to help me with my career progression in the company’. (Female 13)

Others see progression as the opportunity to become a manager themselves one day and relate this to learning something from their current managers:

‘I would like to work for someone that I am glad to work and at the same time I have to learn something from him, so that I can become a boss one day’. (Male 17)

‘I expect opportunities to grow. I expect opportunities to learn. And hopefully become a manager in the near future. So it is important for me to find a job where it is possible’. (Female 14)

In conclusion, the finding that millennials have expectations regarding career advancement opportunities is not surprising since it has been discovered that a shortfall in providing career management help is a major cause of dissatisfaction among new employees who join companies’ graduate programs (Sturges & Guest, 2001). De Hauw and De Vos (2010) emphasized that millennials have high expectations regarding their career advancement. Wong et al. (2008) stressed that since millennials are more ambitious than earlier generations, career development is a main motivational drive for millennials. In line with the findings of the current study, Sturges et al. (2002) and Loughlin and Barling (2001) also found that millennials value mentoring and training opportunities in organizations since such opportunities will support them to continuously gain new skills, increasing their future employability.

From a psychological contract perspective, ‘career development and training’ are two of the seven employer obligations in the psychological contract scale developed by Rousseau (1990). In the psychological contract literature, this scale has been widely studied as a measurement of psychological contracts (e.g. Chen, 2010; Coyle-Shapiro & Kessler, 2000; McDonald & Makin, 2000; Robinson, 1996; Robinson et al., 1994; Robinson & Morrison, 1995). Therefore, the theme of career advancement opportunities is grounded in the existing body of literature, and the findings of the current study on this theme are consistent with those of earlier studies.

However, in the data, the distinction between graduates who expect opportunities for training and development for the pure purpose of learning and improving themselves for the next job and for the purpose of progressing in their career within the firm is very clear. The majority of the participants fall into the first category (first sub-theme), while few fall into the second (second sub-theme). Yet, literature on millennials suggests that the understanding of time is quite different for millennials than for previous generations, which also affects how millennials perceive their career advancement in regards to time. Martin (2005) suggests that one year is long term for millennials, and three years is a mirage. They are not lured by promises of climbing up ladders over decades or savings for retirement. They want to know what they can learn today and what value they can add today, both to themselves and others. In addition, they wonder what rewards they will get today (Martin, 2005).

The current study shows that a majority of participants expect opportunities to learn because they are simply interested in learning. These millennials are also interested in changing jobs in a few years and expect their first employer to invest in them through relevant training and development. Others who want to climb up the ladders and look for progression opportunities within their first job expect this to happen a lot faster than previous generations would have (Martin, 2005). Therefore, organizations should be aware of this and customize their training, career paths, and work incentives accordingly to attract and retain the best talent amongst millennials.

3.5.2. Main theme 2: Autonomy

The second strongest emerging theme from the data was expectations regarding autonomy. Job autonomy is defined as the ability to decide where, when, and how the job is to be done (Clark, 2001; Thompson & Prottas, 2006). Earlier research has shown that job autonomy is influential on employee well-being (Thompson & Prottas, 2006). Research to date has also suggested that employees who have control over how they execute their job are generally more satisfied with their work (Clark, 2001), experience less stress (Parasuraman & Alutto, 1984), and have less family-to-work conflict (Parasuraman & Alutto, 1984; Thompson & Prottas, 2006), which together contribute to employee well-being.

It is surprising that autonomy emerged as the second strongest theme after career advancement opportunities, since autonomy has not been studied neither as a content dimension of pre-entry expectations nor of anticipatory psychological contracts. As discussed above, the issue regarding the expectations gap in a newcomer context – a discrepancy between what a potential employee experiences on the job and what s/he expected to experience (Porter & Steers, 1973) – has become more relevant with the changing trends in new generations' attitudes toward work life (Sturges & Guest, 2001). Nowadays, the traditional, hierarchical, and lifelong career promises of being in a single company are not relevant for the current millennial workforce. Therefore, it has been argued that new deal job offers should replace the conventional offers to attract the attention of the best talent among millennials (e.g. Herriot, 1995; Rousseau, 1995).

With the emergence of autonomy as the second strongest theme, it is evident that the 'new deal' is not only related to changing the career perspective from

traditional to contemporary (e.g. Rousseau, 1995) but also to how the job is done. This assertion is supported by Cennamo and Gardner's (2008) findings suggesting that millennials attach more importance to freedom-related work values, including autonomy. The analysis of the interview data shows that millennials who are currently in the job market expect to be autonomous in how they execute their job. They would like to take responsibilities and be flexible in how they do their jobs.

Autonomy is not grounded in the current literature as a content dimension of anticipatory psychological contracts. Hence, it is one of the strongest contributions of Paper 2. Autonomy appeared in 21 interviews out of 32. Two sub-themes were identified under the main theme of autonomy. Participants talked about their expectations regarding (1) being autonomous in how they execute their jobs and (2) being autonomous when taking responsibility.

Sub-theme 1: Being autonomous in how they execute their jobs

The first sub-theme related to autonomy is participants' expectations regarding being autonomous in how they execute their jobs. Please note that some of the participants used the terms flexibility and autonomy interchangeably but what they explained was generally related to being autonomous:

'I look for a job where I do have some flexibility. And I expect to have influence myself over the job, how it is designed, or maybe that's more like what I do every day and I do have some autonomy'. (Female 6)

'I expect him/her to give me the flexibility and opportunity of autonomy, which I'm seeking, and I expect him/her to help me in my professional development as well'. (Male 3)

'I want to be autonomous, so I want to be flexible'. (Male 5)

Other participants conceptualized autonomy as having freedom in various things, including how they execute the job, or as having more influence or more say on things:

‘Of course, there would be some tasks in whatever job I would be given, but I prefer to arrange them myself or to schedule them, and I also expect to have freedom in terms of hours’. (Female 12)

‘If I was in charge and that I could make one change that would actually change my whole job experience with them and make it better, in both cases, I would give more say, more freedom to the employees’. (Male 9)

‘The worst-case scenario that I can think of with my future job is that they will restrict me and dictate me, and I do not have any autonomy or freedom to change things’. (Male 11)

Some participants expressed that having flexibility is the most important thing for them and that an employer’s failure to satisfy this expectation may cause them to leave the job:

‘I really, really hate when they tell me what and how to do exactly, so I feel that I do not have any flexibility and freedom over the tasks that I do. So, if I cannot decide how I am going to do it step by step and I cannot control my work...hmm, that would be a very bad experience, and I would most probably consider my opportunities elsewhere’. (Female 10)

‘I am looking for someone that I can respect and work for and who is going to give me the same respect. I want to be respected enough to be given the autonomy because I am not the kind of person that you need to check what I am doing on all day because maybe I was not working or I do not do things properly. I am very hardworking. So, you just need to explain to me what I have to do and don’t have to worry about me not working or if I am doing things properly. Therefore, one thing I would, I like to have is autonomy and respect, so that I can be flexible in my job and my employer would know that I will finish the job on time up to the high standards. If you don’t respect me and give me this flexibility, I am sorry – I do not really want to work for you’. (Male 5)

Recent studies on millennials (e.g. Karakas et al., 2015; Martin, 2005; Myers & Sadaghiani, 2010; Shaw & Fairhurst, 2008) suggest that millennials seek more flexibility compared to earlier generations. With today's fast-moving world and easy access to different resources online, millennials have developed the skill of quick adaptation to new places, people, and circumstances (Martin, 2005). As Martin (2005) emphasizes, millennials do not expect change; they demand it, so that they can work at places where they can move from position to position, department to department, and location to location. Millennials expect to have a say in their job and demand to be flexible in how they do it.

‘...I expect to have influence myself over the job, how it's designed...’ (Female 6)

Sub-theme 2: Being autonomous in taking responsibility

The second sub-theme related to autonomy is participants' expectations regarding being autonomous in determining which responsibility they will take, when, and where. Some participants expressed that it is important that their future employer give them autonomy in choosing their responsibilities. This sub-theme is different from the first sub-theme, since the millennials who discussed this sub-theme specifically mentioned that they expected to be autonomous in choosing which responsibilities they will take and when they will take them, and not only in how they will execute these responsibilities:

‘For me, the biggest thing I expect to have would be having enough responsibility and being able to decide which responsibility I would have and when I would have them’. (Male 17)

‘I would like to be flexible when it comes to choosing my job duties. For example, I would not like it if they change my duties without asking me or if I

will not have any freedom to influence what type of responsibilities I will have'.
(Female 13)

'I would like to find a job which is project based...to me, the most important thing in that job would be being able to have some influence on choosing which projects I am taking and whom I am going to be working with in the next project. Without this flexibility and autonomy, I guess I would be very sad doing the job'.
(Female 4)

The participants also expressed that if their employer failed to satisfy their expectations regarding being autonomous in choosing their responsibilities, this may cause them to quit their jobs:

'I think the moment that I would think of quitting my job is when they somehow force me to take some responsibilities without asking my opinion or without giving me the flexibility to choose, or if I am forced to be in one position which does not correspond to what I like to do'. (Female 13)

'I think that's one of the things that I really judge the quality of my employment by: if I would be having to do routine tasks and I have no say whatsoever on this situation. If they do not give me the flexibility to choose my tasks and responsibilities, I do not think I will stay with them for a long time and, exclusively, I would probably be very disappointed'. (Male 11)

'So, the ideal job would be where I could somehow set up a way to allow myself to not only do what I am given to do but to use, I guess, an individual set of skills as well. Then, if I could somehow bring the individualization into it – I mean, if I could have the flexibility in choosing my tasks – I'd be very happy. Otherwise, I do not think I will be happy working there; I do not like being regulated. And as soon as I find something, I would move to the next opportunity where I believe it is possible to have more flexibility in choosing my tasks'. (Female 7)

As evident in most of the quotes above, millennials would like to take more responsibilities above and beyond their tasks. Research on millennials has shown that they do not see extra responsibility as a burden but as a grounds for showing their skills and talents. Hence, not only do millennials not only expect extra

responsibility; they demand it (Martin, 2005). Therefore, it is crucial to understand this need of millennials in the workplace and use it as a motivator to keep the job more interesting for them. Martin (2005) recommends that managers use extra responsibilities as rewards for millennials' accomplishments.

To conclude, it is important for psychological contract, socialization, and human resources scholars to understand the expectations of the new generation regarding increased autonomy, flexibility, and responsibility and integrate these into their research. This dimension has hitherto been overlooked in the psychological contract literature. I believe the psychological contract literature will benefit from including the expectations of autonomy and flexibility in psychological contract research, especially from the perspectives of preventing early psychological contract breach. From a practical perspective, it is crucial for organizations to respond to these expectations. If autonomy to influence their tasks and responsibilities is not given to millennials in their current organizations, they will go find it elsewhere (Glass, 2007; Martin, 2005; Shaw & Fairhurst, 2008)

3.5.3. Main theme 3: Recognition

The third emerging theme from the data was related to the participants' expectations regarding recognition. Recognition is often associated with high pay, performance-based pay, or monetary reward in studies concerning the psychological contract. For example, high pay and performance-based pay are two of seven employer obligations in the scale developed by Rousseau (1990). Psychological contract scholars have widely utilized this scale in their studies (e.g. Chen, 2010; Coyle-Shapiro & Kessler, 2000; McDonald & Makin, 2000; Robinson, 1996; Robinson et al., 1994; Robinson & Morrison, 1995).

Although a majority of psychological contract studies do not include intangible aspects of recognition such as verbal recognition by the organizational agents regarding how good of a job the employees are doing or how valued they are, there is evidence that employees expect to be recognized in that way as well (Herriot et al., 1997; Sturges & Guest, 2001). For example, in their qualitative study of graduates who joined companies' graduate programs, Sturges and Guest (2001) found that level of pay did not influence graduates' loyalty to the firm or intention to stay. On the contrary, scholars emphasized that graduates extremely value the verbal recognition they receive from their employer regarding their achievements and performance. In addition, feelings of being respected and valued by the employer were the most important contributors to the graduates' future commitment (Sturges & Guest, 2001). This findings are also supported by Rawlins et al. (2008), who found that millennial employees do not focus on moneymaking as much as the earlier generations but instead value meaningful work where they can find personal satisfaction.

In the current study, the emerging theme of recognition is also mainly related to its intangible aspects. The graduating millennial students expressed their expectations regarding: (1) acknowledgment of good work and (2) feeling valued and respected. The theme of recognition appeared in 18 interviews out of 32.

Sub-theme 1: Acknowledgment of good work

The first sub-theme is related to the participants' expectations regarding feeling valued and respected by their potential employers. They highlighted that they expect to receive acknowledgment from their employer, which can be

expressed in more personal terms, in return for their hard work and effort. Some of the participants articulated that they thought it would be a poor experience if they were not appreciated for their hard work:

‘If I am not getting enough recognition or credit for what I do, that will be a really bad experience. Or maybe just my hard work is not being recognised and I feel it is going to waste. Probably if I am working hard, doing my best, but if the people on top of me do not care about the feelings of employees but they are doing everything in their own interests, then I will feel bad, I will feel heartbroken’. (Male 13)

‘I am thinking about what I said before about the experience I did not like. The thing I did not like was doing a large workload not receiving any credit. I would love a job where you take the merit’. (Male 18)

‘These days, I talk to lots of people who are a year or two senior to me that I know from student clubs here at LSE – I mean, people who recently started working. A lot of people complain about not getting enough credit for the good things they do in their new job. If my boss will not appreciate my hard work, I will feel really, really unhappy and unsatisfied’. (Female 8)

‘I think getting into the project where people don’t acknowledge me for what I know or what I do, and they think less of me because I just started so that I cannot be useful: I think that would be the main point for me to kind of think over things’. (Male 9)

Some of the participants valued acknowledgement of good work to such an extreme that failure to fulfil this expectation would make them leave their employer:

‘What would make me leave? I think if my results will not be appreciated or if I could not really get along with my manager, and we could not communicate, and I would not know what to do to improve my performance. I believe hard work and honest efforts should always be appreciated. I would not want to work with people who cannot do that’. (Female 12)

‘I would consider leaving if it gives me the feeling that I am not really recognised for what I do, and if I do something well, it does not really have an impact. So, it would not be a very satisfying experience for me’. (Female 3)

‘I believe not being appreciated for my good performance would lower my motivation toward that job and maybe eventually would make me think of leaving. I would be useless if I do not get gratification intrinsically. I mean, both mental and as far as the psychological aspect is concerned, if you do not hear a good word or do not get anything after having worked a long time on something’ (Male 15)

Sub-theme 2: Feeling valued and respected

The second sub-theme is related to the participants’ expectations regarding feelings of being valued and respected by their future employers. Participants expressed that they expected their future employer and coworkers to show respect to them by listening to their opinions and valuing their input on work-related issues:

‘I will provide them with my best: my best possible work, my honest work, my honest opinions. Whether or not they choose to accept it or value it is their own decision. So, if they will not value what I say, I am obviously going to be sad. And then, it allows me to say, “Okay, I obviously I am not worthy of your time to be an employee here”; then, “Okay, I will go work elsewhere where I will be more valued, where I feel more valued, and where the other person or company will obviously benefit from my opinions and value my opinions’. (Male 17)

‘So, when you come in to a job and try to apply these new things because you care and because it will be better for the company this way and then you hear, “these are new”, “no, we do it this way”, “this is how we do it here, and you better accept that”, that would make me feel as if I am not respected. So they do not listen to me, they do not try to understand, which means they do not value my opinion, and this would make me really angry’. (Female 14)

For some of the participants, feeling valued and respected were very important to such an extreme that failing to fulfil this expectation would make them leave their employer:

‘If they mistreat me, if they treat me with no respect, I will be very disappointed. Alright. One thing that would make me want to leave is, let’s say I am trying to improve something, and instead of recognizing my efforts, they put me down and say, ‘No. That is not your job. You just are to do yours. End of the story. You just be quiet’. Like, that kind of restricting and disrespectful attitude would really make me want to leave without looking back’. (Female 5)

Some participants conceptualized receiving informal and constructive feedback as a signal of being valued and respected by their employer:

‘I expect my boss to interact with me. I do not want it to be just like, “you have to do this, and I do not care how you do it’. I expect him to get involved in what I am doing and appreciate if I am doing something good and say it out loud, so I would understand he really values me and tries to improve my performance. That would make me feel very motivated and committed’. (Male 18)

While there is broad agreement on what constitutes as millennial characteristics, there also seem to be some inconsistencies between them (Martin, 2005). The pre-entry expectations regarding verbal recognition can also be seen as one of these inconsistencies. Scholars have emphasized that despite being independent, millennials are also emotionally needy and, consequently, constantly seeking approval and praise (Crumpacker & Crumpacker, 2007). They have a desire for clear directions and managerial support in what to do and, at the same time, ‘a demand for freedom and flexibility to get the task done in their own way, at their own pace’ (Martin, 2005, p. 40). Although millennials are capable of multitasking and have a can-do attitude, they expect to be empowered by their managers (Shaw

& Fairhurst, 2008). Therefore, it is crucial for organizations to understand that millennials need to be acknowledged by their first degree managers/supervisors to be happy at work. From the organization's perspective, it is crucial to prevent early negative feelings of unmet expectations.

From a psychological contract perspective, the current study shows the importance of redesigning the measures that are used in psychological contract studies, especially for studies where subjects are younger. The majority of the measures concentrate on tangible recognition, while the current study shows that the new generation values intangible/verbal recognition over tangible recognition such as high pay.

3.5.4. Main theme 4: Organizational support

The fourth emerging theme from the data is related to the participants' expectations regarding organizational support. In the literature, support has been previously studied as a content dimension of employees' psychological contracts (e.g. Herriot et al., 1997; Rousseau, 1990). However, organizational support is a very broad concept and has been studied from many different perspectives. For example, while Rousseau (1990) used the term "support for personal problems" as a dimension of employer obligations (p. 394), Herriot et al. (1997) preferred to study the concept under many related subcategories (needs, consult, humanity, and benefits), derived from interview data concerning the content of psychological contract.

In the current study, I categorize two sub-themes under one main theme of organizational support: (1) establishing a work environment with relational civility,

and (2) taking care of employees. The organizational support theme emerged in 13 out of 32 interviews.

Sub-theme 1: Establishing a work environment with relational civility

The first sub-theme is related to participants' expectations of working in a supportive work environment in which people treat each other with civility. Some participants expressed that working in such a work environment is the most important criteria for them:

'The most important thing for me is that we have a warm environment. We may have several different types of people from different backgrounds, qualifications. What should matter is not where you come from but what you actually do, what you can show on paper and your performance. I do not want to work at a place where people are hostile and talk behind each other's backs'. (Female 1)

'I could sacrifice from starting with a high salary for the very good and friendly work environment in which people are happy to help each other'. (Female 10)

'I would like to work with people that I get along with. All the obviously good qualities in a person, like driven and capable, I think would be the two main things that I would want in my colleagues, but also someone that I could get along with. Otherwise, I believe I would not find the energy to get up every morning to go to work where there are bunch of people I do not like'. (Male 3)

Some of the participants expressed that an uncivil work environment with a lot of cynicism would be a reason for them to quit:

'I think if there is a lot of cynicism inside the company, it will not be possible for me to work with them. I would most probably start looking for another job and move forward as soon as I find something that I believe is more human'. (Male 1)

'Because I am going to find myself in the company, the company needs to find herself in the people. I believe this is only possible by creating a people-oriented, friendly and supportive environment where everybody talk to each other and help

each other. I would not work for a company where people are unfriendly and only care for money'. (Female 13)

Sub-theme 2: Taking care of employees

The second sub-theme is related to participants' expectations regarding having an employer who takes care of their employees. Some participants expressed that failure of this expectation would lower their commitment toward the company:

'I think if I were an employer I would try and kind of show that it is like being a family, that we are taking care of our employees and we expect them to therefore be dedicated. This is at least what would make me, as an employee, committed to an employer: feeling that I am being taken care of'. (Female 14)

'I do not really think that having high turnover rates in a company is good. In fact, I am really much against that. Saying that they should try to keep their employees as long as they can, and that means constantly taking care of them and motivating them, so they will be committed to the company'. (Male 12)

'I think you want to be in a company where they take care of you. That is the only way that you feel committed to them. I see, like, how my partner is struggling and how he is willing to settle for a much less salary just because the working conditions are much better and because the company cares more about him. I understand him, and I would do exactly the same'.

Some participants expressed that a caring employer would be their ideal employer:

'If I describe my ideal employer in a single sentence I would say somebody who is caring and respectful. That is what I would say for sure'. (Male 16)

'I believe caring employer is a responsible employer. I do not mean responsible in the sense of CSR and all that stuff, but being responsible in the sense that you actually care about your employees. An employer like that would be my ideal employer'. (Male 18)

Some participants expressed that companies should provide some benefits to their employees as a sign to show that they care about them and their wellbeing:

‘If I was an employer I would try to arrange these small deals like getting a company phone or maybe a gym membership or discounts because these are things that would make their lives much easier. I think a caring employer should be able to think about these little but important things and show employees that they care about them’. (Male 15)

The findings of Paper 2 regarding millennials’ expectations of organizational support confirm the findings of earlier studies on the characteristics of millennials. For example, Cennamo and Gardner (2008) found that millennials have high expectations regarding their social relations at work and prefer employers that value social involvement. Similarly, Wong et al. (2008) emphasized that millennials score higher on the affiliative trait compared to any other generational cohort and that millennials are strongly motivated by a helpful and supportive workplace.

Moreover, Martin (2005) suggested that once organizations recruited millennials, the key to retaining them is by building strong relationships between millennials and their immediate managers. In addition to the expectations regarding verbal recognition from their managers, millennials also need to form strong social relationships. It is important to make millennials feel valued in the company since they are high achievers and used to being shown value by their parents. Glass (2007) emphasized that millennials are the most wanted generation because they were conceived at a time when birth control and abortions were widely available and their families still chose to have them. Millennials usually have fewer siblings compared to earlier generations, and their parents were more dedicated to raising

them. This dedication manifests itself in millennials' expectations regarding being taken care of and valued by their employer, as a result of the over-caring parenting style they received (Shaw & Fairhurst, 2008).

From a psychological contract perspective, it is very important to consider the organizational support that millennials expect from their employer, even from the initial stages of employment. In the past, employees were expecting to be taken care after years of work in the same company in return of their long-term commitment. However, nowadays, the findings of this study suggest that millennials expect it even before they join the organization. Therefore, organizations should be careful how they treat millennial newcomers from day one of the employment relationship and should show that they are valued in the organization.

3.5.5. Main theme 5: Fairness

The final emerging theme from the data is related to the participants' expectations regarding fairness. In the literature, fairness has been widely studied as a predictor of organizational outcomes such as counterproductive work behavior, organizational citizenship behavior and job performance (Ambrose & Cropanzano, 2003; Colquitt, Scott, Judge, & Shaw, 2006; Cropanzano, Byrne, Bobocel, & Rupp, 2001). Psychological contract researchers have studied fairness in relation to psychological contract violations. There is evidence that organizational justice influences the employee perceptions of contract violation. For example, Shore and Tetrick (1994) proposed that perceptions of violations involve the assessment of fairness by the employee. Employees may perceive unfulfilled promises in relation with distributive injustice, that is, unfair distributions of outcomes (e.g., promotions

and merit pay). On the other hand, a tenured employee who is expecting a promotion may perceive the promotion of a junior employee as procedural injustice (Shore & Tetrick, 1994).

Although a majority of the psychological contract studies do not include fairness as a content dimension, there are a few exceptions. For example, in their qualitative study, Herriot et al. (1997) studied justice as one of the 12 categories of psychological contract content. It is rational to assume that employees would have expectations regarding fair treatment by their employer if they perceive it as unfair once these expectations are not fulfilled.

In the current study, participants' expectations regarding fairness emerged as the final theme. Eleven out of 32 participants expressed that they have expectations of (1) equal opportunities/diversity and (2) good ethics/socially responsible employer.

Sub-theme 1: Equal opportunities/Diversity

The first sub-theme is related to participants' expectations regarding having equal opportunities and diversity at the workplace:

'It should be clean. They should be giving equal opportunities to everybody. They should judge your work...they should judge you by your work, not by your background, or your family, or your contacts. It should be clean – the method of recruiting should be clean. This is a basic thing that everybody has to make'.
(Male 6)

'I expect my employer to make sure that everybody is getting equal opportunities. People from all languages, all castes, and all religions are given an opportunity to participate'. (Male 2)

‘In my firm, I would expect the equal representation in terms of caste and gender and age’. (Female 11)

Some of the participants expressed that unequal treatment and discrimination in the workplace would be a reason for them to quit:

‘It should be fair. It should not be like there is some preferential treatment given to some of their employees. I would not work for someone who does that’. (Female 4)

‘Probably if I am not considered to be equal, if I am discriminated, if I am not given an equal opportunity, I would leave that employer’. (Male 13)

Sub-theme 2: Good ethics/Socially responsible employer

The second sub-theme is related to participants’ expectations regarding working for an employer who has good ethics and is socially responsible:

‘My employer should be a good guy. He should respect all citizens and all members of his firm. They should have good ethics and should be fair to people and society’. (Male 11)

‘To me, it is a big a plus point if they have good ethics in and out of the office and if they get a good interaction with the society. I also believe in transparency. For example, if they are firing someone, I want to know the reason behind it. I think it is only possible if you have justice’. (Female 14)

Some of the participants expressed that if the employer did not have good ethics, it would be a reason for them to leave:

‘If I feel treated unfairly, if it is unjust, if I do not agree with the methods they are using, if there is no equality and there is discrimination, in short, if they have bad ethics, I would most probably leave that employer, because I value having good ethics in my life, and I cannot just turn my back to what is happening’. (Male 5)

The studies on millennials emphasize that the youngest workers are placing heavy significance on corporate philanthropy, ethics, and social awareness (Glass, 2007). According to the 2006 Cone Millennial Cause Study, 61 percent of millennials (Cone's survey includes those born between 1979 and 2001) see themselves as accountable for making a difference in the world (Cone, 2006). Also, 78 percent of the millennials reported that they think their employers should be responsible for providing them opportunities to make this happen. Of the same group, 74 percent expressed that they will support a company and its services and products if it is known for being ethical. Moreover, 50 percent of these individuals also reported that they would turn a job offer down if the company was known for being irresponsible/unethical to the society and its employees (Cone, 2006; Glass, 2007).

These results clearly show that the new generation of employees places a dramatic importance on fairness and ethics, to the extreme that they are willing to refuse working for companies that they perceive as unfair and/or unethical. Therefore, this study provides evidence supporting that organizational fairness/ethics is a strong part of millennials' pre-entry expectations contributing to their anticipatory psychological contracts. Up until today, fairness has been studied as a factor influencing employees' perceptions in evaluating a psychological contract breach (e.g. Shore & Tetrick, 1994). However, with the entrance of millennials into the workforce, the emphasis on fairness and ethics has gained more importance (Glass, 2007). Therefore, the findings of this study suggest that organizational fairness/ethics should be included in psychological contract studies

as content dimensions since the new generation of employees perceive these as employer obligations.

3.6. Discussion

Today's millennial workforce perceives challenging and meaningful assignments to be far more important for their self-development than lifelong employment (Dries et al., 2008; Glass, 2007). Millennials constantly seek opportunities to learn and grow professionally (Eisner, 2005). They are characterized by desiring not only a portable career but also greater degrees of personal flexibility, satisfaction, and immediacy (Glass, 2007). They want to keep learning and see continuous learning, like change, as a way of life (Sayers, 2007). They also value institutionalized learning (Glass, 2007). Today's millennial graduates come from the generation that perceives education as "cool" (Martin, 2005). Such characteristics of millennials reinforce perceptions among older generations of workers that the new generation is high maintenance and needy (Martin, 2005). Nevertheless, as a result of the positive reinforcement and self-esteem building that they received from their parents, it is asserted that they may need help in accepting criticism and managing conflict (Glass, 2007; Shih & Allen, 2007). Stemming from their sense of immediacy and hunger to learn and improve, they also seek guidance and immediate feedback from their managers/supervisors (Martin, 2005).

Although these characteristics of millennials have recently been researched in different literatures such as management learning, person-organization fit, work values, personality, and motivation (e.g. Bennett et al., 2012; Cennamo & Gardner,

2008; Dries et al., 2008; Glass, 2007; Karakas et al., 2015; Martin, 2005; Shaw & Fairhurst, 2008; Shih & Allen, 2007; Wong et al., 2008), the psychological contract literature has been generally silent on it (De Hauw & De Vos, 2010). The measures of psychological contract were developed for older generations and might overlook what the new generations value most and develop their psychological contracts around. The aim of the current qualitative study is to identify the pre-entry expectations of millennials who are currently in the job market. This has vital importance for the psychological contract literature since the content of pre-entry expectations has the potential to contribute to formation of anticipatory psychological contracts at the pre-entry stage, in which interactions, therefore perceived promises are scarce (Montes and Zweig, 2009).

Five main themes of pre-entry expectations have emerged from this inductive qualitative study: (1) opportunities for career advancement, (2) autonomy, (3) recognition, (4) organizational support, and (5) fairness. Among these dimensions, opportunities for career advancement are the most expected and grounded in the literature. Therefore, the findings confirm earlier studies regarding the importance of career advancement in organizations such as training, learning and development, and progression opportunities (e.g. Rousseau, 1990; Rousseau, 1995; Sturges & Guest, 2001; Sturges et al., 2002).

On the other hand, the second strongest theme, autonomy, is the most unexpected theme that emerged from the interview data. Autonomy has not been widely integrated in psychological contract studies as a content dimension. However, the results of this study provide evidence that graduating millennials expect to be autonomous in their future jobs. They consider autonomy as an

important obligation that their potential employers owe to them. They value freedom in executing, as well as choosing, their responsibilities early in their careers.

A possible explanation of autonomy emerging as a pre-entry expectation can also be related to the recent debates regarding the importance of ‘new deal’ jobs. It suggests a more contemporary and dynamic approach to careers in which employees are more autonomous and individualistic; therefore, hierarchical and lifelong career promises are no longer attractive (e.g. Herriot, 1995; Rousseau, 1995). It is also related to Porter and Steers’ (1973) concept of ‘expectations gap’, in which there is a discrepancy between what is expected to be experienced and what is actually experienced on the job. If the expectations gap occurs between pre-entry expectations and post-entry experiences, it is most likely that the effective management of psychological contracts will not be possible, which leads to feelings of violation and negative employee outcomes (Rousseau, 1990; Rousseau, 1995). It is therefore important for organizations to understand what millennial employees expect and how these expectations may impact the development of healthy employment relationships. Hence, the current study contributes to the literature by identifying that new generations of employees expect to be autonomous in their first jobs, and the failure to satisfy these expectations may lead to negative employee outcomes, such as intentions to leave early in the employment relationship due to the perceptions of psychological contract breach.

The third strongest theme, recognition, has been previously studied as a psychological contract dimension (e.g. Herriot et al., 1997; Rousseau, 1990). A majority of the studies that included recognition as a content dimension focused on

the tangible aspects of it, such as high pay and promotion. However, there is also evidence that it is important for employees to be acknowledged in less tangible and more personal ways, such as expressions of appreciation of the good efforts by the employer or work colleagues (Sturges & Guest, 2001). In the current study, the intangible aspects of recognition emerged as the third strongest theme. It is evident in participants' expressions that they expect to be acknowledged for their good work and efforts by their employer through some sort of human interaction. Therefore, the current study contributes to the literature by expanding the findings of Sturges and Guest (2001), that graduating millennials value intangible recognition more than tangible recognition. Therefore, the results of this study suggest that the intangible dimension of recognition should also be included in the psychological contract studies as a content dimension, especially where the millennials are the subjects of the study.

The fourth theme, organizational support, emerged in two sub-themes: establishing a work environment with relational civility and taking care of employees. Although different terminologies were used in the literature, organizational support is one of the most widely studied content dimensions. Therefore, the current findings regarding this theme are already grounded in the existing body of knowledge and confirm the findings of previous studies. The final theme emerging from the current study is related to fairness. Fairness has been widely studied in the literature; however, it has not been included in psychological contract studies as a content dimension. Perceptions of an unfair work environment have been studied as a contributor of perceptions of psychological contract breach (Shore & Tetrick, 1994). However, in the current study, millennials expressed that

they have expectations regarding being treated fairly and having an ethical employer even before they join the organization. They also added that if their employer fails to satisfy this expectation, it might make them feel bitter and they might consider quitting their jobs. Therefore, it is evident from the data analysis that fairness emerged as a strong expectation of graduating millennials; therefore, it should be included in psychological contract studies as a content dimension. Being known as the most socially aware generation, millennials not only expect but also demand ethical and responsible employers (Glass, 2007); therefore, it is evident that they also include this dimension in their psychological contracts.

3.6.1. Theoretical implications

The aim of this paper is to understand how millennials form their anticipatory psychological contracts prior to organizational entry. The pre-entry expectations of graduating students who were in the job market at the time of data collection were investigated to understand the building blocks of their anticipatory psychological contracts. The outcomes of this study will contribute to the psychological contract literature in numerous ways.

Firstly, and most importantly, this study was initially designed as a preliminary study for the empirical study in Chapter 4 (Paper 3), which investigates the concurrent formation of newcomers' psychological contracts and social networks. In studying the formation of psychological contract, I argue that the existing psychological contract measures may not fully capture millennial employees' psychological contracts, since these measures were created considering earlier generations. However, recent research suggests that the expectations of the new generations are different compared to earlier generations (Bennett et al., 2012;

Cennamo & Gardner, 2008; De Hauw & De Vos, 2010; Karakas et al., 2015; Wong et al., 2008). Therefore, the current study contributes to the literature by investigating the potential content dimensions of the millennials' psychological contract in its formation stage prior to organizational entry. I argue that pre-entry expectations are main contributors of psychological contracts at the pre-entry stage, given the limited interaction for conveying promises (Montes & Zweig, 2009). Secondly, as Rousseau (2001) and De Vos et al. (2003) argued, much attention has been paid to the outcomes of psychological contract breach, while little attention has been paid to the formation of it. In line with Rousseau's (2001) argument, understanding the formation of psychological contract is of supreme importance if we are to ascertain a complete and more precise picture of how psychological contracts work in the employment relationship. Thirdly, the grounded and inductive approach of this study makes it possible to capture the emerging expectations of millennials that have not been considered previously as antecedents of the psychological contract formation process, such as autonomy, fairness, and less tangible aspects of recognition. However, as discussed earlier, with the changing attributes of the current millennial workforce, it is vital to consider their changing expectations and, therefore, potentially changing psychological contracts. Expanding the earlier works of Sturges and Guest (2001) and Herriot et al. (1997), this study contributes to the literature by showing that autonomy, fairness, and less tangible aspects of recognition should be included in the studies concerning pre-entry expectations and psychological contracts. Finally, in line with my overall viewpoint and the current debates regarding the importance of studying psychological contract from a dynamic perspective (Conway & Briner, 2005;

Rousseau et al., 2016; Tomprou et al., 2015), the current study conceptualizes psychological contract as a dynamic construct that starts forming prior to entry and evolves through the duration of the employment relationships. Hence, the findings of this study contribute to the debates regarding the dynamic process approach to study psychological contracts by shedding light on the pre-entry time, which is where it all begins.

3.6.2. Limitations and future research

Despite its contributions, this study is not without its limitations. The first limitation of this study is related to generalizability issues. As mentioned in the methods section, interviews are conducted in the United Kingdom, but participants belonged to a range of nationalities. However, the context of LSE can be perceived as a limitation of generalizability. LSE students are high achievers and ambitious about their careers. Therefore, the specific characteristics of LSE students might have contributed to the high expectations they have regarding the obligations of their future employers. I recommend that future scholars test the findings of this study with different millennial samples in different countries and schools with different levels of educational success.

Secondly, in this study, I only consider millennials' expectations regarding their future employers' obligations. However, psychological contracts are individuals' belief systems regarding the reciprocal obligations between themselves and their employers (Rousseau, 1990). Therefore, investigating what millennials believe to be their own obligations to their future employers is a fruitful area for future research. In the current analysis of the interview data, there are hints

regarding what millennials might consider to be their own obligations. For example, some participants declared that they expect verbal recognition in return for their best performance and good work. These statements signal that millennials might believe presenting their best performance is one of the obligations they owe to their employers. However, further data collection and analysis is needed to draw final conclusions.

I also believe future scholars might be interested in testing the influence of these five dimensions of pre-entry expectations on the formation of millennial employees' psychological contracts once they join the organization. On the other hand, it would also be interesting to see how these pre-entry expectations influence millennial employees' perceptions of psychological contract breach. One stimulating question for the future is whether millennials with relatively high pre-entry expectations are more likely to perceive psychological contract breach than other employees with lower pre-entry expectations.

I hope the findings of this study will be a stepping stone and further motivate future scholars to capture how generational differences and pre-entry expectations influence the potential employee–employer relationship.

3.6.3. Practical implications

From a practical perspective, one interpretation of this study's findings would be that managing millennials' pre-entry expectations is an efficient way of managing the adaptation process of millennials into organizations. Therefore, organizations can increase their chances of forming healthier relationships by responding to their millennial employees' needs. In return, organizations can

increase their chances of retaining millennials longer, expecting higher commitment, and increasing job performance.

The findings of this study practically suggest that companies can attract the most talented millennials with the effective messaging of these five expectations in their job adverts. The human resources of companies should work on creating attractive career deals for millennials, including opportunities for career development, autonomy (in executing and choosing tasks), and a welcoming and helpful work environment in which efforts and good work are recognized and good ethics is valued.

However, if companies cannot offer what millennials expect from them, they should effectively communicate what they can offer to the millennials in their job adverts and during the recruitment and selection stage. Therefore, millennials can adjust their expectations with the reality of the organizations they want to join. Or, alternatively, they can decide to search for other opportunities elsewhere. The findings of this study show that if organizations fail to communicate what they can offer, millennials will likely start forming perceptions of breach once they join. Earlier studies clearly indicated that a breach of psychological contract expectations can have detrimental effects for companies, such as lowered employee commitment, poor performance, or even intentions to leave (De Hauw & De Vos, 2010; Rigotti, 2009; Robinson & Morrison, 2000). Therefore, it is highly recommended for organizations to have clear communications with potential millennial employees regarding what they can offer prior to organizational entry.

3.7. Conclusion

This paper inductively investigates graduating millennials' pre-entry expectations regarding what should happen in their first employment relationship. Thirty-two millennials were interviewed, and the findings suggested that the participants had five main pre-entry expectations from their future employers: (1) opportunities for career advancement, (2) autonomy, (3) recognition, (4) organizational support, and (5) fairness. The results regarding opportunities for career advancement and organizational support confirm the findings of prior research. However, the results regarding autonomy, intangible recognition, and fairness contribute to our understanding of millennials' pre-entry expectations, since these dimensions have not been studied as either as parts of new employees' pre-entry expectations nor as parts of psychological contracts before. Therefore, the current study expands our understanding regarding what the new generation currently on the job market expects and how these expectations influence the formation of their anticipatory psychological contracts prior to entering their first jobs. These five dimensions will be further elaborated in the next chapter.

Chapter 4

Paper 3: The Coevolution of Newcomers' Social Networks and Psychological Contracts: A Dynamic Empirical Investigation of the Interplay Between Expectations, Perceptions, and Network Ties

4.1. Chapter Overview

Chapter 4 of my thesis includes Paper 3, which is a quantitative empirical study that examines the mechanisms of *homophily* and *assimilation* as the driving forces of coevolution between newcomers' psychological contract formation and social network ties. This study shows the complex, dynamic, interconnecting, and multidimensional mechanisms through which the psychological contracts and social relationships coevolve at the workplace. By utilizing a novel simulation methodology, a software package SIENA (Statistical Investigation of Empirical Network Analysis), this paper provides empirical evidence that psychological contracts are both the products and predictors of employees' social network ties.

4.2. Introduction

For decades, researchers have shown that psychological contracts (i.e., employees' beliefs about their own and their organizations' obligations to one another) offer a powerful lens to understand employee attitudes and behaviors, such as organizational commitment, performance, counterproductive work behavior, and turnover intentions (Bankins, 2015; Coyle-Shapiro & Kessler, 1998; Robinson, 1996; Rousseau, 1989; Shore & Tetrick, 1994; Tomprou & Nikolaou, 2011). The bulk of this research studied psychological contracts from a between-person perspective, such as why some employees perform worse than others, using concepts such as psychological contract breach and the fulfillment to explain. Despite the utility of such findings, we know little about the circumstances under which people form their psychological contracts; the temporal nature of employees'

expectations, perceptions, attitudes, and beliefs; or the dynamic nature of psychological contract formation over time (Hansen & Griep, 2016; Rousseau et al., 2016).

More recently, there have been repeated calls to adopt a temporal and dynamic lens in organizational research (Roe, 2008; Shipp & Cole, 2015). In psychological contract research specifically, numerous scholars have urged researchers to recognize the dynamic nature of psychological contracts by focusing on within-person processes (Conway & Briner, 2002; Griep et al., 2016; Hansen & Griep, 2016; Rousseau et al., 2016; Tomprou et al., 2015). A within-person process perspective emphasizes issues regarding how psychological contracts form and change over time and how reactions to psychological contract fulfillment/breach unfold and change over time. This study focuses on the former. As a result, this perspective allows for more fine-grained answers to the fundamental questions of *why*, *when*, and *how* psychological contracts form and shape employee attitudes and behaviors.

On the other hand, a few psychological contract scholars adopted a sociological orientation to study psychological contract formation and newcomer socialization (e.g. De Vos et al., 2005; Morrison, 2002), investigating the influence on effective socialization of information seeking and newcomers' social networks – the web of interpersonal connections among newcomers and insiders (Morrison, 2002). Research in this stream suggests that characteristics of the newcomers' informational networks, such as size, density, strength, range, and status, are related to three different indicators of learning: organizational knowledge, task mastery, and role clarity (Morrison, 2002). Morrison (2002) also provided evidence

suggesting that the structure of the newcomers' friendship ties influence newcomers' social integration and organizational commitment. Moreover, De Vos et al. (2005) investigated the relationship between newcomers' information seeking and psychological contract change during organizational socialization.

To date, researchers have devoted greater attention to the consequences of psychological contract, especially psychological contract breach, than to their antecedents (De Vos, 2005; De Vos et al., 2003). Similarly, scholars who adopted sociological orientation to study psychological contracts and newcomers also focused on the consequences of newcomers' social networks rather than their antecedents (e.g. De Vos et al., 2005; Morrison, 2002).

Ho and Levesque (2005), and Ho et al. (2006) show that individuals' social network positions and social referents influence perceptions of psychological contract obligations and fulfillment. While this work importantly demonstrates that newcomers are indeed sensitive to interactions with, and information gleaned from, others in the organization, there remains room to explore how this social influences informs psychological contract formation from a bi-directional and dynamic perspective.

While Ho and colleagues fruitfully applied social networks theory in psychological contract research (Dabos & Rousseau, 2013; Ho & Levesque, 2005; Ho et al., 2006), they investigated network effects once people are embedded in organizations, arguably beyond the contract formation stage. My research extends earlier work of Ho and colleagues in two ways. Firstly, I investigate networks effects on psychological contracts starting from the first day and through the socialization period, thus capture the proposed effect of social influence on

contracts while the psychological contracts are forming. Secondly, I also investigate the influence of psychological contracts on social networks, thus capture not only the uni-directional influence of social networks on psychological contracts but also bi-directional, co-evolutionary, relationship between the two constructs.

Addressing these gaps in the research literature, I draw on a prior theory (e.g. Ho et al., 2006; Schulte et al., 2012) to argue that newcomers' psychological contract formation and social networks are each the key antecedent of one another; the two are mutually influential and coexist and coevolve over time. While social networks influence newcomers' socialization experiences (Morrison, 2002) and psychological contracts (De Vos et al., 2005), newcomers' newly forming psychological contracts reflect and shape the extent to which they turn to one another for advice, help, and support (Dean Jr & Brass, 1985; Ibarra & Andrews, 1993; Labianca, Brass, & Gray, 1998; Umphress et al., 2003).

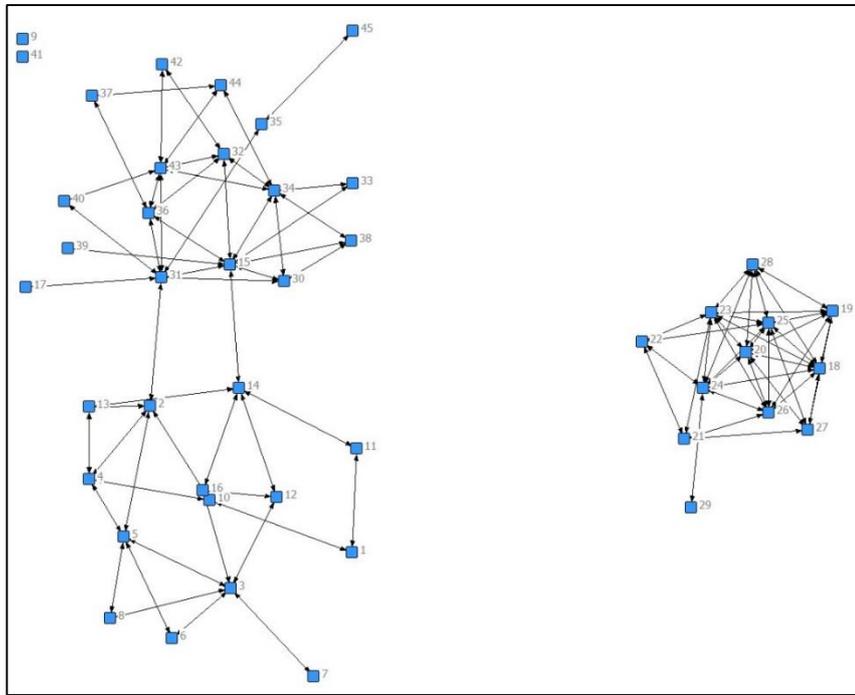
Schulte and colleagues (2010) emphasized in their influential study on the perceptions of a team's psychological safety and network ties that team members' perceptions of their team and team members' social networks being likely to coevolve is "intuitively obvious" (p. 1), but more bewildering is *how*. I argue that the same principle also applies with newcomers' social networks. One might intuitively think that once a newcomer enters an organization, it is likely that s/he will start forming her/his social network ties and psychological contract at the same time, and it is likely that these two constructs will influence each other. However, one will struggle to explain *how* and *why* the formation of social networks and psychological contracts influence each other.

The current study is designed to answer these *how* and *why* questions empirically. In doing so, I answer recent scholarly calls and employ a within-person process perspective to investigate newcomers' psychological contract formation. However, I also take a step forward and study how between-person (social networks between newcomers) and within-person (newcomers' psychological contract formation over time) constructs coevolve. I conceptualize the between-person perspective here differently than previous studies of the psychological contract breach that explain the differentiating employee outcomes, such as why some employees perform worse than others. In contrast, I adopt a between-person perspective from a social networks point of view and argue that the characteristics and structure of the network ties between people will influence how individuals form their psychological contracts through within-person processes (the formation/evaluation/update of psychological contract expectations and perceptions). Therefore, unlike previous studies, the focus is not on between-person differences after the psychological contract breach but on the influence of between-person interactions (network ties) on the psychological contract evolution. In my conceptualization, this explains one part of the hypothesized coevolution. Correspondingly, as the other part of the hypothesized coevolution, evolving psychological contracts (within-person processes) will influence the formation of newcomers' network ties (between-person interactions) over time.

An illustrative example is the friendship networks of the newcomers – real networks from my data –, along with their psychological contract expectations, at times 1 and 4 shown in Figures 5 and 6 (please see Appendix 5 for all of the network illustrations in this study). On the first day of organizational entry (Time 1, Figure

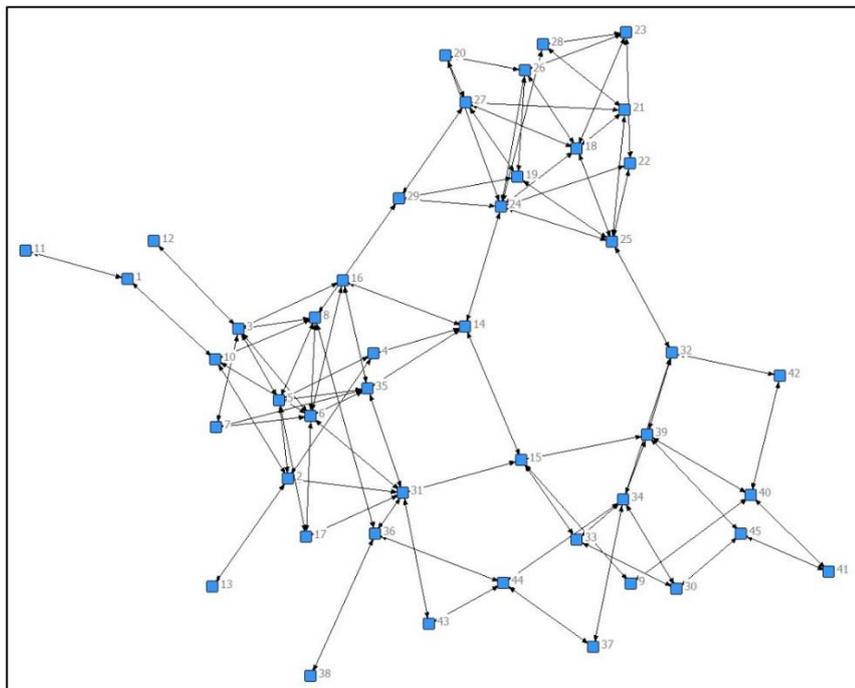
5), the friendship network is divided into two clusters, and there are also newcomers who are not connected to others at all. At this stage, newcomers also have high psychological contract expectations. However, we see that at the fourth data collection time, 4 months and 10 days after entry (Time 4, Figure 6), the friendship networks became denser, while newcomers exhibited evidently lower psychological contract expectations than at Time 1. Therefore, as seen in Figures 5 and 6, there are considerable changes both in terms of newcomers' psychological contract expectations and their friendship networks. In Paper 3, my motivation is empirically model and gain greater insights into the ways in which newcomers' social network ties and psychological contract expectations and perceptions may coevolve over time (please see Appendix 5 for all of the network illustrations in this study including times 2 and 3 for friendship networks and times 1,2,3 and 4 for advice relationships.)

Figure 5: Newcomers' friendship ties and expectation of employer obligations at Time 1 (first day of training)



Mean of expectations at Time 1;
 Career advancement = 6.49
 Autonomy = 4.93
 Recognition = 5.78
 Organizational support = 5.91
 Fairness = 6.29

Figure 6: Newcomers' friendship ties and psychological contract expectations at Time 4 (4 months and 10 days after entry)



Mean of expectations at Time 4;
 Career advancement = 4.42
 Autonomy = 4.24
 Recognition = 3.93
 Organizational support = 3.84
 Fairness = 4.67

For this purpose, I formulated and tested a framework designed to explain the processes by which newcomers' psychological contract expectations and perceptions of employer's obligations and newcomers' social network ties coevolve. The framework was formulated around two socio-psychological mechanisms: one describes how newcomers' social networks influence newcomers' psychological contract expectations and perceptions, and the other describes how newcomers' psychological contract expectations and perceptions influence newcomers' social network ties. I tested each mechanism by utilizing the data of newcomers' (1) friendship network ties, (2) advice network ties and newcomers' psychological contract (3) expectations, and (4) perceptions regarding five employer obligations ((1) opportunities for career development, (2) autonomy, (3) recognition, (4) organizational support, and (5) fairness). I collected the data from 45 newcomers at four time points over 4 months and 10 days. By means of psychological contract formation, I particularly focused on newcomers' psychological contract expectations and perceptions of five employer obligations (opportunities for career development, autonomy, recognition, fairness, and organizational support) that emerged as anticipatory psychological contract content from the qualitative study in Paper 2 (Chapter 3).

As discussed in Paper 2, the anticipatory psychological contract explains the form of psychological contract that starts forming before the employment relationship. The pre-entry expectations regarding the potential employment relationship influence the development of anticipatory psychological contracts (Mabey et al., 1996). Once newcomers join their organizations, anticipatory psychological contracts function as frames of reference through which newcomers

evaluate their experiences and form perceptions regarding whether their employer fulfils his/her obligations to them (Mabey et al., 1996).

Prior research has also shown that when newcomers' experiences after joining the organization do not match their pre-employment expectations, they are more likely to feel that their psychological contract has been breached, leading to reduced organizational commitment and increased turnover intentions (Sturges & Guest, 2001). As prior research suggests (e.g. Anderson & Thomas, 1996; Mabey et al., 1996), I argue that once newcomers join the organization, their anticipatory psychological contracts will guide them to make sense of their new work environment and might trigger the early networking behavior with other newcomers (i.e., to seek information from certain others regarding the expectations they have embedded in their anticipatory psychological contracts) (De Vos et al., 2005). In addition, since newcomers will evaluate their new work environment through the lens of their anticipatory psychological contracts, focusing on the content of it allows me to monitor the evolution of newcomers' psychological contract expectations and perceptions on these dimensions from day one of the employment relationship.

In this paper, which integrates between-person and within-person processes of psychological contract, my conceptual framework and findings make four significant contributions to the literature. First, my framework and findings extend the earlier sociological perspectives to study newcomers' psychological contract formation (De Vos et al., 2005) and socialization processes (Morrison, 2002) by focusing on the influence of newcomers' friendship and advice networks on newcomers' psychological contract expectations and perceptions of five distinct

employer obligations. Utilising socio-psychological mechanisms, the current study tests the interplay between newcomers' social network ties, psychological contract expectations, and perceptions of whether their employer fulfils these obligations to them.

Second, in line with the Rousseau's (2001) assertions, this paper draws attention to the "antecedents of psychological contract" (p. 501) by postulating a theoretical model that captures how and why the nature of social relationships are important building blocks of psychological contract.

Third, my framework and findings extend and challenge prior studies that suggest that social relationships and social cues have a unidirectional impact on psychological contracts processes (e.g. De Vos et al., 2005; Rousseau, 1995; Shore & Tetrick, 1994; Thomas & Anderson, 1998). In my model there is a bidirectional influence and coevolution between social relationships and psychological contract formation. It is proposed and tested that as the social interactions shape newcomers' psychological contracts, newly forming psychological contracts will also shape newcomers' social network ties.

Fourth, I conceptualize psychological contract formation as an *emergent* construct. Emergence is widely conceptualized and studied in group, team, and leadership studies but is widely disregarded in psychological contract studies. Psychological contract researchers anticipated that psychological contracts exist and focused on the consequences of psychological contracts. However *from where*, *why*, or *how* psychological contracts emerge is rarely specified and studied. For example, in the teams literature, emergence is used to explain how properties of teams initiate from the team members' attitudes, beliefs, perceptions, and behaviors

(Schulte et al., 2012). Correspondingly, I debate that psychological contract formation of newcomers (by means of how newcomers form and evaluate their psychological contract expectations and perceptions of these obligations) originates in and arises from the expectations, perceptions, and beliefs of the members of the social networks that newcomers are part of.

4.3. Literature Review

4.3.1. Psychological contract formation

The earlier conceptualizations of psychological contract are rooted in theories of mental schemas (Rousseau, 1995; Shore & Tetrick, 1994). A mental schema is a cognitive structure that embodies the instructions that guide individuals' sense making and information processing about a given stimuli, which can be a person or a situation (De Vos et al., 2005; Rousseau, 1995). In this regard, the psychological contract is conceptualized as a mental schema that individuals develop and utilize to make sense of their employment relationship. It is the individuals' set of organized beliefs regarding what is expected to occur in the employment relationship (Rousseau, 1995, 2001; Shore & Tetrick, 1994). The schema assists individuals in interpreting what has been promised between themselves and their employer. This indicates that these promises have no objective meaning; nonetheless, they are perceptions of what was communicated (Rousseau, 1995).

Even though scholars agree about the conceptualization of psychological contact as a mental schema, it has been widely overlooked how employees form this schema from the beginning of the employment relationship (De Vos et al.,

2005). Throughout my thesis, I conceptualize the psychological contract formation as a dynamic process that begins before the organizational entry (Thomas & Anderson, 1998; De Vos et al., 2003) and unfolds throughout the employment relationship (Conway & Briner, 2005). As discussed in Paper 1 (Chapter 2), the uncertainty and ambiguity of the socialization period stimulate newcomers' sense making; thus, the pace of psychological contract formation also accelerates upon organizational entry. Newcomers constantly make sense of the new information that they receive from their new environment, evaluate/update their pre-entry expectations, and form new perceptions regarding their employment relationship (De Vos et al., 2003, 2005; De Vos & Freese, 2011).

Within the psychological contract literature, few studies empirically investigated newcomers' psychological contract formation upon organizational entry and during the socialization period (De Vos et al., 2003, 2005; De Vos & Freese, 2011; Robinson et al., 1994; Thomas & Anderson, 1998). Robinson et al. (1994) found that, within the first two years of the employment relationship, employees develop perceptions that they owe less to their employer, whereas their employer owes them more. Thomas and Anderson (1998) showed that there is an increase in army recruits' expectations about their employer's inducements regarding job security, social and leisure time, work-life balance, and accommodation during the first two months of entry. Finally, De Vos et al. (2003) highlighted that changes in newcomers' perceptions of their employer's obligations are affected by perceptions of the employer inducements received. As evident in the above studies, newcomers' psychological contract expectations regarding their employer's obligations to them and perceptions regarding whether these obligations

are (un)fulfilled change over time. Therefore, in order to understand the formation of psychological contracts, it is vital to further investigate what contributes to this change.

Expanding earlier studies on psychological contract formation, this study focuses on mechanisms that drive the concurrent formation of newcomers' psychological contracts and social network ties during the organizational socialization period. I focus on two related but separate cognitive elements that contribute to the psychological contract formation: (1) newcomers' psychological contract expectations (which newcomers start forming before the organizational entry and update during organizational socialization); and (2) newcomers' perceptions of their employer's obligations. In the previous studies mentioned above, researchers focused on either psychological contract expectations (e.g., Thomas & Anderson, 1998) or perceptions of the promises made (e.g., De Vos et al, 2003). However, as evident in the earlier conceptualizations, psychological contract, as a mental schema, is a belief structure regarding what is expected to occur in the organization (Rousseau, 1995; 2001; Shore & Tetrick, 1994). This mental schema will then guide how individuals perceive the exchange of promises (Rousseau, 1995). Therefore, I measure both (1) psychological contract expectations and (2) perceptions of employer's obligations that newcomers start developing based on five dimensions. This conceptualization allows me to consistently compare the similarities/differences in what newcomers expect and what they perceive and how their expectations and perceptions evolve throughout the socialization period, thus forming newcomers' psychological contracts.

4.3.2. Content of the psychological contract

Although psychological contracts are subjective, earlier research explains that they can be measured by focusing on a limited number of dimensions embodying different content areas of employer obligations (Rousseau & Tijoriwala, 1998). For these employer obligations, researchers developed scales that can be used as constant measures of distinct psychological contract terms that can be generalized across populations (e.g., De Vos et al., 2003; Robinson, Kraatz, & Rousseau, 1994; Robinson & Rousseau, 1994). However, to date, there is no agreement among the researchers regarding which scale to use for measuring psychological contract content (De Vos et al., 2005). De Vos et al.'s (2005) review of the literature reveals that five content areas appear as predominant in the majority of the studies that measure the content of the psychological contract. De Vos and colleagues (2005) listed these five dimensions as the following: (1) *career development*, referring to employer obligations for providing promotion and development opportunities within the organization or sector; (2) *job content*, referring to employer obligations for providing challenging and interesting work; (3) *financial rewards*, referring to employer obligations for providing the provision of appropriate rewards; (4) *social atmosphere*, referring to the provision of a pleasant and helpful work environment; and (5) *respect for private life*, referring to the employer's obligation to respect the employee's personal and family situation.

For the current study, I explore psychological contract formation. However, none of the content dimensions mentioned above have been developed to understand psychological contract formation. On the contrary, they were widely used to understand the perceptions regarding psychological contract breach (e.g.

Lapointe et al., 2013; Robinson & Morrison, 2000). On the other hand, as discussed in Paper 2, from a psychological contract formation perspective, it is impossible for individuals who have not entered the organization yet, or who have just entered, to foresee the nature of their future employment entirely. Hence, it is expected that their initial psychological contracts will be based on pre-entry expectations (Mabey et al., 1996) and information they gathered during recruitment and induction (Wanous et al., 1992). Therefore, I argue that it would be a major assumption to revise the initial formation process on all the content dimensions of the psychological contract that has been studied in the literature so far.

With the purpose of understanding which content dimensions are most salient for future employees before the organizational entry, in Paper 2, I explored the content dimensions of anticipatory psychological contracts that are formed based on the pre-entry expectations of potential employees. I inductively investigated the employer obligations that are most salient for future employees. Five pre-entry expectations that contribute to the formation of anticipatory psychological contract content dimensions that emerged in Paper 2 include the following: (1) opportunities for career advancement, (2) autonomy, (3) recognition, (4) organizational support, and (5) fairness. The findings of Chapter 3 (Paper 2) support my earlier discussion suggesting that employees might focus on different aspects of the psychological contract at the initial formation stage. Among the five content dimensions that emerged in Paper 2, only two of them (opportunities for career advancement and organizational support) were identified as predominantly studied psychological contract content dimensions in De Vos and colleagues' (2005) review.

Earlier studies suggest that anticipatory psychological contracts are *frames of reference* (Mabey et al., 1996) that guide the information seeking and sense making of new employees once they join the organization (De Vos et al., 2009). Mabey et al.'s (1996) *frame of reference* interpretation of anticipatory psychological contract is parallel to conceptualizations of psychological contract as a mental schema (Rousseau, 1995). However, an anticipatory psychological contract starts forming before the organizational entry. It has also been shown that if there is a discrepancy between pre-entry expectations and post-entry perceptions, newcomers are more likely to perceive that their employer breaches the psychological contract, leading to reduced organizational commitment and increased turnover intentions (Sturges & Guest, 2001). Since pre-entry expectations and anticipatory psychological contracts will guide how newcomers make sense of and perceive their new work environment, as a first step to understanding psychological contract formation, I argue that it is important to understand how newcomers evaluate and update their pre-entry expectations once they join the organization. Afterwards, it is important to understand how they perceive their employment relationships and whether there is a match or mismatch between their expectations and perceptions. I focus on newcomers' psychological contract expectations and perceptions of five dimensions that emerged as the content dimensions of anticipatory psychological contracts in Paper 2. Therefore, I can capture the formation of newcomers' psychological contract through what they expect from their employer (before and upon organizational entry) and whether they perceive that their employer fulfils his/her obligations to them (upon organizational

entry). Moreover, I investigate how these expectations and perceptions coevolve with the formation of newcomers' social networks.

4.3.3. Newcomers' social networks

The established findings dating back to early social science research on influence and conformity suggest that social interactions influence individual attitudes and beliefs (Asch, 1955; Deutsch & Gerard, 1955; Festinger, 1954) as well as social information processing (Blau & Katerberg, 1982; Salancik & Pfeffer, 1978; Zalesny & Ford, 1990). Dabos and Rousseau (2013) emphasized that informal social networks, by means of network position and local ties, play a prevalent role in shaping work-related attitudes and beliefs in organizations. Their findings suggest that when employees' psychological contract terms include competitive resources, employees with better network position and social status have more positive beliefs regarding their employer's commitment than others whose network positions are not as strong. However, when psychological contract terms include resources that are broadly available to all employees, network position and status are less predominant in influencing employee beliefs.

Building on earlier research investigating the impact of social interactions on work-related attitudes and beliefs (Burkhardt, 1994; Dabos & Rousseau, 2013; Dean Jr & Brass, 1985; Ho, 2005; Ho et al., 2006; Ibarra & Andrews, 1993; Pastor, Meindl, & Mayo, 2002; Roberson & Colquitt, 2005), I adopt a social networks perspective to examine the psychological contract formation and patterns of newcomers' social networks influencing this formation process. On the other hand, I also investigate how the expectations and perceptions of newcomers influence the development of their social networks during the organizational socialization period.

Therefore, the current study focuses on the bidirectional, concurrent, and codependent formation of newcomers' psychological contracts and social networks.

In social networks studies, organizations are viewed as groups of individuals linked by a variety of relational ties (Morrison, 2002). This stream of research focuses on the relationship patterns between people rather than the individual characteristics of people in separation from one another (Brass, 1995). The principal notion of social network studies proposes that structured social relationships are more powerful sources to describe a social phenomenon than the individual qualities of the members of a social system (Morrison, 2002). In social networks literature, scholars agree that we can comprehend the antecedents and outcomes of organizational phenomena by not only studying the existence of social relationships but also the general patterns of social relationships among the actors (Brass, 1995). In the current study I adapt that logic to the psychological contract formation of newcomers and argue that different mechanisms of newcomers' social relationships contribute differently to the formation of their psychological contracts.

Social network scholars mainly focus on two types of network structures: instrumental network ties and expressive network ties. Instrumental network ties are sources of work- or task-related advice and information (Nebus, 2006). Expressive network ties are formed based on affect, which may be positive or negative (Krackhardt, 1992; Labianca et al., 1998). In the current paper, I study newcomers' instrumental ties in the form of advice networks and positive expressive ties in the form of friendship networks. In the context of newcomers, especially by socialization scholars, it is reported that newcomer learning is one of

the tasks that must be completed for a successful socialization (Morrison, 2002). Newcomer learning requires newcomers to obtain various sources of organizational and task-related information, which they can acquire through their advice relationships (Morrison, 2002). Advice relationships tend to be cognition based, non-reciprocal, and short in duration compared to expressive ties (Nebus, 2006; Umphress et al., 2003)

On the other hand, organizational scholars not only emphasize newcomer learning but also newcomer assimilation as a vital task that must be completed for a successful organizational socialization (Morrison, 2002). These studies recommend that newcomers need to feel that they belong to their direct work groups and organizations in general for socialization to be successful and effective (e.g. Bauer & Green, 1998; Feldman, 1981; Ostroff & Kozlowski, 1992; Reichers, 1987). Newcomers' friendship ties can provide the support and sense of belonging that newcomers need during the ambiguous socialization period. Network scholars explain that friendship ties are based on personal liking and affection for another individual, and these ties provide social and emotional support as well as enjoyment to the members (Krackhardt, 1992; Lincoln & Miller, 1979). They tend to be affect based, reciprocal, and more long-lasting than advice ties (Umphress et al., 2003).

4.3.4. Conceptualization of the coevolution of newcomers' psychological contract formation and social network ties

The conceptual framework reported in this study describes the coevolution of newcomers' psychological contract formation and social network ties, and it relies on four fundamental assumptions within the psychological contract and social networks literature. First of all, the psychological contract formation is

conceptualized as the evolution of newcomers' psychological contract expectations and perceptions of employer's obligations. Previous literature suggests that the psychological contract, as a mental schema, is the belief structure of the employees regarding what is expected to occur in the organization (Rousseau, 1995; 2001; Shore & Tetrick, 1994), which will then influence how employees perceive their employment relationship (Rousseau, 1995). Therefore, in order to understand the process through which psychological contracts are formed, the current framework builds on the assumption that both the expectations and perceptions of new employees are important building blocks of the psychological contract formation process. What newcomers expect from their new employment might be similar or different from what they perceive in the employment, and these similarities and differences will influence the newly forming psychological contracts.

Secondly, the framework builds on the assumption that both newcomers' psychological contract expectations/perceptions and social network ties originate in and emerge from newcomers' attitudes, beliefs, and behaviors (Snijders, Steglich, & West, 2006). This means that interpersonal relationships among newcomers and newcomers' psychological contract expectations/perceptions are fundamental components of both the social network and psychological contract formation processes. In the absence of one, the other cannot exist. Furthermore, any change that happens in the system is the choice of the actor that implements this change. Therefore, it is possible to understand how newcomers employ agency in their psychological contracting and networking processes (Ripley, Snijders, & Preciado, 2011)

Thirdly, in this study I consider two types of networks: friendship and advice. In terms of the nature of the relationships, I study newcomers' friendship networks as non-directional (reciprocal, symmetrical) but study advice networks as directional. Brass (2011) emphasized that deciding the boundaries of the network is an important but seldom-addressed issue. Based on the research question and the context, researchers should decide on the boundaries of the networks that they study, such as specifying the number of different types of networks to include, and the number of links to be removed from one's ego network that only has indirect links (Brass, 2011).

Although it is commonly accepted that friendship ties are reciprocal (Umphress et al., 2003), there are debates in the social networks literature that this might not always be the case (e.g. Carley & Krackhardt, 1996; Oik & Gibbons, 2010). However, based on the research questions and the context of the study, if one investigates the mutuality of beliefs and shared perceptions, it is recommended by many network researchers to set the boundaries of the friendship networks to the reciprocal, strong ties (e.g. Granovetter, 1973; Huston & Levinger, 1978; Krackhardt, 1992). From a contextual perspective, given the short period of time newcomers spent in the organization with their colleagues, one might think that some of the friendship ties that newcomers have might not yet be strong and/or reciprocated.

However, the main purpose of this study is to investigate the mutual formation of psychological contracts and social networks; thus it was vital to understand how (or if) the friendship ties influence the newcomers' psychological contract expectations and perceptions. Therefore, I preferred to set the boundaries

of friendship ties only to the reciprocal ones. Literature on social networks suggested that strong friendship ties, which are often reciprocated, have the power of influencing perceptions of network members (Brass, 1995; Krackhardt, 1992; Podolny & Baron, 1997). Moreover, organizational entry and socialization periods are ambiguous and uncertain times that newcomers often need social support from their friends that they trust, which is another characteristic of strong and reciprocal friendship ties (Krackhardt, 1992; Morrison, 2002). Therefore, it is important to understand whether strong friendship ties exist between newcomers during organizational socialization; and how this will influence their psychological contract formation. Hence, I decided to include only reciprocal friendship ties of newcomers in the current study. In doing so, I aimed to control for potential influence of some form of initial affection and liking, which was not yet and might never become a strong friendship tie. Therefore, I achieved to only measure the influence of friendship ties that exist and mutually shared between actors on the newcomers' psychological contract expectations and perceptions.

Fourthly, the final fundamental assumption is that both newcomers' psychological contract formation and social networks are not static. Indeed, during the organizational socialization period, as well as during the course of the employment relationship, formation and development of psychological contracts are dynamic (Conway & Briner, 2005; De Vos & Freese, 2011; Tomprou & Nikolaou, 2011; Tomprou et al., 2015). Employees will form/evaluate/update their psychological contracts (De Vos et al., 2005). Similarly, newcomers' social network ties will be formed or broken over the course of their employment, hence

the networks ties are also not necessarily stable (Schulte et al., 2012; Wellman, Wong, Tindall, & Nazer, 1997)

4.3.5. Mechanism explaining the coevolution of newcomers' psychological contract formation and social network ties: Social selection and social influence

The present study focused on two main mechanisms explaining the coevolution of newcomers' psychological contract formation and social networks through *social selection* and *social influence*. The choice of newcomers to form network ties with certain individuals may depend on the expectations and perceptions they integrate into their newly forming psychological contracts; this is the social selection part of the theorized coevolution. In addition, how newcomers evaluate and update their psychological contract expectations and perceptions may depend not only on newcomers' own attributes but also on the expectations and perceptions of those to whom they are directly or indirectly tied in the network; this is the social influence part of the theorized coevolution (Snijders, 2001). Therefore, the influence of the psychological contract on networks is explained through *social selection*, and the influence of networks on the psychological contract is explained through *social influence*. In this paper, models developed for the coevolution of networks and psychological contract formation allow for the joint representation of *social selection* and *social influence*, as explained in Steglich, Snijders, and Pearson (2010). The models developed for this study will be explained further in the analysis section of this paper.

The conceptual framework explaining the two mechanisms of the coevolution of psychological contracts and social networks applies to both advice

and friendship networks as well as to newcomers' psychological contract expectations and perceptions of employer obligations, which I conceptualized as psychological contract formation. Following is a general explanation of the mechanisms, which provides an overall interpretation of how these mechanisms drive the theorized coevolution (please see Table 4 below). In the next section, I apply and expand the conceptual framework to the specific hypotheses regarding the coevolution of friendship and advice ties, and of the psychological contract expectations and perceptions of newcomers.

Table 4: A Conceptual Framework of the Mechanisms That Drive the Coevolution of Psychological Contract Formation and Social Networks

Coevolution of PC formation and social networks	Psychological contract formation influence network ties (<i>Social selection</i>)	Network ties influence psychological contract formation (<i>Social influence</i>)
Similarity	<u><i>Homophily:</i></u> I prefer to have network ties with others whose psychological contracts are similar to mine	<u><i>Assimilation:</i></u> My psychological contract become similar to the ones whom I am connected in my networks

As presented in the left column of Table 4, the framework suggests that the psychological contract and social networks influence each other's formation by means of similarity, which is explained through two socio-psychological mechanisms of social influence and social selection: *homophily* and *assimilation*. As presented in the middle column of the framework in Table 4, social selection, the influence of the psychological contract on social networks, happens through the *homophily* mechanism. The *homophily* mechanism describes the influence of the

similarity between actors on network formation (Huston & Levinger, 1978; McPherson, Smith-Lovin, & Cook, 2001). More specifically, *homophily* explains the influence of the similarity of the psychological contract expectations and perceptions on social network formation, in the sense that newcomers prefer to form network ties with other newcomers who have similar psychological contract expectations and perceptions.

On the other hand, as presented in the right column of Table 4, the framework shows that social influence, the influence of social networks on psychological contract formation, happens through the *assimilation* mechanism. The *assimilation* mechanism describes the influence of newcomers' network connections on their psychological contracts (Huston & Levinger, 1978; McPherson et al., 2001). More specifically, *assimilation* explains the tendency of newcomers to adopt the psychological contract expectations and perceptions of other newcomers to whom they are connected in their networks. In other words, the expectations and perceptions of newcomers become similar to those to whom they are tied in their networks (Ripley et al., 2017).

In the next section, I use the framework explained in Table 4 to develop the hypotheses regarding the coevolution of newcomers' social networks and psychological contract formation. I propose that the two main mechanisms, *homophily* and *assimilation*, apply to both friendship and the advice networks of newcomers as well as to newcomers' psychological contract expectations and perceptions as a function of their psychological contract formation.

4.4. Hypotheses Development

In this section, I cover the hypotheses I developed regarding the coevolution of newcomers' network ties and psychological contract formation stemming from the two mechanisms explained in the framework in Table 4: *homophily* and *assimilation*. My focus was on two different types of networks: friendship and advice. On the other hand, as explained earlier, I studied newcomers' psychological contract expectations and perceptions of their new employer's obligations. Therefore, four segments in this section explain the hypotheses regarding the dynamic coevolution of newcomers' (1) friendship ties and psychological contract expectations, (2) friendship ties and perceptions of employer's obligations, (3) advice ties and psychological contract expectations, and (4) advice ties and perceptions of employer's obligations.

4.4.1. Dynamic coevolution of newcomers' friendship ties and psychological contract formation

4.4.1.1. Friendship ties and psychological contract expectations

I hypothesized that *homophily* is the mechanism that drives the relationship between newcomers' friendship ties and expectations. It explains the social selection side of the coevolution of friendship ties and psychological contract formation. Earlier sociological research on *homophily* suggests that individuals are attracted to others whose opinions, attitudes, beliefs, and behaviors are similar to theirs (Ibarra, 1992; Schulte et al., 2012).

Smirnov and Thurner (2016) recommends that in addition to similarity in traits, such as gender and race, other attributes, such as goal preferences and a range of other attitudes can also form the basis for homophilous ties. Yuan and Gay (2006) suggest that homophily particularly underpins the development of bonding social capital, which is the basis of friendship ties. In my thesis, I hypothesized that *homophily* is the mechanism that drives the relationship between newcomers' friendship ties and psychological contract expectations. It explains the social selection side of the coevolution of friendship ties and psychological contract formation. Earlier sociological research on *homophily* suggests that individuals are attracted to others whose opinions, attitudes, beliefs, and behaviors are similar to theirs (Ibarra, 1992; Schulte et al., 2012).

Newcomers start to form their expectations before they enter the organization (Mabey et al., 1996), and as argued in Paper 2, when promises are scarce, these expectations form psychological contracts (Montes & Zweig, 2009), or anticipatory psychological contracts in pre-entry stage. Upon organizational entry, anticipatory psychological contracts guide newcomers' sensemaking and information-seeking behavior (De Vos et al., 2009). Therefore, once newcomers join the organization, it is expected that newcomers will look for information based on the expectations they have as part of their anticipatory psychological contracts.

On the other hand, organizational socialization scholars advised that organizational entry and socialization periods are uncertain and ambiguous times for newcomers (De Vos, 2005; De Vos et al., 2003, 2005; Morrison, 2002; Wanous et al., 1992). To reduce the ambiguity and uncertainty, newcomers might look for other newcomers who hold similar expectations to their own. Previous research

recommends that when a person observes that others' standpoints are similar to his/hers regarding an unfamiliar situation, he or she feels less alone (Festinger, 1957) and experiences increased positive affect for these people (Byrne, 1971; Schulte et al., 2012). During the ambiguous and uncertain times of organizational socialization, I hypothesized that the reduced feelings of aloneness and increased positive affect generated from sharing similar expectations will motivate newcomers to seek friendship with other newcomers who have similar expectations.

As discussed earlier in this paper and in Paper 2, I measured newcomers' psychological contract expectations based on five distinct dimensions: (a) opportunities for career development, (b) autonomy, (c) recognition, (d) organizational support, and (e) fairness. Therefore, I formed hypotheses for these five expectations to understand whether the *homophily* mechanism applies to each of these five expectations. Hence:

H1A: Newcomers prefer to form friendship ties with other newcomers who hold similar expectations of their employer's obligations regarding opportunities for career advancement.

H1B: Newcomers prefer to form friendship ties with other newcomers who hold similar expectations of their employer's obligations regarding autonomy.

H1C: Newcomers prefer to form friendship ties with other newcomers who hold similar expectations of their employer's obligations regarding recognition.

H1D: Newcomers prefer to form friendship ties with other newcomers who hold similar expectations of their employer's obligations regarding organizational support.

H1E: Newcomers prefer to form friendship ties with other newcomers who hold similar expectations of their employer's obligations regarding fairness.

4.4.1.2. Friendship ties and perceptions of employer's obligations

Newcomers start forming their expectations prior to organizational entry; however, what they perceive once they join the organization might be similar to or different from what they expected (De Vos et al., 2009). I proposed that the similarities and dissimilarities between newcomers' psychological contract expectations and perceptions play an important role in their newly forming psychological contracts. Perceptions of their employer's obligations start forming after newcomers join the organization based on how they perceive their experiences to be. Many organizational, social, and psychological elements affect these perceptions (De Vos et al., 2003, 2005). In this paper, I focus on the influence of social relationships, and I argue that the network ties of newcomers will contribute to how newcomers form their perceptions regarding employer obligations.

I hypothesized that *assimilation* is the mechanism that drives the relationship between newcomers' friendship ties and expectations. It explains the social influence side of the coevolution of friendship ties and psychological contract formation. As explained through *homophily*, people are attracted to other people with whom they have similar opinions, attitudes, and beliefs. However, this clarifies only one side of the story for the proposed coevolution between friendship ties and psychological contract, which is the social selection side.

On the other hand, theories of social comparison and information processing suggest that during ambiguous and uncertain times, individuals turn to significant others to make sense of their situations (Salancik & Pfeffer, 1978; Schulte et al.,

2012). Friendship ties are characterized as being based on mutual trust and positive affect. Therefore, during ambiguous times, friends are particularly important as sources of informal information to which individuals reach out and on which they rely without hesitation (Granovetter, 1973). Moreover, Krackhardt (1992) emphasized that friends want to be alike; therefore, it is likely that individuals adopt their friends' attitudes, beliefs, and behaviors. As a result, newcomers' perceptions of their employer's obligations are likely to become similar to the perceptions of their friends over the period of organizational socialization. It is important to point out here once again that I focused not on the sent or received friendship ties but on the reciprocated friendship ties. In the context of this study, for two newcomers to have a friendship tie, both have to identify each other as a friend. Therefore, for a newcomer's perceptions to influence another newcomer's perceptions, it is not sufficient only to consider someone as a friend or for someone else to consider one as a friend; both have to occur. During an ambiguous and uncertain period of organizational socialization (Morrison, 2002), for newcomers to share their perceptions regarding their new employer, a strong friendship has to be present between two individuals, which is one of the main sources of reciprocated friendship ties (Huston & Levinger, 1978; Umphress et al., 2003).

As discussed earlier in this paper, I measured the perceptions that newcomers develop based on the five distinct dimensions on which they previously form expectations: (a) opportunities for career development, (b) autonomy, (c) recognition, (d) organizational support, and (e) fairness. In doing so, I could consistently study the interplay among the expectations, friendship ties, and perceptions of newcomers. As with the expectations, I developed hypotheses for

five perceptions of employer obligations to understand whether the *assimilation* mechanism applies to each of these five newcomer perceptions of employer obligations. Hence:

H2A: A newcomer's perceptions of their employer's obligations regarding opportunities for career advancement will become similar to the perceptions of those with whom he or she shares reciprocated friendship ties.

H2B: A newcomer's perceptions of their employer's obligations regarding autonomy will become similar to the perceptions of those with whom he or she shares reciprocated friendship ties.

H2C: A newcomer's perceptions of their employer's obligations regarding recognition will become similar to the perceptions of those with whom he or she shares reciprocated friendship ties.

H2D: A newcomer's perceptions of their employer's obligations regarding organizational support will become similar to the perceptions of those with whom he or she shares reciprocated friendship ties.

H2E: A newcomer's perceptions of their employer's obligations regarding fairness will become similar to the perceptions of those with whom he or she shares reciprocated friendship ties.

4.4.2. Dynamic coevolution of newcomers' advice ties and psychological contract formation

4.4.2.1. Advice ties and psychological contract expectations

Similar to friendship ties, I hypothesized that *homophily* is an important mechanism for explaining the influence of newcomers' psychological contract expectations on the evolution of newcomers' advice ties, thus clarifying the social

selection side of the coevolution of advice ties and psychological contract formation. I expected that the effect of *homophily* with advice ties will be present but considerably weaker than with friendship ties for the following two reasons. First of all, the literature suggested that people generally seek advice from others based on their expertise (Ibarra & Andrews, 1993), not necessarily based on the similarity of their attitudes (Schulte et al., 2012). However, given the uncertainty of organizational entry, newcomers might feel safer with approaching others whom they consider to be knowledgeable but also whom they think share similar attitudes. I assumed that newcomers might initially feel more comfortable with reaching out for advice relationships with other newcomers with whom they think they have similar expectations of their new employer. Second, in the current study, the boundaries of the network were limited to other newcomers who entered the organization at the same time. It is important to note that newcomers do not always seek advice regarding task-related issues. Louis (1980) recommended that individuals might also need practical and psychological advice during uncertain times, such as organizational socialization. Therefore, in seeking advice within the boundaries of the network that comprises only newcomers, expertise might not necessarily be the most salient element. In their reconceptualization of developmental networks, Higgins and Kram (2001) debated that individuals receive mentoring advice from many people at any one point in time, including senior colleagues, peers, family and community members. Hence, drawing on Higgins and Kram's (2001) allegations, I proposed that within the boundaries of the newcomer networks, newcomers seek advice from one another, and having similar expectations might facilitate their advice-seeking behavior.

Similar to friendship ties and expectations, I developed five hypotheses for the five expectations to understand whether the *homophily* mechanism with advice ties also applies to each of these five expectations: (a) opportunities for career development, (b) autonomy, (c) recognition, (d) organizational support, and (e) fairness. Hence:

H3A: Newcomers prefer to form advice ties with other newcomers who hold similar psychological contract expectations of their employer's obligations regarding opportunities for career advancement; however, the influence of similar expectations regarding opportunities for career advancement on the formation of advice ties will be weaker compared with friendship ties.

H3B: Newcomers prefer to form advice ties with other newcomers who hold similar psychological contract expectations of their employer's obligations regarding autonomy; however, the influence of similar expectations regarding autonomy on the formation of advice ties will be weaker compared with friendship ties.

H3C: Newcomers prefer to form advice ties with other newcomers who hold similar psychological contract expectations of their employer's obligations regarding recognition; however, the influence of similar expectations regarding recognition on the formation of advice ties will be weaker compared with friendship ties.

H3D: Newcomers prefer to form advice ties with other newcomers who hold similar psychological contract expectations of their employer's obligations regarding organizational support; however, the influence of similar expectations

regarding organizational support on the formation of advice ties will be weaker compared with friendship ties.

H3E: Newcomers prefer to form advice ties with other newcomers who hold similar psychological contract expectations of their employer's obligations regarding fairness; however, the influence of similar expectations regarding fairness on the formation of advice ties will be weaker compared with friendship ties.

4.4.2.2. Advice ties and perceptions of employer's obligations

Similar to friendship ties and perceptions, I hypothesized that *assimilation* is the mechanism that drives the relationship between newcomers' advice ties and perceptions explaining the social influence side of the coevolution of advice ties and psychological contract formation. Once newcomers perceive others as their advice givers, these individuals become important and credible sources of information regarding the work environment (Gibbons, 2004). Casciaro and Lobo (2008) recommended that during organizational socialization, individuals are likely to ask for advice from people they like. Advice givers might make comments about what behavior is and is not appropriate in the workplace (Jokisaari & Nurmi, 2012). Therefore, I expected that the perceptions of advice givers will eventually influence how advice takers start to perceive their new work environment.

It is important to note here that given that the boundaries of the network are limited to other newcomers, I did not expect advice relationships to be built on real statuses and expertise but rather on perceived competency and knowledge. Likewise, Jokisaari and Nurmi (2012) argued that when others perceive a newcomer as a competent performer, he or she is likely to become more central in

the network. Therefore, it is likely that other newcomers will start to seek information and advice from him/her (Jokisaari & Nurmi, 2012). Hence, if a newcomer perceives another newcomer as his/her advice giver, based on the perceptions of competence and knowledge, the advice giver's perceptions of employer's obligations might influence the advice-seeking newcomer.

As discussed earlier in this paper regarding friendship ties and perceptions, I measured the perceptions of newcomers based on the five distinct dimensions of employer obligations: (a) opportunities for career development, (b) autonomy, (c) recognition, (d) organizational support, and (e) fairness. In doing so, I could consistently study the relationship among the expectations, advice ties, and perceptions of newcomers on these five dimensions to understand whether the mechanism of *assimilation* applies to each of these five dimensions of newcomer perceptions. Hence:

H4A: A newcomer's perceptions of the employer's obligations regarding opportunities for career advancement will become similar to the perceptions of those to whom he or she sends advice ties.

H4B: A newcomer's perceptions of the employer's obligations regarding autonomy will become similar to the perceptions of those to whom he or she sends advice ties.

H4C: A newcomer's perceptions of the employer's obligations regarding recognition will become similar to the perceptions of those to whom he or she sends advice ties.

H4D: A newcomer's perceptions of the employer's obligations regarding organizational support will become similar to the perceptions of those to whom he or she sends advice ties.

H4E: A newcomer's perceptions of the employer's obligations regarding fairness will become similar to the perceptions of those to whom he or she sends advice ties.

I summarize my hypotheses unified with the framework in Table 5, which also briefly shows the significant findings.

Table 5 Conceptual Framework: Summary of Hypotheses and Findings

Coevolution of PC formation and social networks	Psychological contract formation influence network ties (Social selection)	Network ties influence psychological contract formation (Social influence)
Similarity	<p><u>Homophily:</u></p> <p>H1A*, H1B*, H1C*, H1D*, H1E* (hypotheses regarding psychological contract expectations and friendship ties are supported)</p> <p>H3A, H3B, H3C, H3D, H3E (hypotheses regarding psychological contract expectations and advice tie are not supported)</p>	<p><u>Assimilation:</u></p> <p>H2A*, H2B*, H2C*, H2D*, H2E* (hypotheses regarding friendship ties and perceptions of employer's obligations are supported)</p> <p>H4A, H4B, H4C, H4D, H4E (hypotheses regarding advice ties and perceptions of employer's obligations are not supported)</p>

*, a significant positive relationship at the 0.05 level.

4.5. Methodology

4.5.1. Sample and procedures

I collected data from newcomers who started to work in a private bank in Istanbul, Turkey. The bank is one the most sought after employer in the country and was expanding their sales and marketing department. The bank has a graduate

program that they run every year, and the participants of this study were hired as part of this graduate program. The bank has a criterion for their graduate program that the potential candidate has to have either no job experience or under one year of job experience. It was the bank's first time hiring 48 graduates at the same time for their sales and marketing department. All of the 48 newcomers were hired during this period and started their new jobs on the same day. They went through a 10-day training period together. The bank has a separate facility where all of the trainings for any department of the bank take place. Therefore, for the first 10 days, the newcomers were physically separated from their supervisors and other colleagues in their department. At the end of the 10 days of training, newcomers had to take a written test (mixture of short answer and multiple choice questions) on which they had to score 80% to be able to move to their department. Three out of 48 newcomers failed the test, and the participant numbers were reduced from 48 to 45. After the test, they had one month of a probation period in the department. All of the remaining 45 newcomers passed the probation period. Newcomers could have their own access codes to the customer data only after they passed their probation periods. The end of the training period and the end of the probation period were important markers in deciding the data collection points.

I gathered survey data from 45 newcomers at four points in time. Time 1 (T1) was on the morning of the first day they joined the organization. Time 2 (T2) was on the 10th day, which was the last day of the training period; T2 survey was collected in the morning before newcomers took the test in the late afternoon. Time 3 (T3) was when they completed the probation period, one month after T2. All of the remaining 45 newcomers completed their probation periods successfully. Time

4 (T4) was three months after T3 (in total, four months after they moved to the department, and four months and 10 days since their entry). In my data collection, I aimed to follow critical organizational events during the socialization period, such as the end of the training period and end of the probation period. The timing of T4 was decided in collaboration with the sales and marketing manager and the human resources professional who helped me throughout my field work. They explained that they considered newcomers as fully integrated newcomers three months after they passed their probation periods.

At all four time points of data collection, I measured friendship and advice ties within 45 newcomers and expectations regarding the five employer obligations of (1) opportunities for career advancement, (2) autonomy, (3) recognition, (4) organizational support, and (5) fairness. At the last three time points (T2, T3, T4), I measured perceptions regarding the above five employer obligations. I did not measure perceptions regarding employer obligations at T1 for two reasons. First, the T1 survey was collected in the morning of the first day of the new job. Therefore, newcomers did not yet have the opportunity to observe their new work environment. Second, as explained in my hypotheses, I conceptualize the coevolution of network ties and perceptions through social influence, which is the influence of network ties on perceptions. Hence, I started to collect perception data at T2, after which newcomers spent 10 days together and had the chance to form and strengthen their ties. On the other hand, with the expectations, I hypothesize that social selection (the influence of expectations on network ties) is the mechanism that drives the coevolution of network ties and expectations. Therefore, I started to measure expectations and network ties right after the first day after

organizational entry to capture fully the dynamism between expectations and network ties.

In my sample, all 45 newcomers participated at all of the four time points of the data collection. Thirty-seven out of 45 participants were females. The average age was 24, ranging from 21 to 27. All of the participants were Caucasians with Turkish origins. The sample was a mixture of new graduates with either a bachelor's or master's degree. For 39 newcomers, this was their first job. For the remaining six newcomers, they either had part-time student jobs or had temporary job experiences less than one year, compatible with the entry requirement for the organization's graduate program.

4.5.2. Measures

4.5.2.1. Opportunities for career advancement

Newcomers used a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree) to indicate their agreement with Kraimer, Seibert, Wayne, Liden, and Bravo (2011)'s six-item 'Organizational Support for Development (OSD)' measure, developed to capture the extent to which the employee perceives that the organization offers programs that develop employees' abilities, functional skills, and managerial capabilities.

Expectations of Opportunities for Career Advancement

A total of six items were modified to indicate whether newcomers expect these six items from their employers, to measure their expectations regarding career advancement opportunities from their new employer. Example modified items are as follows: 'It is an expectation of mine that my employer provides opportunities

for me to develop my specialized functional skills’ and ‘I desire my employer to provide career development programs that help employees to develop their managerial skills’ (please see Appendix 3 for the full list of the six items). Internal consistency reliability (Cronbach’s alpha), based on the six items, revealed high scale reliability of 0.968, 0.983, 0.973, and 0.889 for T1, T2, T3, and T4 respectively.

Perceptions of Opportunities for Career Advancement

A total of six items were modified to indicate whether newcomers perceive that their new employer fulfils these six items regarding career advancement opportunities. Example modified items are as follows: ‘My employer provides opportunities for me to develop my specialized functional skills’ and ‘My employer provides me opportunities to develop managerial skills’ (please see Appendix 3 for the full list of the six items). Internal consistency reliability (Cronbach’s alpha), based on the six items, revealed high scale reliability of 0.967, 0.964, and 0.975 for T2, T3, and T4 respectively.

4.5.2.2. Autonomy

Newcomers used a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree) to indicate their agreement with Hackman and Oldham’s (1975) three-item autonomy scale, developed to measure employees’ perceptions regarding the degree to which their employer provides substantial freedom, independence, and discretion to them in scheduling work and determining the procedures to be used in carrying it out (Hackman & Oldham, 1975). In case newcomers were not familiar with the term autonomy, the definition of autonomy was provided to participants before they took the survey as follows: Autonomy is

the extent to which a job permits one to decide on one's own how to go about doing one's work (Hackman & Oldham, 1975).

Expectations of Autonomy

A total of three items were modified to indicate whether newcomers expect these three items from their employers, to measure their expectations regarding autonomy from their new employer. Example modified items are as follows: 'I have an expectation that I will have autonomy in my job' and 'It is important to me that this job allows me to use my personal initiative and judgement in carrying out my work' (please see Appendix 3 for the full list of the three items). Internal consistency reliability (Cronbach's alpha), based on the three items, revealed high scale reliability of 0.814, 0.894, 0.796, and 0.811 for T1, T2, T3, and T4 respectively.

Perceptions of Autonomy

A total of three items were modified to indicate whether newcomers perceive that their new employer fulfils these three items regarding autonomy. Example modified items are as follows: 'I have autonomy in my job' and 'In this company, my job provides me opportunity to use my personal initiative and judgement in carrying out my work' (please see Appendix 3 for the full list of the three items). Internal consistency reliability (Cronbach's alpha), based on the three items, revealed high scale reliability of 0.923, 0.881, and 0.939 for T2, T3, and T4 respectively.

4.5.2.3. Recognition

Newcomers used a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree) to indicate their agreement with five items from Eisenberger, Fasolo, and Davis-Lamastro (1990)'s Work-Related Expectancies scale, developed to describe the extent to which employees believe that higher levels of job performance will be rewarded (Fields, 2002). Through two sub-scales, the measure separately assesses employee expectancies regarding the relationship between better performance with increased pay, promotions, and job security, and employee expectancies that better performance will lead to increased influence, supervisory approval, and recognition. Therefore, the scale is composed of two sub-scales with separate relevant items: pay/promotion expectancy items (four items) and approval/recognition/influence expectancy items (five items). I measured only approval/recognition/influence expectancy items (five items) because my focus was on newcomers' psychological contract expectations and perceptions regarding the recognition of their hard work rather than monetary rewards and pay.

Expectations of Recognition

A total of five items were slightly modified to indicate whether newcomers expect these five items from their employer, to measure their expectations regarding recognition and approval from their new employer. Example modified items are as follows: 'I expect to receive recognition from my manager for completing my tasks, especially if completed on-time' and 'It is important to me to be recognized by my manager for the quality of my work' (please see Appendix 3 for the full list of the five items). Internal consistency reliability (Cronbach's alpha), based on the five

items, revealed high scale reliability of 0.809, 0.907, 0.759, and 0.810 for T1, T2, T3, and T4 respectively.

Perceptions of Recognition

A total of five items were modified to indicate whether newcomers perceive that their new employer fulfils these five items regarding recognition. Example modified items are as follows: 'I receive recognition from my manager for completing my tasks, especially if completed on-time' and 'I receive recognition from my manager for the quality of my work' (please see Appendix 3 for the full list of the 5 items). Internal consistency reliability (Cronbach's alpha), based on the five items, revealed high scale reliability of 0.830, 0.885, and 0.890 for T2, T3, and T4 respectively.

4.5.2.4. Organizational support

Newcomers used a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree) to indicate their agreement with Eisenberger, Huntington, Hutchison, and Sowa (1986)'s Perceived Organizational Support scale, developed to measure employee perceptions of the extent to which an organization is willing to reward greater efforts from the employee because the organization values the employee's contribution and cares about his/her well-being. The original scale has 15 items. However, I adopted a shortened version consisting of the nine items as some of the earlier studies did (e.g. Moorman, Blakely, & Niehoff, 1998; Wayne, Shore, & Liden, 1997).

Expectations of Organizational Support

A total of nine items were slightly modified to indicate whether newcomers expect these nine items from their employers, to measure their expectations regarding organizational support from their new employer. Example modified items are as follows: ‘I expect that organizational help is available to me when I encounter a problem’ and ‘My employer should care about my well-being’ (please see Appendix 3 for the full list of the nine items). Internal consistency reliability (Cronbach’s alpha), based on the nine items, revealed high scale reliability of 0.944, 0.967, 0.953, and 0.839 for T1, T2, T3, and T4 respectively.

Perceptions of Organizational Support

A total of nine items were modified to indicate whether newcomers perceive that their new employer fulfils these nine items regarding organizational support. Example modified items are as follows: ‘Organizational help is available to me when I encounter a problem’ and ‘My well-being is cared for by my employer’ (please see Appendix 3 for the full list of the nine items). Internal consistency reliability (Cronbach’s alpha), based on the nine items, revealed high scale reliability of 0.970, 0.976, and 0.955 for T2, T3, and T4 respectively.

4.5.2.5. Fairness

Newcomers used a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree) to indicate their agreement with Mansour-Cole and Scott (1998)’s modification of Price and Mueller (1986) Distributive Justice Index. The original scale focuses on the assessment of the degree to which rewards that employees receive are perceived to be related to performance inputs (including effort, experience, and education) (Fields, 2002). I chose Mansour-Cole and Scott (1998)

modification because they modified the original items to assess the degree of perceived fairness in general terms in an employee's work situation (Fields, 2002), which was also my focus.

Expectations of Fairness

A total of five items were slightly re-worded to indicate whether newcomers expect these five items from their employers, to measure their expectations regarding fairness in their new workplace. Example modified items are as follows: 'It is important to me that I am assigned job responsibilities that are fair' and 'I expect my employer to provide me a work schedule that is fair' (please see Appendix 3 for the full list of the five items). Internal consistency reliability (Cronbach's alpha), based on the five items, revealed high scale reliability of 0.869, 0.960, 0.900, and 0.854 for T1, T2, T3, and T4 respectively.

Perceptions of Fairness

A total of five items were modified to indicate whether newcomers perceive that their new employer fulfils these five items regarding recognition. Example modified items are as follows: 'I have been fairly assigned job responsibilities at my work' and 'My work is scheduled fairly by my employer' (please see Appendix 3 for the full list of the five items). Internal consistency reliability (Cronbach's alpha), based on the five items, revealed high scale reliability of 0.969, 0.970, and 0.945 for T2, T3, and T4 respectively.

4.5.2.6. Newcomers' network ties

To assess the friendship and advice ties of newcomers, on the sociometric questionnaire, they were asked to name other newcomers on the following two "name

generator” questions (Ibarra, 1995, p. 683). These questions asked respondents to list their contacts in two domains, (1) friendship or (2) advice ties:

(1) ‘Who are good friends of yours, people whom you see socially outside of work?’ for friendship ties,

(2) ‘Who are important sources of professional advice, whom do you approach if you have a work-related problem or when you want advice on a decision you have to make?’ for advice ties.

This measure is adapted from Ibarra (1993, pp. 479-480) and it is commonly used method to identify friendship and advice connections when the sample is large (e.g. Ibarra, 1995). Therefore, newcomers are not provided with a list of all other 45 newcomer but they are asked to respond open questions in which they nominate their friends and advice givers. Answers to these questions provided the raw data I used to define newcomers’ friendship and advice ties.

4.5.2.7. Control variables

Previous studies of social networks reported that demographic variables, such as gender, age, and race, may impact the formation of interpersonal ties (Brass, 1985; McPherson et al., 2001; Schulte et al., 2012). On the other hand, scholars commonly consider demographic variables to be a potential influence on the development of individuals’ psychological contracts (De Vos & Freese, 2011; Payne, Culbertson, Boswell, & Barger, 2008) and the organizational socialization of newcomers (Ashforth & Saks, 1996; Jackson, Stone, & Alvarez, 1992).

Scholars also suggest that homophily is a highly influential, relational-level social network concept premised on the notion that ‘like attracts like’, whereby individuals who are similar in traits (such as gender, race) are more likely to interact

with and develop stronger ties with each other (Jokisaari & Nurmi, 2009). To make sure that the homophily effects are not simply a result of people with similar traits clustering together, all the models in Paper 3 are controlled for gender, however the gender effects were insignificant suggesting that there is no effect of gender homophily (this will be explained in more detail in the findings section below). Furthermore, age and race were not relevant since all the newcomers belong to same race and have same nationality (Turkish). They also belong to similar age group (21-27 with an average of 24) and all are the graduates of top universities in the country. Therefore, the observed homophily effects are not the result of similarities in terms of age, gender, race, nationality, academic achievement, hierarchy levels or sharing same supervisor.

Moreover, all the participants belong to same hierarch levels and all started their first time jobs at the same time. Regarding sharing a supervisor, for times 1 and 2, supervisor was not a relevant measure since they had a training period all together at a separate place and they were not in contact with their assigned supervisors during this period. For times 3 and 4, I did not have an access to supervisor data. Thus, I controlled only for gender in the current study.

4.6. Analysis

I encountered many methodological challenges in testing my hypotheses regarding the dynamic coevolution between network ties and newcomers' psychological contract formation. Although many scholars acknowledged the dynamic and evolving nature of psychological contracts, common methodologies adopted within the psychological contract field limit the prospect of analyzing the

dynamic and evolving nature of psychological contracts empirically. Recently, debates have taken place in the field regarding the need for advancing our conceptualizations and methodologies to better understand the temporal and dynamic nature of psychological contracts (Roe, 2008; Shipp & Cole, 2015; Sonnentag, 2012). Correspondingly, the number of psychological contract scholars who are beginning to adopt different conceptualizations and methodologies considering the role of time and the dynamic nature of psychological contracts is increasing (e.g. Griep et al., 2016; Sonnentag, 2012; Tomprou et al., 2015).

Given the methodological and conceptual limitations discussed above, analyzing the dynamic and evolving nature of psychological contract is challenging on its own. However, analyzing the dynamic coevolution of network ties and psychological contract formation is even more challenging for the following two reasons. First of all, when analyzing the coevolution, to distinguish the separate effects of newcomers' psychological contract expectations on network ties (social selection effect, *homophily* mechanism) and the effects of newcomers' network ties on their perceptions (social influence effect, *assimilation* mechanism), a longitudinal approach is required. It is possible only through a longitudinal approach that we can understand the simultaneous yet separate effects of social selection and social influence (Ripley et al., 2011; Schulte et al., 2012).

Second, when considering the coevolution of social networks and any type of behavior, the formation of a network tie is not only dependent on the characteristics (in this case expectations and perceptions of newcomers) of the people to whom newcomers are tied but also dependent on the characteristics of the other people to whom that the ties of newcomers are tied within the network

(Schulte et al., 2012). In other words, to understand the mutual effects of social networks and psychological contracts, I needed to take into account (and control for) other network mechanisms that might also explain some of the variation in the hypothesized coevolution. These other network mechanisms are a form of network dependence and can be explained through various structural effects for networks. Among the most important structural network effects are reciprocity (i.e., ‘if you extend your tie to me, I will in turn extend my tie to you’), transitivity (i.e., ‘friends of my friends are my friends’) and popularity (i.e., ‘I will be friends with people who already have too many friends’) (Ripley et al., 2011; Schulte et al., 2012). Thus, any analysis that does not consider these structural network mechanisms can fall into the trap of having misleading estimates (e.g., inaccurate, falsely [in]-significant, overestimated or underestimated) for the hypothesized mutual effects of networks and behavior (Ripley et al., 2011; Schulte et al., 2012).

In my analysis, I used SIENA (Statistical Investigation for Empirical Network Analysis), a software package that social statistician Tom Snijders and colleagues developed slightly more than a decade ago at the University of Oxford (Snijders, 2005; Ripley et al., 2011). SIENA was developed to analyze longitudinal network data as well as the coevolution of networks and behavior. In SIENA, it is possible to analyze the network structure, e.g., network dependence, together with actor attributes, e.g., the psychological contract, as codependent variables of a longitudinal framework (Ripley et al., 2011). Therefore, in SIENA, one can study the constructs of a social network and actor attributes as codependent variables and investigate their coevolution over time, assuming that the data are collected according to a panel design (Ripley et al., 2011; Schulte et al., 2012). Actor

attributes can be various personal characteristics, such as behavior, expectations, perceptions, opinions and attitudes. For example, Snijders et al. (2006) applied SIENA to examine the coevolution of adolescents' friendship ties and their changing music tastes and alcohol consumption (as actor attributes). Therefore, the application range of SIENA is extensive from the smoking behavior of teenagers (e.g. Mercken, Snijders, Steglich, & de Vries, 2009) to the emergence of team psychological safety (e.g. Schulte et al., 2012). To my knowledge, the current study was the first application regarding the coevolution of newcomers' social networks and their psychological contract formation.

The properties and assumptions of SIENA enabled testing my hypotheses regarding coevolution and provided solutions to the methodological challenges I mentioned above. First of all, SIENA works with complete networks, which is a type of network that includes the whole network configuration of newcomers at the data collection points. Therefore, network mechanisms such as reciprocity, transitivity and popularity, can be controlled for in the analysis. This prevents the potential misleading predictions regarding the hypothesized coevolution of networks and psychological contracts (Ripley et al., 2017).

Second, models of SIENA are built on the assumption that the changes in both networks and actor attributes not only happen at the observed data collections points but also happen in between these observed points. This property of SIENA is reality based and encouraging because it makes it possible to empirically investigate the dynamic and unfolding nature of psychological contracts. It is logical to think that changes in newcomers' networks and psychological contracts are expected to happen continuously throughout the organizational entry and

socialization periods, not just at the time points at which the data are collected. Methodologically, SIENA uses the continuous-time Markov chain to model the continuous change between observed data points as a stochastic process (Ripley et al., 2011). Precisely, in SIENA, the total of observed changes in newcomers' social networks, psychological contract expectations, and perceptions of employer's obligations are broken down into arrays of unobserved small changes. Then, using continuous-time Markov chain properties, SIENA simulates these unobserved small changes. As a result, SIENA decides on the presumably closest array of small changes that happen between the observed data points based on the characteristics of the observed data (Snijders et al., 2006).

Last but not least, SIENA models are actor driven (Ripley et al., 2011). The fundamental assumption here is that at any stochastically determined moment (moments when these unobserved small changes happen), a member of the newcomers' network makes a decision to form or dissolve a tie to another newcomer (network change) or to update (negatively or positively) expectations and perceptions. In SIENA, these actor-driven changes are called 'micro-steps' (Ripley et al., 2011, p.51). Micro-steps are modelled through multinomial logit distribution, in which the estimated model parameters predict newcomers' personal decisions to form, maintain, or dissolve a network tie and/or increase, keep, or decrease the scale scores on their expectations and perceptions surveys. Therefore, as discussed earlier, the actor-oriented nature of SIENA also sheds light on the role of agency in psychological contract formation processes. In other words, it shows that the mutual relationship and coevolution of newcomers' networks and psychological contract formation is ingrained in human agency.

In SIENA, it is not possible to analyse different network types and different actor attributes at the same time. For example, it is not possible to analyse the relationship between friendship ties and expectations and friendship ties and perceptions in the same model. Below, Tables 7-11 capture the reciprocal relationship between expectations and friendship ties. In other words, the models represented in Tables 7-11 capture both expectations > friendship ties and friendship ties > expectations. Similarly, Tables 12-16 capture the reciprocal relationship between perceptions and friendship ties. In other words, the models represented in Tables 12-16 capture both friendship ties > perceptions and perceptions > friendship ties. Therefore, I developed models for the coevolution of expectations and friendship ties, expectations and advice ties, perceptions and friendship ties, and perceptions and advice ties separately. Because newcomers form their expectations and perceptions on five dimensions, I developed 20 separate models. In line with the recommendations of SIENA developers (see Ripley et al., 2011), I included control variables for the network structure. For models with advice networks, I included reciprocity, transitivity, and popularity. For friendship networks, I did not include reciprocity because the ties I included in the friendship networks were already reciprocal. However, transitivity and popularity were also included in the models with friendship networks.

4.7. Results

4.7.1. Descriptive statistics

Table 6 shows the means, standard deviations, and correlations of all of the study variables¹.

On average, the expectations of newcomers on the five dimensions of developing psychological contract decreased over a four-month-and-10-day period upon organizational entry: grand mean of expectations regarding (1) opportunities for career advancement from 6.49 at time 1 to 4.42 at time 4, (2) autonomy from 4.93 at time 1 to 4.24 at time 4, (3) recognition from 5.78 at time 1 to 3.93 at time 4, (4) organizational support from 5.91 at time 1 to 3.84 at time 4, and (5) fairness from 6.29 at time 1 to 4.67 at time 4. The means of expectations regarding autonomy and fairness slightly increased between time 2 and time 3 but still stayed a lot lower compared with the expectations at the time of organizational entry. The means of expectations regarding opportunities for career advancement, recognition, and organizational support kept decreasing over the course of four data collection points.

¹ Abbreviations used in Table 6: "T1, T2, T3, T4" for time 1, time 2, time 3, and time 4 of data collection points. 'Car' for career advancement, 'Aut' for autonomy, 'Rec' for recognition, 'OS' for organizational support, and 'Fair' for fairness. 'Exp' for expectations and 'Per' for perceptions. 'SD' for standard deviation.

Although the significant high correlations of all of the five dimensions of expectations between time 1 and time 2 (see Table 6) showed that newcomers did not change their psychological contract expectations much during the first 10 days of the training period upon organizational entry. However, the low to moderate correlations ranging from 0.021 to 0.38 among all of the five dimensions of expectations between time 2 and time 4 showed that newcomers shift their expectations drastically after time 2 (see Table 6).

As explained in the methodology section, I started the data collection of newcomers' psychological contract perceptions at time 2 (10 days after organizational entry—at the end of the training period). Similar to the expectations, the grand means of newcomers' psychological contract perceptions on the five dimensions also decreased over a four-month period (between time 2 and time 4 of data collection): grand mean of perceptions of employer obligations regarding (1) opportunities for career advancement from 4.53 at time 2 to 3.80 at time 4, (2) autonomy from 4.67 at time 2 to 4.49 at time 4, (3) recognition from 4.58 at time 2 to 3.91 at time 4, (4) organizational support from 4.69 at time 2 to 4.00 at time 4, and (5) fairness from 4.58 at time 2 to 4.44 at time 4. The means of newcomers' perceptions of their employer's obligations regarding autonomy and recognition slightly increased between time 2 and time 3 but still stayed lower at the end of four months (time 4) compared with the perceptions they had once they entered the department. On the other hand, the means of perceptions regarding fairness slightly increased between time 3 and time 4 but also stayed lower compared with the perceptions at time 2. The means of perceptions regarding opportunities for career advancement and organizational support kept decreasing over the course of three

data collection points. Likewise, low to moderate correlations across data collection points among five dimensions of newcomers' perceptions of their employer's obligations, ranging from 0.025 to 0.338*, showed that newcomers tended to shift their psychological perceptions regarding employer obligations throughout the socialization period.

In Table 6, friendship ties refer to the number ties that are reciprocally shared between individuals. On the other hand, advice ties refer to the number of ties that individuals send out. On average, newcomers had the highest number of friendship and advice ties (5.07 and 1.58 respectively), at time 2, which was at the end of the 10 days of the training period after entry (see Table 6). A high correlation existed among friendship ties between time 2 and time 3 (0.839**), with low correlations between time 1 and time 2 (0.296*) and time 3 and time 4 (0.243). This showed that newcomers made new friends during the first 10 days of training (time 1 to time 2), then tended to keep these friends for the first month in their department (time 2 to time 3). However, the biggest change happened after they passed the probation period, over the three months between time 3 and time 4 of data collection. All of the 45 newcomers passed probation period at the end of first month (plus 10 days training at the beginning).

For advice networks, all of the correlations between different time points were high and significant, ranging from 0.688** to 0.872**. This indicates that newcomers tend to keep their advice ties and do not change them over the period of socialization. When we look at the correlations between friendship and advice ties, we see only a high significant correlation at time 1 (0.542**). However, this changed over the period of data collection (four months and 10 days). The low to

moderate correlations, ranging from 0.048 to 0.305, across times 2, 3, and 4 between friendship and advice ties indicated that newcomers formed their advice and friendship relations with different individuals.

As mentioned earlier, I developed 20 SIENA models to test my 20 hypotheses. To keep the conditions the same, I included both homophily and assimilation effects in all of the 20 models. This also allowed me to capture any unhypothesized homophily and/or assimilation effect that could activate the coevolution of newcomers' networks and psychological contracts, i.e., a potential unhypothesized homophily effect between friendship ties and newcomer perceptions. For the sample coding script for SIENA models developed, please see Appendix 6.

What follows is an explanation of SIENA specific parameters of the model development.

4.7.2. SIENA specific parameters

As suggested in the SIENA manual, the significance of the effects were tested via *t statistic*, defined by the parameter estimate divided by its standard error. Results greater than 2 indicate significance (Ripley et al., 2011, p. 70). Then, for the significant effects, p-values were calculated in R via the following R command:

$$2*pnorm(-abs(parameter\ estimates/standard\ errors))$$

The same procedure was applied to the results of all 20 models, which will be discussed in the next sections. For all of the parameter estimates and their standard errors, please refer to Tables 7 through 11 (for model results with friendship networks) and Appendix 7 (for model results with advice networks).

As the SIENA developers recommended, I included control variables for the network structure in my model development (Ripley et al., 2017; Ripley et al., 2011). With friendship networks (see Tables 7 to 11), I tested two network control variables: transivity and popularity. Significant positive transivity parameters (significance determined via ‘parameter estimates/ standard errors > 2’) in the upper sub-models shown in Tables 7 to 11 indicate that newcomers tend to form friendships with the friends of their friends. In other words, if the transivity parameter is positive and significant, this shows that friends of friends also become friends themselves. This is also called triangle closing behaviour in social networks literature (e.g. Espelage, Green, & Wasserman, 2007; Robins, Pattison, & Wang, 2009; Wimmer & Lewis, 2010). On the other hand, significant negative popularity parameters indicate that newcomers have no tendencies to form friendships with other newcomers who already have high numbers of friends. In other words, in the studied newcomers’ friendship network, a newcomer’s having too many friends does not affect the preference of other newcomers when they decide with whom to form friendships.

With advice networks (please see Appendix 7), I tested three network control variables: transivity, popularity, and reciprocity. For transivity and popularity, the same interpretation with the friendship networks applied. The significant positive transivity parameters suggest that newcomers have a tendency to seek advice from those from whom their advice givers also ask for advice. The significant negative popularity parameters suggest that newcomers have no tendencies to seek advice from other newcomers who already have high numbers of advice seekers. As discussed earlier, friendship networks are already

reciprocated (symmetrical). Therefore, reciprocity, as a network control variable, was only included in models with advice networks. As can be seen in Appendix 7, with the advice networks, positive significant reciprocity parameters indicate that newcomer A most likely perceives newcomer B to be his/her advice giver if newcomer B also perceives newcomer A to be his/her advice giver. For further explanation regarding SIENA parameters, please see the example in footnote².

In addition to the network control variables mentioned above, degree (density) effect was also included in all of the 20 SIENA models by default. Ripley et al. (2011, p. 42) emphasized in the SIENA manual that the degree effect is so basic for network studies that it ‘cannot be left out’. In social networks literature, degree stands for network density. Density is the overall level of connectedness

² In the upper part of the Table 7, the values 5.551, 1.267 and 4.372 indicate that the estimated number of opportunities for change per actor between observation points 1 and 2 is 5.551, between observation points 2 and 3 is 1.267 and between observation points 3 and 4 is 4.372. Note that this refers to unobserved changes, and that some opportunities for change lead to the decision ‘no change’, and moreover some of these changes may cancel (make a new choice and then withdraw it again), so the average observed number of differences per actor will be smaller than this estimated number of unobserved changes. Therefore the size of the coefficients are directly related to the estimated number of opportunities for change per actor, therefore they are directly related to the change between different time points in the observed data. Same representation applies for the lower panels of the models where behavior is the dependent variable.

The other three parameters are the weights in the evaluation function. The terms in the evaluation function in this model specification are the degree effect defined as si_1 , the transitivity effect as si_2 , and popularity effect as si_3 . Therefore the estimated evaluation function here is $-0.440si_1(x) + 0.544si_2(x) - 0.214si_3(x)$

For the rate parameter, testing the hypothesis that it is 0 is meaningless because the fact that there are differences between the two observed networks implies that the rate of change must be positive. The weights in the evaluation function can be tested by t-statistics, defined as estimate divided by its standard error. (Do not confuse this t-test with the t-ratio for checking convergence; these are completely different although both are t ratios!) Here the t-values are, respectively, $-0.440/0.344 = 1.279$, $0.544/0.068 = 8$, $-0.214/0.066 = -3.242$. Since the last two are larger than 2 in absolute value, they are significant at the 0.05 significance level. It follows that there is evidence that the actors have a ‘preference’ for transitive and popular relations (Ripley et al., 2011, p. 69-70).

in a network and it is calculated through number of actual connections divided by number of potential connections (density = number of actual ties / number of potential ties) (Scott, 2017). In other words, if all the members of a network is connected with each other, the density has the value of one. Otherwise, network density has a decimal value between zero and one, representing the percent of possible links.

As can be seen in the sub-models (B) of Tables 7 to 11 and Appendix 7, two behavioral control variables were included in the SIENA models. As SIENA developers recommended, models considering the coevolution of networks and behavior, behavior linear, and quadratic shape effects practically should always be included as control variables (Ripley et al., 2017). For dependent behavior variables only with two categories, this applies only to the linear shape effect. The linear shape effect expresses the basic drive toward high values on the measured behavior. A zero value for the linear shape implies a drift toward the midpoint of the range of the behavior variable. On the other hand, the quadratic shape effect, which is relevant only if the number of behavioral categories is three or more, can be interpreted as giving a quadratic preference function for the behavior (Ripley et al., 2017).

Each of the 20 SIENA models also included two rate functions, one for the upper sub-model and one for the lower sub-model. Rate functions, for the upper sub-models (A) in Tables 7 to 11 and Appendix 7, indicated how frequently newcomers changed their friendship or advice networks. On the other hand, rate functions for the lower sub-models (B), indicated how frequently newcomers

changed their expectations or perceptions. In the next section, I present the results of 20 SIENA models developed to test the hypotheses of this study.

4.7.3. Friendship ties and newcomer's psychological contract expectations

I predicted that newcomers' friendship ties and expectations coevolve as a function of the homophily mechanism (i.e., newcomers' psychological contract expectations shape their friendship ties). Because I studied five separate dimensions of newcomer expectations that contribute to the formation of their psychological contracts, I developed five separate models in SIENA to test my five hypotheses predicting the coevolution between newcomers' friendship ties and expectations regarding opportunities for career advancement (H1A), autonomy (H1B), recognition (H1C), organizational support (H1D), and fairness (H1E); Tables 7 to 11 show the results respectively.

Each SIENA model had two sub-models treating either the network or the actor attribute as the dependent variable to understand the different parts of the co-dependency between the two variables. In Tables 7 to 11, the upper sub-models (A) present the relative newcomer expectation as the dependent variable, whereas the below sub-models (B) present the newcomers' friendship networks as the dependent variable. Consequently, the upper sub-models (A) comprise the parameter estimates of the hypothesized mechanism homophily (newcomers' psychological contract expectations shape their friendship ties) and the below sub-models (B) comprise the parameter estimates of the mechanism assimilation (newcomers' friendship ties shape their expectations).

As predicted in H1A, H1B, H1C, H1D, and H1E, newcomers formed more reciprocal friendship ties with other newcomers whose psychological contract expectations were similar to, rather than different from, their own. The upper sub-models (A) in Tables 7, 8, 9, 10, and 11 show the results regarding the significance of homophily driving the relationship between newcomers' friendship ties and expectations of opportunities for career advancement (H1A), autonomy (H1B), recognition (H1C), organizational support (H1D), and fairness (H1E) respectively. Hence, hypotheses H1A (homophily estimate: 0.36*, $p = 0.032$), H1B (homophily estimate: 0.203**, $p < 0.001$), H1C (homophily estimate: 0.838**, $p < 0.001$), H1D (homophily estimate: 1.969*, $p = 0.020$), and H1E (homophily estimate: 3.31**, $p < 0.001$) were supported. These results suggest that newcomers have a *preference* for forming reciprocal friendship ties with other newcomers with whom they share similar psychological contract expectations.

Although not hypothesized, I wondered whether an assimilation effect could take place between newcomers' friendship ties and expectations (please refer to lower sub-models [B] in Tables 7-11). However, the assimilation effect was not significant in any of the five models, meaning that there are no significant effects suggesting that newcomers' friendship ties shape their psychological contract expectations. Therefore, as hypothesized, the results of this study suggest that newcomers' friendship ties and expectations regarding opportunities for career advancement, autonomy, recognition, organizational support and fairness coevolve only as a function of the homophily mechanism.

Table 7: SIENA Simulation Estimation Results: Coevolution of Newcomers' Friendship Ties and Expectations of Opportunities for Career Advancement (H1A)

Effect	Parameter	Standard error
Sub-model (A)		
Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Friendship (period 1)	5.551*	(1.062)
rate Friendship (period 2)	1.267*	(0.216)
rate Friendship (period 3)	4.372*	(0.712)
<i>Network Control Variables</i>		
degree (density)	--0.440	(0.344)
transivity	0.544*	(0.068)
popularity	--0.214*	(0.066)
same gender.covar	0.004	(0.138)
<i>Opportunities for Career Advancement Expectations similarity (homophily) – H1A</i>	0.356*	(0.166)
Sub-model (B)		
Dependent Variable: Expectations of Opportunities for Career Advancement		
<i>Rate Function</i>		
rate Opportunities for Career Advancement (period 1)	3.086*	(1.089)
rate Opportunities for Career Advancement (period 2)	10.179*	(4.221)
rate Opportunities for Career Advancement (period 3)	6.724*	(2.896)
<i>Behavior Control Variables</i>		
behavior Opportunities for Career Advancement linear shape	0.366*	(0.093)
behavior Opportunities for Career Advancement quadratic shape	--0.077	(0.062)
behavior Opportunities for Career Advancement average alter (assimilation)	0.335	(0.201)
All convergence t ratios < 0.099.		

Overall maximum convergence ratio: 0.2070

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

Table 8: SIENA Simulation Estimation Results: Coevolution of Newcomers' Friendship Ties and Expectations of Autonomy (H1B)

Effect	Parameter	Standard error
Sub-model (A)		
Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Friendship (period 1)	5.623*	(1.094)
rate Friendship (period 2)	1.266*	(0.212)
rate Friendship (period 3)	4.425*	(0.654)
<i>Network Control Variables</i>		
degree (density)	--0.530*	(0.282)
transivity	0.555*	(0.070)
popularity	--0.205*	(0.058)
same gender.covar	0.043	(0.128)
<i>Autonomy Expectation similarity (homophily) – H1B</i>	0.203*	(0.031)
Sub-model (B)		
Dependent Variable: Expectations of Autonomy		
<i>Rate Function</i>		
rate Autonomy Expectation (period 1)	3.531*	(0.984)
rate Autonomy Expectation (period 2)	7.647*	(3.151)
rate Autonomy Expectation (period 3)	2.919*	(1.118)
<i>Behavior Control Variables</i>		
behavior Autonomy Expectation linear shape	0.247*	(0.077)
behavior Autonomy Expectation quadratic shape	--0.083*	(0.038)
behavior Autonomy Expectation average alter (assimilation)	0.233	(0.148)
All convergence t ratios < 0.091.		

Overall maximum convergence ratio: 0.2291

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

Table 9: SIENA Simulation Estimation Results: Coevolution of Newcomers' Friendship Ties and Expectations of Recognition (H1C)

Effect	Parameter	Standard error
Sub-model (A)		
Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Friendship (period 1)	5.626*	(1.037)
rate Friendship (period 2)	1.278*	(0.233)
rate Friendship (period 3)	4.435*	(0.621)
<i>Network Control Variables</i>		
degree (density)	--0.599*	(0.274)
transivity	0.546*	(0.070)
popularity	--0.191*	(0.056)
same gender.covar	0.026	(0.131)
Recognition Expectation similarity (homophily) – H1C	0.838*	(0.199)
Sub-model (B)		
Dependent Variable: Expectations of Recognition		
<i>Rate Function</i>		
rate Recognition Expectation (period 1)	1.704*	(0.582)
rate Recognition Expectation (period 2)	7.444	(4.509)
rate Recognition Expectation (period 3)	4.468*	(1.950)
<i>Behavior Control Variables</i>		
behavior Recognition Expectation linear shape	0.254*	(0.088)
behavior Recognition Expectation quadratic shape	--0.138*	(0.070)
behavior Recognition Expectation average alter (assimilation)	0.185	(0.275)
All convergence t ratios < 0.081.		

Overall maximum convergence ratio: 0.1677

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

Table 10: SIENA Simulation Estimation Results: Coevolution of Newcomers' Friendship Ties and Expectations of Organizational Support (H1D)

Effect	Parameter	Standard error
Sub-model (A)		
Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Friendship (period 1)	5.498*	(1.084)
rate Friendship (period 2)	1.257*	(0.263)
rate Friendship (period 3)	4.398*	(0.643)
<i>Network Control Variables</i>		
degree (density)	--0.562	(0.319)
transivity	0.547*	(0.077)
popularity	--0.204*	(0.071)
same gender.covar	0.000	(0.130)
Organizational Support Expectation similarity (homophily) – HID	1.969*	(0.849)
Sub-model (B)		
Dependent Variable: Expectations of Organizational Support		
<i>Rate Function</i>		
rate Organizational Support Expectation (period 1)	1.231*	(0.361)
rate Organizational Support Expectation (period 2)	5.429	(5.678)
rate Organizational Support Expectation (period 3)	4.849	(3.009)
<i>Behavior Control Variables</i>		
behavior Organizational Support Expectation linear shape	0.345*	(0.117)
behavior Organizational Support Expectation quadratic shape	--0.325	(0.233)
behavior Organizational Support Expectation average alter (assimilation)	0.488	(0.363)
All convergence t ratios < 0.10.		

Overall maximum convergence ratio: 0.1898

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

Table 11: SIENA Simulation Estimation Results: Coevolution of Newcomers' Friendship Ties and Expectations of Fairness (H1E)

Effect	Parameter	Standard error
Sub-model (A)		
Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Friendship (period 1)	5.416*	(1.116)
rate Friendship (period 2)	1.275*	(0.223)
rate Friendship (period 3)	4.375*	(0.662)
<i>Network Control Variables</i>		
degree (density)	--0.571*	(0.281)
transivity	0.553*	(0.069)
popularity	--0.207*	(0.068)
same gender.covar	0.023	(0.141)
<i>Fairness Expectation similarity (homophily) – H1E</i>	3.304*	(0.964)
Sub-model (B)		
Dependent Variable: Expectations of Fairness		
<i>Rate Function</i>		
rate Fairness Expectation (period 1)	7.167	(4.191)
rate Fairness Expectation (period 2)	8.748*	(4.093)
rate Fairness Expectation (period 3)	3.304*	(1.420)
<i>Behavior Control Variables</i>		
behavior Fairness Expectation linear shape	0.357*	(0.092)
behavior Fairness Expectation quadratic shape	--0.051	(0.054)
behavior Fairness Expectation average alter (assimilation)	0.145	(0.254)
All convergence t ratios < 0.071.		

Overall maximum convergence ratio: 0.1812

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

4.7.4. Friendship ties and newcomer's perceptions of their employer's obligations

I predicted that newcomers' friendship ties and perceptions of their employer's obligations, which they started to form after organizational entry, coevolve as a function of the mechanism assimilation (i.e., friendship ties shape newcomers' perceptions of their employer's obligations). Similar to expectations, I developed five separate models in SIENA to test my five hypotheses predicting the coevolution between newcomers' friendship ties and perceptions regarding opportunities for career advancement (H2A), autonomy (H2B), recognition (H2C), organizational support (H2D), and fairness (H2E); Tables 12, 13, 14, 15, and 16 show the results respectively. Similar to the models with newcomer expectations, each SIENA model concerning the coevolution of newcomers' friendship networks and perceptions had two sub-models. In Tables 12 to 16, the upper sub-models (A) present the newcomers' friendship networks as the dependent variable; in return, the below sub-models (B) present the relative newcomer perceptions as the dependent variable.

As predicted in H2A, H2B, H2C, H2D, and H2E, newcomers' perceptions of their employer's obligations regarding providing opportunities for career advancement, autonomy, recognition, organizational support, and fairness became similar to other newcomers with whom they shared reciprocal friendship ties. Therefore, the hypotheses H2A (assimilation estimate: 0.678*, $p = 0.022$), H2B (assimilation estimate: 0.656*, $p = 0.033$), H2C (assimilation estimate: 0.669**, $p = 0.001$), H2D (assimilation estimate: 0.925*, $p = 0.039$), and H2E (assimilation estimate: 0.906*, $p = 0.013$) were supported. Please see the full results in Tables

12, 13, 14, 15, and 16 respectively. The same procedure of the significance test (parameter estimate/ standard deviation > 2) and calculations of p-values applied as explained in the previous section.

Similarly to the models with friendship ties and expectations, although not hypothesized, I wondered whether a homophily effect could exist between newcomers' friendship ties and perceptions (please see the upper sub-model (B) of Tables 12-16). However, the homophily effect was not significant in any of the five models. Therefore, the results suggest that newcomers' friendship ties and perceptions regarding opportunities for career advancement, autonomy, recognition, organizational support, and fairness coevolve only as a function of the assimilation mechanism.

Table 12: SIENA Simulation Estimation Results: Coevolution of Newcomers' Friendship Ties and Perceptions of Opportunities for Career Advancement (HA2)

Effect	Parameter	Standard error
Sub-model (A)		
Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Friendship (period 1)	1.278*	(0.209)
rate Friendship (period 2)	4.368*	(0.644)
<i>Network Control Variables</i>		
degree (density)	--0.395	(0.611)
transivity	0.480*	(0.115)
popularity	--0.240	(0.123)
same gender.covar	0.118	(0.246)
Opportunities for Career Advancement Perception similarity (homophily)	--0.036	(1.304)
Sub-model (B)		
Dependent Variable: Perceptions of Opportunities for Career Advancement		
<i>Rate Function</i>		
rate Opportunities for Career Advancement Perception (period 1)	2.809*	(0.886)
rate Opportunities for Career Advancement Perception (period 2)	8.264	(14.099)
<i>Behavior Control Variables</i>		
behavior Opportunities for Career Advancement Perception linear shape	--0.135	(0.157)
behavior Opportunities for Career Advancement Perception quadratic shape	--0.349*	(0.135)
<i>Behavior Opportunities for Career Advancement Perception average alter (assimilation) – H2A</i>	0.678*	(0.297)
All convergence t ratios < 0.093.		

Overall maximum convergence ratio: 0.1829

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

Table 13: SIENA Simulation Estimation Results: Coevolution of Newcomers' Friendship Ties and Perceptions of Autonomy (H2B)

Effect	Parameter	Standard error
Sub-model (A)		
Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Friendship (period 1)	1.267*	(0.211)
rate Friendship (period 2)	4.349*	(0.615)
<i>Network Control Variables</i>		
degree (density)	--0.399	(0.455)
transivity	0.474*	(0.115)
popularity	--0.238*	(0.087)
same gender.covar	0.127	(0.193)
Autonomy Perception similarity (homophily)	--0.149	(1.440)
Sub-model (B)		
Dependent Variable: Perception of Autonomy		
<i>Rate Function</i>		
rate Autonomy Perception (period 1)	2.792*	(0.935)
rate Autonomy Perception (period 2)	8.086*	(4.018)
<i>Behavior Control Variables</i>		
behavior Autonomy Perception linear shape	--0.140	(0.097)
behavior Autonomy Perception quadratic shape	--0.342*	(0.119)
<i>behavior Autonomy Perception average alter (assimilation) – H2B</i>	0.656*	(0.309)
All convergence t ratios < 0.049		

Overall maximum convergence ratio: 0.1579

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

Table 14: SIENA Simulation Estimation Results: Coevolution of Newcomers' Friendship Ties and Perceptions of Recognition (H2C)

Effect	Parameter	Standard error
Sub-model (A)		
Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Friendship (period 1)	1.255*	(0.210)
rate Friendship (period 2)	4.336*	(0.611)
<i>Network Control Variables</i>		
degree (density)	--0.545	(0.500)
transivity	0.461*	(0.133)
popularity	--0.221*	(0.093)
same gender.covar	0.116	(0.207)
Recognition Perception similarity (homophily)	0.802	(1.599)
Sub-model (B)		
Dependent Variable: Perception of Recognition		
<i>Rate Function</i>		
rate Recognition Perception (period 1)	2.934*	(0.835)
rate Recognition Perception (period 2)	9.779	(4.939)
<i>Behavior Control Variables</i>		
behavior Recognition Perception linear shape	--0.110	(0.091)
behavior Recognition Perception quadratic shape	--0.335*	(0.121)
<i>behavior Recognition Perception average alter (assimilation) – H2C</i>	0.669*	(0.216)
All convergence t ratios < 0.062.		

Overall maximum convergence ratio: 0.1178

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

Table 15: SIENA Simulation Estimation Results: Coevolution of Newcomers' Friendship Ties and Perceptions of Organizational Support (H2D)

Effect	Parameter	Standard error
Sub-model (A)		
Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Friendship (period 1)	1.263*	(0.216)
rate Friendship (period 2)	4.516*	(0.741)
<i>Network Control Variables</i>		
degree (density)	--0.716	(0.406)
transivity	0.442*	(0.106)
popularity	--0.190*	(0.081)
same gender.covar	0.098	(0.181)
Organizational Support Perception similarity (homophily)	1.647	(1.178)
Sub-model (B)		
Dependent Variable: Perception of Organizational Support		
<i>Rate Function</i>		
rate Organizational Support Perception (period 1)	9.026	(6.015)
rate Organizational Support Perception (period 2)	2.522*	(0.986)
<i>Behavior Control Variables</i>		
behavior Organizational Support Perception linear shape	0.241*	(0.109)
behavior Organizational Support Perception quadratic shape	--0.316	(0.185)
<i>behavior Organizational Support Perception average alter (assimilation) – H2D</i>	0.925*	(0.450)
All convergence t ratios < 0.076.		

Overall maximum convergence ratio: 0.2448

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

Table 16: SIENA Simulation Estimation Results: Coevolution of Newcomers' Friendship Ties and Perceptions of Recognition (H2E)

Effect	Parameter	Standard error
Sub-model (A) Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Friendship (period 1)	1.261*	(0.306)
rate Friendship (period 2)	4.481*	(0.622)
<i>Network Control Variables</i>		
degree (density)	--0.655	(0.464)
transivity	0.449*	(0.120)
popularity	--0.202*	(0.082)
same gender.covar	0.097	(0.203)
Fairness Perception similarity (homophily)	1.620	(3.376)
Sub-model (B) Dependent Variable: Perception of Fairness		
<i>Rate Function</i>		
rate Fairness Perception (period 1)	9.004	(22.003)
rate Fairness Perception (period 2)	2.457*	(1.031)
<i>Behavior Control Variables</i>		
behavior Fairness Perception linear shape	0.250	(0.402)
behavior Fairness Perception quadratic shape	--0.303	(0.276)
<i>behavior Fairness Perception average alter (assimilation) – H2E</i>	0.906*	(0.365)
All convergence t ratios < 0.1.		

Overall maximum convergence ratio: 0.2361

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

4.7.5. Advice ties and newcomer's psychological contract expectations

I predicted that newcomers' advice ties and expectations would coevolve as a function of the homophily mechanism (i.e., newcomers' expectations shape their advice ties). Again, I developed five separate models in SIENA to test my five hypotheses predicting the coevolution between newcomers' advice ties and expectations regarding opportunities for career advancement (H3A), autonomy (H3B), recognition (H3C), organizational support (H3D), and fairness (H3E). As with the previous models, I also included both homophily and assimilation effects to see whether there was any un-hypothesised assimilation effect. However, no hypothesized homophily effects or unhypothesized assimilation effects were found. Therefore, none of the H3A, H3B, H3C, H3D and H3E were supported. For the tables executing the results of the models with newcomers' advice ties and expectations please refer to Appendix 7.

4.7.6. Advice ties and newcomer's perceptions of their employer's obligations

As with newcomers' friendship ties and perceptions, I predicted that newcomers' advice ties and perceptions would also coevolve as a function of the assimilation mechanism (i.e., newcomers' advice ties shape their perceptions). Again, I developed five separate models in SIENA to test my five hypotheses predicting the coevolution between newcomers' advice ties and perceptions regarding opportunities for career advancement (H4A), autonomy (H4B), recognition (H4C), organizational support (H4D), and fairness (H4E). As with the previous models, I also included both homophily and assimilation effects to see whether there was any un-hypothesised homophily effect. However, no hypothesized assimilation effects or unhypothesized homophily effects were found.

Therefore, none of the H4A, H4B, H4C, H4D and H4E were supported. For the tables executing the results of the models with newcomers' advice ties and perceptions, please refer to Appendix 7.

The control variable gender was not significant in any of the 20 SIENA models, suggesting that gender differences did not play any role in the coevolution of newcomers' networks and psychological contract related expectations and perceptions.

4.8. Discussion

Proposing that newly forming psychological contracts are both the products and predictors of newcomers' social relationships, I built and tested a framework to analyse two dynamic mechanisms, homophily and assimilation, that drive the coevolution of newcomers' psychological contract expectations and perceptions regarding their employer's obligations and social interactions. The framework and its outcomes elucidate the complex, dynamic, interconnecting, and multidimensional mechanisms through which newcomers' psychological contracts and social relationships may coevolve. Therefore, this study's findings challenge earlier views of a unidirectional and relatively static relationship of social interactions' influence on employees' psychological contracts.

In the two social networks that I investigated, all of the hypotheses regarding the coevolution of newcomers' friendship networks and their psychological contract formation were fully supported, but the findings did not provide any support for the hypotheses considering the coevolution of newcomers' advice networks and their psychological contract formation.

4.8.1. Homophily mechanisms: social selection

This study's findings provide full support of the hypotheses positing that the homophily mechanism drives the coevolution of newcomers' psychological contract expectations and friendship relationships (H1A, H1B, H1C, H1D, and H1E). In other words, newcomers showed a preference to form friendship ties with other newcomers who had similar expectations to their own. Therefore, it is evident that, once individuals join the organization, their expectations regarding their employer's obligations are an instrument through which they choose with whom to form friendships and that they choose others who have similar expectations. This finding is important in two ways. Firstly, it provides evidence that employee's psychological contract expectations were influential in shaping workplace social interactions. Newcomers with similar expectations preferred to become friends with each other and potentially continued to influence each other's opinions. Secondly, it provides evidence that the relationship between social interactions and psychological contracts is not unidimensional and static but is multidimensional and dynamic. Not only did social interactions influence psychological contract expectations, but psychological contract expectations did also influence how newcomers chose to interact with each other.

On the other hand, the findings did not support the hypotheses positing that the homophily mechanism drives the coevolution of newcomers' psychological contract expectations and their advice relationships (H3A, H3B, H3C, H3D, and H3E). In other words, newcomers did not show any preference to seek advice from other newcomers who had similar expectations to their own. Usually, advice relationships are formed based on status and expertise (Gibbons, 2004; Krackhardt,

1992; Nebus, 2006). However, given the nature of the study, it was hypothesized that having similar expectations could potentially be influential for newcomers' advice relationship formation amongst themselves. All of the participants were similarly aged newcomers who started their first job at the same time, thus there were no significant differences in status and expertise amongst them that could potentially influence from whom they sought advice. Although I initially hypothesized that having similar expectations might provide a safe ground for newcomers activating advice seeking behavior from other newcomers, after collecting the advice networks data, it was not surprising to find no support for these hypotheses. The advice ties of newcomers amongst themselves were quite sparse and were relatively static over time compared to the friendship networks. Therefore, there was not enough change in the newcomers' advice networks that could potentially be the result of any shared expectation, attitude or behavior. I believe future research should test these hypotheses with advice networks that include existing organizational members with more status and expertise than the newcomers, since earlier research noted that status and expertise were the main drivers of advice seeking (Nebus, 2006).

4.8.2. Assimilation mechanism: social influence

Similar to homophily mechanism explained above, the findings of the study provided full support for the hypotheses positing that the assimilation mechanism drives the coevolution of newcomers' friendship ties and their psychological contract perceptions (H2A, H2B, H2C, H2D, and H2E). In other words, the psychological contract perceptions of newcomers regarding their employer's obligations became considerably similar to their friends' perceptions. Therefore, it

is evident that once individuals start forming their friendship relations with other newcomers, their friends' perceptions influence how newcomers themselves form, evaluate, and update their own perceptions over time. This finding is important in two ways. Firstly, it provides evidence and confirms the earlier assertions that social relationships are influential in shaping employees perceptions (De Vos et al., 2005; Morrison, 2002; Rousseau, 1995). Findings showed that newcomers were influenced by their friends' perceptions; and over time perceptions of newcomers, who shared friendship ties, became similar to each other. Secondly, this finding also provides evidence that the relationship between social interactions and psychological contracts is not unidimensional and static but is multidimensional and dynamic.

In general, the study results provided evidence that two mechanisms, homophily and assimilation, drive the coevolution of newcomers' psychological contracts and friendship ties, starting from the first day of new employment and throughout the socialization period. Regarding the social selection part of the coevolution (in which behavior influenced the networks), the results showed that newcomers' psychological contract expectations influenced their preference regarding whom they choose to form friendships with; in fact, they chose other newcomers with similar expectations (the homophily mechanism). Regarding the social influence part of the coevolution (in which networks influenced behavior), newcomers' friendship ties influenced newcomers' perceptions of their employer's obligations; in fact, newcomers' perceptions of their employer's obligations became closer to those of their friends (the assimilation mechanism). Put simply, friends' perceptions became closer to each other's over the duration of

organizational socialization. In line with the earlier studies, these results showed us the extent that informal relationships, such as friendship, are influential on how individuals perceive their employment relationship (Dabos & Rousseau, 2013; Olk & Gibbons, 2010). However, unlike the earlier studies, the results of this study also showed that this influence is not unidirectional but is bidirectional. Similar expectations regarding employer obligations bring newcomers together and trigger the formation of friendship ties, and eventually these friendship ties influence how newcomers perceive their employment relationships. In conclusion, newcomers' friendship ties and their psychological contract formation (through evaluation of their expectations and formation of new perceptions regarding employer obligations) coevolve from the beginning of the employment relationship.

As a result, the framework and findings of this study put emphasis on the two-way, reciprocating, dynamic and intertwining nature that newcomers' social network ties and psychological contracts coevolve. This coevolution explains how psychological contracts and social networks codependently unfold over time; by shaping newcomers' psychological contract expectations and perceptions upon organizational entry, and by sculpting their social networks that are newly forming.

4.8.3. Limitations and strengths of the study

In this study, 45 newcomers were studied at four time points, starting from the morning of the first day of their employment, over 4 months and 10 days period. This was one of the strengths of this study, since it allowed me to capture newcomers' psychological contract expectations at the time they joined the organization before they had the chance to observe their new workplace. It also allowed me to capture the initial network relationships that newcomers formed,

potentially based on first impression. The rest of the data collection points within the period of 4 months and 10 days was decided based on important organizational events, such as the end of training (time 2), the day newcomers obtained their own access code to customer information (time 3), and the day human resources perceived as the end of socialization period in the subject company (time 4). Therefore, I captured the full duration of the socialization period and used important milestones, at which potential changes in perceptions and network structures could occur, as data collection points. I also captured the directions of the homophily (expectations influence networks) and assimilation (networks influence perceptions) mechanisms. Furthermore, newcomers were asked to nominate other newcomers as their network ties, friendship or advice, rather than being asked dichotomous ‘yes’ or ‘no’ questions, such as ‘is this person (name) your friend?’ This way, I had more insight into the network ties of the newcomers and thus into the way the newcomers’ network ties evolved over time.

Nevertheless, the unique nature of the sample and conditions, namely 45 newcomers starting their job at the same time in the same department, was both the study’s limitation and its strength. It was a limitation because of generalizability considerations; it is not typical for traditional organizations to hire 45 newcomers together, give them ten days of training together, and then make them work in the same office space together throughout the socialization period. Having such a physically connected cohort of newcomers might have accelerated the hypothesized coevolution; that is, it might have heightened the impact of newcomers’ psychological contract expectations in shaping friendship ties among themselves and the impact of friendship ties in shaping newcomers’ psychological contract

perceptions. It was also a limitation in the sense that only the network ties among newcomers were investigated, but other existing organizational members were not included in the networks. In network studies, especially with complete networks, one has to limit the number of actors. Forty-five is already a considerable number of actors for complete network studies, since the data had to be collected from all the network members. In addition, there was only a limited number of people an actor could nominate as their friend or advice giver. This becomes harder with large groups of people. There were also practical limitations at the time of data collection, such as the need to access all the members of the department, and difficulty controlling for the environment, such as people being on rotation and not being physically present in the department during different fieldwork times.

On the other hand, studying a group of 45 newcomers is also a strength of this study. As mentioned above, it is not usually possible to have this many newcomers starting their new job together and staying together over the course of socialization. In many organizations newcomers start in small batches, therefore it is not possible to have enough number of newcomers to track over time and study their psychological contract formation in relation to their networks. There are organizations that hire in big batches, such as consultancy firms, but in those cases, the newcomers are spread across different teams and lose connection with each other. Yet, for a complete longitudinal network study, they must be connected to each other. This could be one of the many practical setbacks causing the lack of studies concerning the dynamic psychological contract formation that unfolds throughout time and coevolves with network ties. The unique sample of this study overcomes this setback.

I believe the lack of support for hypotheses considering the advice networks (H3A, H3B, H3C, H3D, H3E, H4A, H4B, H4C, H4D, and H4E) could be the result of the limitations regarding the uniqueness of the sample. Since advice networks are conducted among the newcomers themselves, the reported advice ties were sparse and were relatively still, compared to the dynamic and changing friendship ties. Future studies should test these hypotheses with different samples that include other organizational members with more status and expertise, including supervisors and managers.

Moreover, the sample was younger than the average workforce age. There is research suggesting that younger individuals may be more prone to assimilation effects (Schulte et al., 2012; Sears, 1986). Although this limits the generalizability of the findings to the overall workforce, the findings shed light on the assimilation effects' impact on employees that are entering the workforce. Therefore, the findings also offer insights into dynamics of first-time job seekers' recruitment and selection processes as well as their adaptation and socialization processes.

Finally, although I included gender as a study control variable, and density, popularity, and reciprocity (only with advice ties) effects as network control variables; I cannot exclude the probability that the findings of this study were influenced by other un-observed variables, such as newcomers' predispositions. Future research, therefore, should replicate the results of this study with different samples, conditions, and possibly different control variables that are suitable for the relevant samples and conditions.

4.8.4. Future research

The framework and findings of this study open up new directions for future research. Even though I examined the psychological contract formation through the interplay between newcomers' social networks, expectations and perceptions of opportunities for career advancement, autonomy, recognition, organizational support, and fairness, I foresee that other employee behaviors (e.g., job performance and organizational citizenship behavior), attitudes (e.g., organizational commitment and job satisfaction) and affect (e.g., anger, enthusiasm, and nervousness) can also be products and predictors of employees' social network relationships. However, the mechanisms through which network ties and other employee behaviors, attitudes, and affects coevolve may differ. As a direction for future research, this is an exciting opportunity that signifies the possibility of investigating differing frameworks to better capture the coevolving procedures in organizations.

For example, investigating how positive and negative emotions are influenced by social relationships could be a fruitful direction for future research. Correspondingly, sensemaking can be utilized as a mechanism, to explain the relationship between emotions and social networks. As discussed in Chapter 2 (Paper 1), social relationships are important sources that facilitate employees' sensemaking (De Vos et al., 2005). On the other hand, sensemaking can also facilitate the formation of certain social relationships. Besides, sensemaking would be prolonged with negative emotions, but people tend to fit positive emotions into their existing mental schemas (Maitlis & Sonenshein, 2010; Maitlis, Vogus, & Lawrence, 2013). Therefore, the coevolution of employees' networks and their

emotions can be investigated through the sensemaking mechanism to better understand how social relationships at work contribute to positive and negative employee emotions. Therefore, I suggest that future research extend the findings of this study and elucidate the other potential mechanisms driving the coevolution of network ties and employee emotions, behavior, attitudes and affect.

Future research should also extend the findings of this study by exploring the coevolution of several types of networks and newcomer's psychological contract formation in the same model. Given the restrictions of SIENA, I developed different models for newcomers' friendship and advice networks along with their applicable expectations and perceptions. However, it is also possible that newcomers' friendship and advice ties coevolve together and jointly influence psychological contract formation. Yet, with the current available methodological tools, it is impossible to capture this empirically. For instance, we do not know yet whether and how the homophily mechanism between two newcomers is influenced by the fact that the two newcomers share both friendship and advice ties. Therefore, we need to develop further methodological, empirical, and conceptual tools to address these important enquiries.

As another fruitful direction for future research, I encourage scholars to investigate how social networks influence perceptions regarding (un)met expectations. Since the focus of this study was on the formation process of newcomers' psychological contract expectations and perceptions in relation to social networks, I gathered expectations and perceptions data separately. As a future direction, the lagged or simple mathematical difference of the expectation and perception scores could be treated as a measure of newcomers' (un)met

expectations. Although (un)met expectations are not same as perceptions of psychological contract fulfillment/breach, it might be exciting to see how early perceptions of (un)met expectations coevolve with social relationships. SIENA analysis can be performed to investigate whether homophily and assimilation mechanisms are also influential in determining how newcomers develop perceptions regarding whether their expectations are met or not. Therefore, I strongly encourage scholars who are interested in early psychological contract breach perceptions to consider (un)met expectations and investigate the concept in relation to newcomers' social relationships.

Furthermore, future research should also investigate deeper into the different stages of psychological contract formation and determine how these different stages influence the hypothesized mechanisms of coevolution. In this study, I investigated how newcomers' psychological contract expectations and perceptions change over a period of 4 months and 10 days. However, the development of a psychological contract is dynamic and unfolds throughout the employment relationship (Conway & Briner, 2005). Therefore, employees' psychological contract expectations, perceptions and beliefs will evolve after the socialization period as well. Future research should distinguish between the coevolution dynamics of psychological contract development in its early and later stages, since the mechanisms of coevolution between network ties and psychological contract may differ at different employment stages.

Moreover, I focused on young newcomers who were beginning their first full-time employment relationship. It is also important that future research focus on concurrent psychological contract and social network formation for more mature

employees who have changed organizations throughout their careers. Correspondingly, future research should also consider employees' earlier experiences, personality and predispositions in addition to their expectations and perceptions. Scholars suggested that employee pre-dispositions are important psychological contract formation contributors (Rousseau, 1995; Shore & Tetrick, 1994).

Finally, as mentioned in the limitations section, future research should test this study's hypotheses with different samples that include both newcomers and existing organizational members, to better understand the coevolution of advice networks and psychological contract formation. People form advice ties based on status and expertise (Nebus, 2006), therefore, in addition to the newcomers themselves, other organizational members with more status and expertise (e.g., managers, older and more experienced colleagues) should be included in future research to capture the dynamics between advice ties and newcomers' psychological contract formation.

4.8.5. Practical implications

The findings of this study offer human resources managers several ways to improve their organizations' socialization process effectiveness. First of all, the findings suggest that human resources managers should pay closer attention to newcomers' psychological contract expectations, both before and after they join the organization. The results regarding the homophily mechanism suggest that expectations influence how newcomers prefer to form friendship ties with other newcomers in their new work environment, which eventually, as suggested by the

assimilation mechanism findings, influence their perceptions of the employer's obligations.

Secondly, if managers understand newcomers' psychological contract expectations and succeed in establishing compatible newcomer groups (for training or any other socialization events), they will impact the formation of more balanced friendship relationships within the new cohort of newcomers; this might minimize polarization among the newcomer groups and could influence the formation of well-adjusted and well-matched newcomer perceptions regarding employer obligations.

Thirdly, the findings of this study highlight the importance of induction programmes for psychological contract formation. Successful induction programmes are vital for organizations to align newcomer expectations with organizational reality. The findings of this study showed that newcomer expectations are important contributors to how friendship relationships are formed in organizations. It is also shown that friendship relationships influence newcomers' perceptions regarding employer's obligations. Therefore, through successful induction programmes, organizations can help newcomers to adjust their expectations regarding what the organization can offer them early in the employment relationship. Hence, newcomers' psychological contract expectations become closer to reality, fostering formation of more coherent friendship ties and developing positive perceptions as a consequence.

Fourthly, the findings also suggest that it might be useful for human resources managers to focus on key newcomers who, compared to the rest of the

group, have unrealistically high expectations. These individuals are likely to form friendships with others who also have high expectations, and this might influence them to form negative perceptions once they face reality. It might be a practical idea for human resources managers to separate individuals with unrealistically high expectations, so they can form friendships with people with more realistic expectations and can eventually form more realistic psychological contract perceptions themselves; this can potentially prevent perceptions regarding early psychological contract breach.

4.9. Conclusion

Psychological contract scholars acknowledged that psychological contracts are dynamic and unfold over time (Conway & Briner, 2005; Tomprou & Nikolaou, 2011). However, this acknowledgement has remained broadly conceptual rather than empirical. On the other hand, organizational scholars posited that social interactions influence various employee outcomes. Although this notion has also remained broadly conceptual, few studies empirically tested the impact of social interactions on organizational socialization effectiveness (Morrison, 2002), and perceptions of psychological contract breach (Ho et al., 2006). However, all of these studies employed a unidirectional lens regarding network ties' influence on employee outcomes, apart from Schulte et al.'s (2012) study examining the interplay between teams' network ties and their perceptions of psychological safety. Moving beyond the conceptual work regarding the dynamic nature of psychological contracts and extending the work of Schulte et al. (2012), the framework and empirical findings of this study offer a deeper insight of various ways in which

employees' psychological contract elements influence and are influenced by their network ties.

Moreover, with the recent efforts of Roe (2008) and Shipp and Cole (2015), organizational scholars have been discussing employing a temporal lens in both our conceptualizations and our methodologies to better understand the dynamic organizational processes. Echoing these notions, the novel simulation methodology used in this study (SIENA) offers the opportunity of inclusion of time in studying dynamic coevolution between social networks and employee behavior. In response to earlier calls from eminent organizational scholars advocating extending the understanding of psychological contract formation (De Vos et al., 2003, 2005; De Vos & Freese, 2011; Rousseau, 1995, 2001; Tomprou & Nikolaou, 2011), the dynamic nature of psychological contracts (Conway & Briner, 2005; Hansen & Griep, 2016; Rousseau et al., 2016; Tomprou et al., 2015), and the inclusion of time in organizational studies (Roe, 2008; Shipp & Cole, 2015), I embraced the complexity of the evolving nature of psychological contracts together with social networks. I hope the discoveries of this study will shed light on these issues and will motivate social network scholars and organizational researchers to further extend our knowledge of psychological contracts and social networks.

Chapter 5

Discussion

5.1. Chapter Overview

The main purpose of my thesis is to explore the antecedents of dynamic psychological contracts through a series of three papers, which investigate how pre-entry expectations and social interactions shape the formation process of newcomers' psychological contracts. The preceding three chapters (Papers 1, 2, and 3) present different theoretical frameworks and empirical findings that capture the complex nature of psychological contracts. I discussed the individual findings and contributions of the three papers separately in their relative discussion chapters. In this chapter, I assemble all the key findings together and present broader contributions and insights of my thesis.

The structure of this chapter is as following. Firstly, I start with a brief summary of the contributions of individual papers. Secondly, I pull all of the contributions of the separate papers together and explain the overall theoretical, methodological and practical implications of my thesis. Thirdly, I discuss limitations and offer directions for future research. Finally, I close with concluding thoughts.

5.2. Summary of the Key Findings and Contributions of Individual Papers

The following is a brief summary of the findings and contributions of Papers 1, 2, and 3 of my thesis.

Paper 1: The role of social networks in psychological contract formation: A Sensemaking Model

Paper 1 of my thesis is a theoretical piece that postulates the concurrent formation of newcomers' social relationships and psychological contracts from a sensemaking perspective. The paper introduces a two-way process model of the coevolution of psychological contracts and social relationships from pre-entry to the post-entry period. In the theoretical model, prospective and retrospective sensemaking mechanisms drive the proposed coevolution at different periods of the employment relationship. The key contribution of this paper is the establishment of a theoretical model, which captures the dynamic nature of the psychological contracts and explains how and why the social relationships are important building blocks of the psychological contract through sensemaking.

Paper 2: A Grounded Investigation of Pre-entry Expectations and Millennial Graduates' Anticipatory Psychological Contracts

Paper 2 is particularly concerned with the pre-entry expectations of future employees, which was proposed as one of the antecedents of psychological contracts in the theoretical model established in Paper 1. Paper 2 comprises a qualitative empirical study that investigates the pre-entry expectations and content dimensions of millennials' anticipatory psychological contracts. The findings of this study suggest that millennials predominantly focus on five expectations prior to employment. These five expectations include (1) opportunities for career advancement, (2) autonomy, (3) recognition, (4) organizational support and (5) fairness. Among these five expectations, autonomy and intangible recognition were

the least grounded themes in the literature and were therefore the least expected themes to emerge from the interview data. The key contribution of this paper is the conceptualization of pre-entry time in the psychological contract formation process. Paper 2 shows the importance of pre-entry expectations in shaping employees' anticipatory psychological contracts, which has been shown to guide employees' behavior and sensemaking once they join the organization (Mabey et al., 1996).

Paper 3: Coevolution of newcomers' social networks and psychological contracts: A dynamic empirical investigation of the interplay between expectations, perceptions, and network ties

Paper 3 is a quantitative empirical study that examines the mechanisms of homophily and assimilation as the driving forces of coevolution between newcomers' psychological contract formation and social network ties. This study shows the complex, dynamic, interconnecting and multidimensional mechanisms through which psychological contracts and social relationships coevolve in the workplace. Therefore, the findings of this study challenge earlier understandings of the unidirectional and static relationship regarding social interactions' influence on employees' psychological contracts. Adding to the model development in Paper 1, this paper provides empirical evidence regarding the coevolution between newcomers' psychological contracts and social network ties during the organizational socialization period. Another key contribution of this study is the introduction of a novel simulation methodology (SIENA) to the study of psychological contracts. SIENA allows researchers to empirically explore the dynamic nature of psychological contracts. The findings of Paper 3, through

utilization of SIENA, shows that psychological contracts are both the products and predictors of employees' social network ties. The application area of SIENA is not limited to employees' expectations and perceptions. It can be applied to a wide range of employee outcomes; such as attitudes, beliefs, affect and behavior, in order to capture the dynamic relationship between people side of organizations and social network ties.

5.3. Overall Contributions and Implications of This Thesis

This section discusses the overall contributions and implications of my thesis from a broader perspective. First, I highlight the overall theoretical implications in relation with the common themes of my thesis. Later, I discuss the methodological and practical implications.

5.3.1. Theoretical implications and themes of this thesis

Although each paper is separate and follows a different line of investigation, Papers 1, 2, and 3 are linked through two common themes: (1) antecedents of psychological contracts and (2) the dynamic nature of psychological contracts. These two themes are synthesized from the knowledge gaps and debates of psychological contract literature. What follows is the explanation of these themes in relation to the discussion of contributions and theoretical implications of my thesis.

5.3.1.1. Antecedents of psychological contracts

The first theme of my thesis is related to the antecedents of psychological contracts. In general terms, all the three papers in my thesis are concerned with the formation of psychological contracts through two potential antecedents: social relationships and pre-entry expectations. Papers 1 and 3 focus on the social relationships as the antecedents of psychological contracts. In Papers 1 and 3, I conceptualize the coevolution of social relationships and formation of psychological contracts through different mechanisms: sensemaking and homophily/assimilation. Paper 2 focuses on pre-entry expectations and their shaping role on millennials' anticipatory psychological contracts, which influence the formation of millennial employees' psychological contracts once they join the organization (Mabey et al., 1996). Moreover, in the theoretical model in Paper 1, pre-entry expectations are also postulated as antecedents of newcomers' psychological contracts, which influence the coevolution of social networks and psychological contracts upon organizational entry.

Social relationships as antecedents of psychological contracts:

Psychological contract scholars acknowledged the importance of social relationships as antecedents of psychological contracts. Rousseau (1995) conceptualized the influence of social cues on the creation of individuals' psychological contracts. Similarly, Shore and Tetrick (1994) emphasized the influence of interactions between newcomers and organizational agents on the formation of psychological contracts. Nelson and Quick (1991) studied the significance of social relationship for psychological contract formation through the lens of attachment theory. Nelson and Quick (1991) argued that newcomers

instinctually feel the need to attach with others in the organization; only after they form secure attachments can positive psychological contracts be formed. More recently, De Vos and colleagues (De Vos, 2005; De Vos et al., 2003; De Vos et al., 2009; De Vos & Freese, 2011) highlighted the link between social relationships and newcomers' information-seeking behavior during the socialization period, in which psychological contracts are dynamically formed.

However, it is evident that these scholarly attempts faced practical challenges, since empirical evidence regarding how social relationships influence the formation of psychological contracts has, to date, been limited. One of the major aims of my thesis is to contribute to this knowledge gap. The theoretical frameworks in Papers 1 and 3 extend the earlier conceptualizations and establish testable frameworks regarding the coevolution of social relationships and psychological contracts. Moreover, the findings of Paper 3 provide strong empirical evidence concerning the relationship between newcomers' social network ties and their psychological contract expectations and perceptions of employer's obligations.

Paper 1 of my thesis is a theoretical piece that extends earlier conceptualizations by explaining how and why social relationships influence formation of newcomers' psychological contracts. By focusing on the unfolding, ongoing, and continuous episodes of action and cognition drawn from Weick's (1995) sensemaking theory, as well as inclusion of prospective sensemaking, Paper 1 contributes to the literature by developing a testable model that postulates the joint formation of social relationships and psychological contracts and the extent to which they concurrently influence each other's evolution.

Paper 3 of my thesis is an empirical investigation of the coevolution between newcomers' social relationships and formation of psychological contracts. Specifically, this paper particularly extends the earlier sociological perspectives on newcomers' psychological contract formation (De Vos et al., 2005) and socialization processes (Morrison, 2002). It investigates the influence of newcomers' friendship and advice networks on newcomers' psychological contract expectations and perceptions of five distinct employer obligations. However, the theoretical implications of Paper 3 move beyond that. In Paper 3, I test a theoretical framework that postulates the homophily and assimilation mechanisms as the driving forces behind the coevolution of newcomers' psychological contracts and network ties. The findings of Paper 3 show that newcomers prefer to form friendship ties with other newcomers who share similar psychological contract expectations to their own. Furthermore, as newcomers form friendship ties over time, their perceptions of employer obligations become similar to their friends with whom they share reciprocal friendship.

Paper 3 has many original theoretical implications. First of all, instead of solely measuring employees' perceptions regarding employer obligations, this study provides empirical evidence regarding the interplay between what newcomers expect, how and why these expectations influence their choices of social relationships, and how and why, in return, these relationships influence their perceptions. This has a vital theoretical implication, because it shows the bidirectional relationship between psychological contracts and social ties and challenges prior studies that suggest that social relationships have a unidirectional influence on the psychological contract processes (e.g. De Vos et al., 2005;

Rousseau, 1995; Shore & Tetrick, 1994; Thomas & Anderson, 1998). Paper 3 provides empirical evidence that elements of psychological contract formation (i.e., psychological contract expectations) also influence the formation of social relationships. Therefore, newcomers' social relationships are not only the antecedents but also the products of psychological contracts.

Moreover, the framework and findings of Paper 3 highlight that psychological contract formation can be studied as an emergent construct. The concept of emergence is widely examined in group, team, and leadership studies (Schulte et al., 2012) but is widely disregarded in the psychological contract literature. Psychological contract researchers anticipated that the construct of psychological contract exists and acknowledged its potential antecedents. However, the field hitherto favoured research on the consequences of psychological contract rather than the emergence of it. *From where, why, and how* psychological contracts emerge are rarely specified or studied. As another major theoretical implication, the theoretical frameworks in Papers 1 and 3, and the findings of Paper 3 have the potential to offer answers to questions regarding the emergence of psychological contracts.

Pre-entry expectations as antecedents of psychological contract:

Scholars acknowledged that psychological contract formation starts before employment and unfolds from the pre-employment stage onwards (Anderson & Thomas, 1996; Shore & Tetrick, 1994). Therefore, to capture antecedents of psychological contracts, it is not solely important to know what contributes to current employees' psychological contracts but also important to have insights into

future employees' expectations prior to the employment relationship (De Vos et al., 2009). Moreover, researchers noted that in the absence of promises, such as in pre-entry time, psychological contract beliefs can be based on more general expectations (Montes & Zweig, 2009). Paper 1 of my thesis conceptualizes several factors that contribute to the formation of psychological contracts. One such factor is employees' pre-existing expectations about their employers' obligations toward them.

Furthermore, Paper 2 of my thesis includes a qualitative study concerning the pre-entry expectations and anticipatory psychological contracts of millennial employees. Paper 2 is designed to investigate the most salient pre-entry expectations that influence the formation of psychological contracts once millennials join the workforce. In Paper 2, I argue that existing psychological contract measures are not suitable for millennials' context, since none of these measures consider the differences between millennials and earlier generations. Therefore, Paper 2 has important theoretical implications for the literature. It investigates potential content dimensions of the psychological contract in its formation stage prior to organizational entry. Moreover, the grounded and inductive approach of Paper 2 makes it possible to capture emerging expectations of millennials that have not been considered previously as antecedents of psychological contracts, such as expectations regarding autonomy and intangible aspects of recognition. However, as discussed in Paper 2, with the changing attributes of the millennial workforce, scholars should be aware that there are new expectations that the psychological contract measures are not currently capturing. Expanding the earlier works of Sturges and Guest (2001) and Herriot et al. (1997)

on pre-entry expectations, Paper 2 contributes to the literature by showing that autonomy, organizational ethics, and intangible aspects of recognition should be included in studies concerning the content of newly forming psychological contracts.

5.3.1.2. The dynamic nature of psychological contracts

The second theme of my thesis is related to the dynamic nature of psychological contracts. As discussed earlier, there have been recent calls to adopt a temporal and dynamic lens to study organizational phenomena (Roe, 2008; Shipp & Cole, 2015). Specifically, in psychological contract research, scholars have urged others to recognize the dynamic nature of psychological contracts by focusing on within-person processes (Conway & Briner, 2002; Griep et al., 2016; Rousseau et al., 2016; Tomprou et al., 2015). Among these within-person approaches, there is an emphasis regarding how psychological contracts form and change over time and how reactions to psychological contract evaluations unfold and change over time. As evident in its title, and in line with recent debates in the literature, the overarching aim of my thesis is to capture the dynamic nature of psychological contracts during the formation phase. All the three papers in my thesis contribute to this aim from different viewpoints and offer novel theoretical implications, which are discussed below.

As a main theoretical implication, the theoretical frameworks developed in Papers 1 and 3 reveal the dynamic nature of psychological contracts and how they coevolve with the social relationships of employees. In the model developed in Paper 1, Weick's (1995) sensemaking theory is utilized to explain the unfolding, ongoing, and continuous episodes of action and cognition as driving forces of the

dynamic coevolution of psychological contracts and social relationships. Similarly, in Paper 3, I build and test a theoretical framework to analyse two dynamic socio-psychological mechanisms, homophily and assimilation, which drive the coevolution of newcomers' social networks and their expectations and perceptions regarding their employer's obligations. The framework in Paper 3 and its outcomes illuminate the complex, dynamic, and interconnecting mechanisms through which psychological contracts and social relationships may coevolve at the workplace. The insights from Papers 1 and 3 challenge earlier views on the unidirectional and relatively static understanding of the influence of social interactions on the employees' psychological contract. Providing evidence that newly forming psychological contracts are both the products and predictors of newcomers' friendship ties, Paper 3 makes a significant contribution to the literature on the dynamic nature of psychological contracts.

As another important theoretical implication, by utilizing sensemaking theory and socio-psychological mechanisms of homophily and assimilation, the theoretical frameworks in Papers 1 and 3 allow the exploration of how employees enact agency in the ongoing and dynamic journey of psychological contract formation. It is particularly important to understand the role of human agency in the psychological contract process, given the subjective nature of psychological contracts (Seeck & Parzefall, 2008). Nevertheless, psychological contract formation is a process in which individuals are active agents who vigorously seek contract-related information and consciously evaluate, revise, and re-evaluate their psychological contracts (Rousseau, 1995). However, in the psychological contract literature, employee agency has been overlooked. The attitudes and behaviors of

employees have been viewed as dependent variables of employer actions, commonly as reactions to psychological contract breach and violation (Seeck & Parzefall, 2008). A key theoretical implication of my thesis is that psychological contract formation should be studied dynamically, treating newcomers as active agents rather than as passive recipients of their employers' actions. This way, we can understand how and why individuals make certain choices (i.e., actively choosing a friend based on similar expectations) that influence their psychological contracts. In my thesis, human agency is defined as an agent's capacity to act in the world through making choices and imposing these choices on the world (Seeck & Parzefall, 2008).

Paper 2 of my thesis presents the findings of a qualitative study conducted among potential millennial employees. In Paper 2, I explore, in particular, the most salient content dimensions of millennials' anticipatory psychological contracts and argue that these dimensions will be the foundation of their psychological contract formation once they join the organization (Mabey et al., 1996). Findings indicate that there are important differences between millennials' expectations and those of other generations. For example, it was surprising to see that expectations of autonomy emerged as the second strongest pre-entry expectation that contributes to the formation of millennials' anticipatory psychological contracts. A possible explanation of autonomy emerging as anticipatory dimension can be related to the earlier debates regarding the importance of 'new deal' jobs, a more contemporary and dynamic approach to careers. 'New deal' jobs suggest that, nowadays, employees are more autonomous and individualistic, implying that hierarchical and life-long career promises are no longer attractive for the current millennial

workforce (e.g., Herriot, 1995; Rousseau, 1995). Therefore, it is evident, with the emergence of autonomy as the second strongest theme, that the ‘new deal’ is not only related to a change from traditional to contemporary career perspectives but is also related to a change in expectations and beliefs regarding how the job is to be done. In other words, the findings of Paper 2 show that millennials not only seek job deals in which life long career promises are no longer attractive but also look for opportunities in which they can have autonomy in executing and choosing their tasks. In Paper 2, I argue and provide evidence that the content of anticipatory psychological contracts is influenced by the change in expectations of current incoming employees.

Hence, Paper 2 contributes to the discussion of dynamic psychological contracts from an entirely different perspective than Papers 1 and 3. It shows that psychological contracts are not only dynamic in the ways in which they form and change but are also dynamic between different generations of the workforce. The findings of Paper 2 correspondingly provide evidence that psychological contracts dynamically adapt to new work arrangements. Furthermore, Paper 2 investigates the most overlooked but crucial period of psychological contract formation: the pre-entry period (Anderson & Thomas, 1996; Shore & Tetrick, 1994). Paper 2 thus offers an answer to recent calls to adopt a temporal and dynamic lens to study organizational phenomena (Roe, 2008; Shipp & Cole, 2015), through exploring how time impacts psychological contracts in a variety of ways, such as generational differences and time periods of employment.

5.3.2. Methodological implications of this thesis

One of the strengths and important implications of my thesis is the introduction of the novel simulation methodology SIENA (Statistical Investigation of Empirical Network Analysis). SIENA allows researchers to model the coevolution of longitudinal networks and behavior of the actors in a network. Developed almost a decade ago at the University of Oxford by a team of social statisticians led by Professor Tom Snijders, SIENA has much to offer to the study of psychological contracts and organizational studies in general. SIENA allows organizational researchers to practically build an empirical bridge between the sociological and psychological aspects of work life, by considering social networks and human behavior. Therefore, with the utilization of SIENA, a different and dynamic perspective can be employed in the field of organizational behavior. As with the theoretical implications of my thesis discussed above, SIENA can offer new insights into many areas of organizational research that created scholarly debates. To name a few: the dynamic nature of psychological contracts (Tomprou et al., 2015), the inclusion of a temporal lens to study of organizational phenomena (Shipp & Cole, 2015), team and group dynamics (Schulte et al., 2012), leadership emergence (Emery, 2012), social influence on evaluations of psychological contract breach (Ho, 2005; Ho et al., 2006), and effective socialization (Morrison, 2002).

5.3.3. Practical implications of this thesis

My thesis has many practical implications that might help managers and human resources professionals facilitate healthy employment relationships through better management of recruitment, selection, and organizational socialization processes. It is vital for managers and human resources professionals to understand

the dynamic nature of psychological contract, which is one of the main determinants of employee behavior in organizations (Rousseau, 1995). In this section, I combine all the practical implications of the separate papers into three main points.

Firstly, the frameworks in Papers 1 and 3 suggest that social relationships that newcomers form in the new work environment can positively contribute to their psychological contract formation. From a practical perspective, one interpretation is that managing social relationships is therefore an efficient way of managing newcomers' perceptions of their employer's obligations. The findings of Paper 3 suggest that effective management of social relationships may offer numerous benefits to the firm, such as reduced perceptions of psychological contract breach, lower turnover, fewer negative emotions, and increased commitment, organizational citizenship behavior, and performance.

Secondly, from a practical perspective, managing pre-entry expectations can be an efficient way of managing employees' adaptation process into the organization. Organizations can form healthier employment relationships by responding to their potential employees' expectations. In return, organizations can increase their chances of retaining new employees longer and can expect higher commitment and increased performance. If managers and human resources professionals understand the expectations of newcomers and succeed in establishing compatible newcomer groups with similar expectations, it will eventually lead to more coherent friendship ties. In Paper 3, the results regarding homophily mechanism show that expectations influence how newcomers prefer to form friendship ties with other newcomers, which eventually influence their perceptions of the employer obligations. A clear understanding of these dynamics

by human resources professionals and managers holds the prospect of influencing the formation of well-matched newcomer perceptions and thus the formation of positive psychological contracts.

The third and final practical implication of my thesis is that, through job advertisements and effective messaging of five expectations that emerged from the inductive investigation in Paper 2, companies can attract the most talented millennials. Human resources professionals can create their strategies to communicate these five expectations during recruitment and selection processes. Hence, both parties can understand each other's expectations at the initial stage of the employment relationship. As discussed above and shown in the findings of Paper 3, this has the potential to eventually lower the risk of future perceptions of psychological contract violations.

5.4. Limitations of This Thesis

Despite its contributions and implications, my thesis is not without limitations. In this section, I discuss the overall limitations of my thesis.

The first limitation of my thesis is concerned with generalizability. Both participant samples in Papers 2 and 3 are unique, which allowed me to investigate that which has not been investigated so far. However, this advantage comes with its own limitation of generalizability.

In Paper 2, the sample of 32 millennial graduates consists of both genders from diverse educational and cultural backgrounds. Although it is located in the United Kingdom, LSE is known for its international environment, and my sample in Paper 2 represents this internationality very well. However, LSE's context can

be perceived as a limitation. In addition to their internationalism, LSE students are high achievers and are very ambitious; thus, these LSE student characteristics may have contributed to the subjects' high expectations regarding their future employers' obligations. Therefore, future studies should test the findings of Paper 2 using different millennial samples from different countries, different schools, and with different educational success levels.

In Paper 3, the sample consists of 45 newcomers who joined the organization at the same time in the same department, which is a unique context. I consider this to be both a strength and limitation. It is a strength, because it satisfies one of the major requirements of carrying out a complete longitudinal social networks study. This unique sample also allowed me to study the evolution of newcomers' psychological contract expectations and perceptions from day one of the employment relationship. Most importantly, the 45 newcomers stayed together and interacted with each other over the 4 months and 10 days data collection period. Therefore, it was possible to study the coevolution of newcomers' psychological contract expectations and their psychological contract perceptions with their social network ties. This feature of Paper 3 is one of the most important strengths of my thesis.

On the other hand, the uniqueness of the sample in Paper 3 is also a limitation, because of generalizability considerations. As mentioned in Paper 3, the sample is not representative of traditional organizations, in which 45 newcomers start together, have 10 days of training together, and work in the same department together throughout the period of organizational socialization. I acknowledge that 45 newcomers being physically connected might have enhanced the findings

supporting the hypothesized coevolution: the impact of newcomers' psychological contract expectations in shaping friendship ties (the homophily hypotheses) and the impact of friendship ties in shaping newcomers' perceptions of their employer's obligations (the assimilation hypotheses). Another consideration regarding the generalizability of the findings of Paper 3 is related to the lack of diversity among the subjects of the study, since all participants were newcomers. Future studies should test the results of Paper 3 using samples in which other organizational members are included as well.

The second limitation of my thesis is concerned with control variables in empirical studies. Both of the studies in Papers 2 and 3 include gender as a control variable, but gender effects are not prevalent in either of the studies. Since all the participants belong to similar age groups, age was not a consideration in my thesis. However, there was no analysis on the role of other important identities, such as nationality, ethnicity, race, and sexual orientation, which could potentially influence expectations, perceptions, and the manner in which individuals approach social relationships at work. Furthermore, an earlier study included personality as a control variable in measuring the relationship between social networks and perceptions of team psychological safety (Schulte et al., 2012). Therefore, I recommend that future research consider various measures of identity and personality as control variables in repeating the findings of Papers 2 and 3.

5.5. Directions for Future Research

I hope the frameworks and findings of my thesis will be a stepping stone to further motivate organizational scholars to capture the dynamic nature of

psychological contracts along with its antecedents. In this section, I recommend areas on which future research can potentially focus to carry the implications of my thesis further.

Firstly, although my thesis focuses on the coevolution of psychological contracts and social networks, I predict that other subjects of organizational behavior can also be both predictors and products of social networks. Among these subjects, I encourage scholars to focus on employee behaviors, such as job performance and organizational citizenship behavior; employee attitudes such as organizational commitment, and job satisfaction; and affect such as anger, enthusiasm, and nervousness. However, scholars should acknowledge that the mechanisms that drive the coevolution of these subjects and social network ties might be different than the mechanisms that I studied in my thesis. Therefore, as an exciting opportunity, future research should investigate other potential socio-psychological mechanisms driving the coevolution of network ties and other employee behavior, attitudes, and affect. Such a direction for future research also speaks to the recent debates regarding the inclusion of dynamic methodologies to the study of organizational behavior (Roe, 2008; Shipp & Cole, 2015).

Secondly, as a fruitful direction for future studies, researchers can potentially investigate whether individuals' network positions impact the coevolution of psychological contracts and network ties. In an earlier study, Ho et al. (2006) examined the association between social network position and psychological contract beliefs and provided evidence that informal network ties (e.g., friendship) shape employees' beliefs. Therefore, I believe it will be favourable

for future research to investigate whether the network position is also influential on how newcomers' psychological contracts and social network ties coevolve.

Thirdly, scholars may focus on testing potential differences between new graduate newcomers' and more experienced newcomers' psychological contract formation processes. Herriot and colleagues suggested that previous work experiences influence employees' psychological contracts (Herriot, 1989, 1995; Herriot et al., 1997). On the other hand, Bal and Smit (2012) emphasized that older employees responded less negatively to psychological contract breach. Hence, I expect that there will be differences between how younger and more experienced employees' psychological contracts coevolve with their social network ties. Similarly, it is also expected that there will be differences between millennials' pre-entry expectations and older employees' pre-entry expectations, given the generational differences (Martin, 2005). Therefore, as a direction for future research, I encourage scholars to replicate the findings of my thesis with a sample of older and more experienced employees.

Fourthly, future research should focus on testing the whole framework in Paper 1 and explore the implications of the sensemaking perspective on the psychological contract formation process. One of the practical challenges to test the whole model in Paper 1 is time. The theoretical model in Paper 1 spans from pre-entry time to post socialization. It is very challenging to reach employees prior to organizational entry and follow them over years in their work. Another practical challenge is related to the coevolution part of the model. It is not enough to follow employees from pre-entry to post-socialization. In order to capture the coevolution of psychological contracts and social networks, these employees should stay

connected to each other throughout these periods. However, as mentioned in the limitations section, this is usually not the common practice in organizations. However, these challenges should not discourage scholars to further pursue this line of research. As mentioned throughout my thesis, if we are going to take the study of psychological contracts further, these are the challenges we should face to advance the field. As a first step, scholars can start by testing the different elements of the process model in Paper 1. For example, in Paper 2, I investigate one of the antecedents of the hypothesized coevolution during the pre-entry time: pre-entry expectations. In Paper 3, I focus on the coevolution of newcomers' psychological contract expectations, perceptions, and social network ties during the organizational socialization period. I believe that, through better understanding of the different elements of the model proposed in Paper 1, it will be more feasible to test the whole model in the future.

Fifthly, Paper 2 explore the most salient pre-entry expectations of millennials: (1) opportunities for career advancement, (2) autonomy, (3) recognition, (4) organizational support, and (5) fairness. I believe future research can benefit from investigating how these pre-entry expectations influence millennial employees' perceptions of psychological contract breach. One stimulating question to ask is whether millennials with high pre-entry expectations are more likely to perceive psychological contract breach than are other employees with low pre-entry expectations.

In relation to the last point above, in Paper 3, I collected data concerning both newcomers' psychological contract expectations and their perceptions of the five employer obligations. In my thesis, the focus is on the concurrent formation of

expectations and perceptions as elements of psychological contract formation with social relationships. Therefore, newcomers' five psychological contract expectations and perceptions of employer's obligations are measured separately, in order to understand how these expectations drive formation of networks and, in return, how newly formed social networks influence the formation of perceptions; or the other way around. As a potential direction for future research, a statistical difference between perceptions surveys and expectations surveys can be treated as a new measure for (un)met expectations. It might be exciting to see how early perceptions regarding (un)met expectations might coevolve with social relationships. SIENA analysis can be done to investigate whether the mechanisms of homophily and assimilation are also influential in how newcomers form perceptions regarding whether their expectations are met or not. Perceptions regarding unmet expectations and perceptions regarding the breach of perceived employer obligations are two different concepts; and as Rousseau (1990) emphasized "all expectations are not obligations" (p. 398). However, as discussed in Paper 2, given the change in expectations of today's incoming workforce, I believe it will be valuable to investigate the influence of (un)met expectations on the perceptions of incoming employees. Therefore, I strongly encourage scholars who are interested in the perceptions of early psychological contract fulfillment/breach to investigate the concept in relation to (un)met expectations and newcomers' social relationships.

5.6. Concluding Thoughts

The field of organizational behavior originated from two predominant schools of thought: psychology and sociology (Furnham, 2005). The organizational scholars who follow psychology as a school of thought consider individual behavioral patterns. As a limitation, the majority of these studies characteristically do not deal with the fact of social organization or social structure (Katz & Kahn, 1978). However, organizations consist of patterned behaviors, and individual behavioral patterns are affected by the larger patterns of organizations. On the other hand, organizational studies produced by scholars who follow sociology as a school of thought also have limitations complementary to the studies that have psychological roots. Organizational studies rooted in sociology examine collective group or organizational level phenomena, without the inclusion of individual characteristics, attributes, beliefs, and behaviors. Moreover, these studies mostly consider the outcomes of social interactions between individuals but do not consider the process of these interactions (Katz & Kahn, 1978). Nevertheless, in organized settings of people, it is impossible to separate psychology and sociology from each other.

The general aim of my thesis is to contribute to the earlier efforts of building a bridge between psychology and sociology within the field of organizational behavior (De Vos, 2005; De Vos et al., 2005; De Vos et al., 2009; De Vos & Freese, 2011; Ho, 2005; Ho et al., 2006; Kilduff & Brass, 2010; Morrison, 2002; Schulte et al., 2012; Thomas & Anderson, 1998). Specifically, in the psychological contract literature, as mentioned throughout my thesis, the influence of social interactions

on psychological contract is acknowledged, however, the majority of the empirical studies did not pass the acknowledgment stage. I hope my thesis contributes to the literature through encouraging future organizational scholars to ask research questions and choose methodologies that can tackle the dynamic nature of the interdependent psychological and sociological aspects of organizational phenomena.

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Appendix 1: Paper 2 Interview Invitation for Participants

Dear LSE students,

My name is Ceren Erdem. I am a doctoral candidate in the Employment Relations and Organizational Behavior group at the LSE.

I am conducting qualitative research as a part of the requirements for my PhD degree in Organizational Behavior, and would like to invite you to participate.

I am studying the relationship between employers and job applicants. If you decide to participate, you will be asked to partake in an interview with me. We will discuss what is important to you when selecting an employer, as well as how these may continue to matter to you once employed. This is a great opportunity to engage in a lively discussion and share your worries and expectations regarding your future career. I believe after the discussion you will understand your own expectations better and potentially re-evaluate what you look for when deciding the best employer for yourself.

The meeting will take place at LSE and should last about 30-35 minutes. The discussion will be audio taped so that I can accurately reflect on what has been discussed.

Participation is confidential and anonymous. Study information will be kept in a secure location at the LSE. The results may be published or presented at academic conferences, but your identity will not be revealed.

Nibbles and drinks will be provided during the meeting. I also offer free tutoring with your undergraduate or master dissertation. Everybody who participates in the study can contact me when they need help with their dissertation with specific questions (such as writing a proposal, setting up objectives, finalising research questions etc.).

We are happy to answer any questions you have about the study. You may contact me at c.erdem1@lse.ac.uk / 07587973781 or my faculty supervisor Dr. Jonathan Booth at j.booth@lse.ac.uk if you have study related questions or problems. If you have any questions about your rights as a research participant, you may contact the Research Ethics Office at the LSE at ethics@lse.ac.uk.

Thank you for your consideration. If you would like to participate, please contact me at the number and/or email address listed below to discuss participating.

Looking forward to meeting most of you.

With kind regards,

Ceren Erdem

PhD candidate

Department of Management / EROB Group

London School of Economics and Political Science

E-mail: c.erdem1@lse.ac.uk

Telephone: 0044 7587 973 781

Appendix 2: Paper 2 Interview Protocol

(For interviewer use only)

Thank you for agreeing to participate in this research project. Let's start our discussion with your previous job experiences.

- 1) Have you had a job experience / internship before? How many years have you worked for your previous employer?
- 2) Tell me about your fondest memory with your previous employer / internship?
(Potential prompt: Why was it the fondest memory?)
- 3) Tell me about the most disappointing moment with your previous employer / internship? Or
Tell me about your worst memory with your previous employer / internship?
(Potential prompt: What makes this the worst memory?)

Notes to the researcher: With first 3 questions, I aim to aid participants to open up about their previous job / internship experiences which may shape their current expectations from their new employer. They may not be consciously aware of the influence of their previous experiences on their current expectations. By asking their fondest and worst memories I try to make them consciously think about what would make them feel satisfied and/or violated reflecting upon their real life experiences. I think starting the discussion by asking about their past experiences opposed to asking about their current expectations would also help them to engage more into the discussion since they can relate to the topic personally.

- 4) Suppose that you were in charge and could make one change that would make your previous job experience better. What would you do?

Notes to the researcher: The aim of question 4 is to make participants to step out and put themselves into their previous employer's shoes and think about what would they do different to make their employees' experience better. Again I want them to think about their previous experience but this time from their previous employer's perspective. I believe this question will also help them to reconsider what they look for when choosing an employer.

- 5) Ok, let's come back to today. When do you explore potential job opportunities, what do you look for? Please take a piece of paper and jot down three things that come to your mind.

Notes to the researcher: The aim of question 5 is to make participants think about their current state. This question is the one of core question of the study and deliberately asks what I aim to get from these discussions. By now, I expect that first 4 questions prepare students to subconsciously think about their current expectations and how they reflect on these expectations when searching for jobs. I expect this since they are presently excited about new job opportunities and weigh out their options.

- 6) Let's list these on the flip chart. If you had to pick only one factor that was most important to you, what would it be? You can pick something that you mentioned or something that was said by others.

Notes to the researcher: The aim of question 6 is to make participants engage with each other and think about each other's job searching strategies. I expect that they have had similar conversations between themselves before. If not I am sure that they are curious about what others think on the matter. I will also observe whether they choose among what they have said or others' said in order to understand their influence on each other. I believe this question will help them to engage more with the discussion given the fact that they may feel tired or distracted through the middle of the session. Of course, I won't be able to use this question if I do semi-structures interviews.

- 7) Now imagine that you are the HR manager of the company that you have applied or want to apply.
 - a- What are the important points that you will make sure to cover during interviews?
 - b- What are things that you are sure would attract people with career needs like yours to the company? What attracts recruits to your firm?
 - c- How do you maintain this attraction/interest in your firms so that successful recruits eventually select you?

Notes to the researcher: The aim of question 7 is to understand what they expect to find out during the interview, since pre-entry expectations are mostly shaped during the interactions with the recruiter. Again I am asking them to think from the employer's point of view, but this time as a recruiter. This question will also help me to understand what would make them to attract certain employers and what would they expect to find out about these employers during interviews.

- 8) Thinking all of the things that we've talked about your job hunting and previous job experiences, what do you expect from your potential employer?
- 9) What makes you have these expectations?

Notes to the researcher: These two questions are the most important questions of the study. I openly ask them to think about their expectations from their potential employer and communicate these expectations with the group. I also want them to think about the reasons of having these expectations by reflecting on their previous and job searching experiences if they need to. I believe this will be the point where the discussion gets hot and all the participants speak out what they have to say.

- 10) Do you think that your current expectations are likely to change over time after joining the company?
 - a- If yes, what would cause change in your expectations?
(Potential prompts: experience, money, people, learning the ropes?)
 - b- If no, what makes you think that your expectations won't change?
Please explain with examples.

Notes to the researcher: The aim of question 10 is to make participants think about their current expectations from a different angle and justify their own thoughts by imagining themselves months later from now. I also believe that this question will help them to think about what they value most. For example, if someone says that her expectations might change after meeting with new people this may give a hint that she expects to have helpful, or vice versa, work colleagues and she values others' perspectives. Or if some says her expectations might change with knowledge this may mean that she expects to learn a lot in her new job and her expectations might change accordingly. I believe this question will be helpful to understand the reasons behind their expectations more deeply. I will provide essential prompts if needed to fire up the conversation.

11) Now imagine that you will have a really bad experience that makes you want to quit and leave your employer. What would it be?

Notes to the researcher: This question is not directly related to their pre-entry expectations, but I think it complements question 10 and makes them think about the other side of the story. I believe they are presently very hopeful about their new jobs and don't think about what would go bad for them. My aim is to make them think about it. I think their responses will be based on their current expectations.

12) To wrap-up our conversation, can you please define your ideal employer in a single sentence?

Notes to the researcher: This is a wrap-up question to end the discussion. My aim is to make them define their ideal employer in one sentence. I believe this question will show their strongest expectation and what they value most when choosing an employer.

13) Is there anything else we haven't covered that you think is important for the purpose of this discussion?

Thank you very much for your participation.

Appendix 3: Paper 3 Study Measures

Job Autonomy scale

Original items source: Hackman, J.R., & Oldham, G. R. (1974). *The Job Diagnostic Survey: An instrument for the diagnosis of jobs and the evaluation of redesign projects* (Tech. Rep. No.4). New Heaven, CT: Yale University, Department of Administrative Sciences. (Page 73 in Fields, Dail L (2002). *Taking the measure of work: a guide to validated scales for organizational research and diagnosis*. Sage publications, Thousand Oaks, California.)

Original Items	Modified items: Expectations	Modified items: Perceptions
<p>1. How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing your work?</p> <p>2. The job gives me considerable opportunity for independence and judgement in how I do the work.</p> <p>3. The job denies me any chance to use my personal initiative or judgement in carrying out the work (revised scored)</p>	<p>1. I have an expectation that I will have autonomy in my job. (Autonomy is the following: to what extent the job permits you to decide on your own how to go about doing your work.)</p> <p>2. I require that my job will give me considerable opportunity for independence and judgement in how I do my work.</p> <p>3. It is important to me that this job allows me to use my personal initiative and judgement in carrying out my work.</p>	<p>1. I have autonomy in my job. (Autonomy is the following: to what extent the job permits you to decide on your own how to go about doing your work.)</p> <p>2. My job gives me considerable opportunity for independence and judgement in how I do my work.</p> <p>3. In this company, my job provides me opportunity to use my personal initiative and judgement in carrying out my work.</p>

Fair Working Environment scale

Original items source: Mansour-Cole, D.M., & Scott, S. G. (1998). Hearing it through grapevine: The influence of source, leader-relations, and legitimacy on survivors' fairness perceptions. *Personnel Psychology*, 51(1), 25-54. (Page 172 in Fields, Dail L (2002). *Taking the measure of work: a guide to validated scales for organizational research and diagnosis*. Sage publications, Thousand Oaks, California.)

Original Items	Modified items: Expectations	Modified items: Perceptions
<p>1. I feel that my current job responsibilities are fair.</p> <p>2. Overall, the rewards I receive here now are quite fair.</p> <p>3. I consider my current workload to be quite fair</p> <p>4. I think that my current level of pay is fair</p> <p>5. My current work schedule is fair.</p>	<p>1. It is important to me that I am assigned job responsibilities that are fair.</p> <p>2. I anticipate that my employer will reward me fairly.</p> <p>3. My employer will provide me a workload that is quite fair.</p> <p>4. I anticipate that my employer will pay me fairly.</p> <p>5. I expect my employer to provide me a work schedule that is fair.</p>	<p>1. I have been fairly assigned job responsibilities at my work.</p> <p>2. My employer rewards me fairly.</p> <p>3. My employer provides me a fair workload.</p> <p>4. My current level of pay is fair.</p> <p>5. My work is scheduled fairly by my employer.</p>

Recognition scale

Original items source: Eisenberg, R., Fasolo, P., & Davis-LaMastro, V. (1990). Perceived organizational support and employee diligence, commitment, and innovation. *Journal of Applied Psychology, 75(1), 51-59.* (Page 111-112 in Fields, Dail L (2002). *Taking the measure of work: a guide to validated scales for organizational research and diagnosis.* Sage publications, Thousand Oaks, California.)

Original Items	Modified items: Expectations	Modified items: Perceptions
<p>1. Completing my work on time gets me greater approval from my immediate supervisor at [company name].</p> <p>2. My immediate supervisor at [company name] gives me more recognition when I get a lot of work done.</p> <p>3. If I get my work done on time, I have more influence with my immediate supervisor at [company name].</p> <p>4. My immediate supervisor at [company name] pays added attention to the opinions of the best workers.</p> <p>5. When I finish my job on time, my job is more secure at [company name].</p>	<p>1. I expect to receive recognition from my manager for completing my tasks, especially if completed on-time.</p> <p>2. When I get a lot of work done, I anticipate that my manager will give me more recognition.</p> <p>3. I expect to have more influence with my manager when I do my best work.</p> <p>4. I expect my manager to pay added attention to the opinions of his/her best workers.</p> <p>5. It is important to me to be recognized by my manager for the quality of my work.</p>	<p>1. I receive recognition from my manager for completing my tasks, especially if completed on-time.</p> <p>2. I get more recognition from my manager when I get a lot of work done.</p> <p>3. I receive more influence with my manager when I do my best work.</p> <p>4. My manager pays added attention to the opinions of his/her best workers.</p> <p>5. I receive recognition from my manager for the quality of my work.</p>

Opportunities for Career Advancement Scale

Original items source: Kraimer, Maria L.; Seibert, Scott E.; Wayne, Sandy J.; Liden, Robert C.; Bravo, Jesus “Antecedents and outcomes of organizational support for development: The critical role of career opportunities”. *Journal of Applied Psychology*, Vol 96(3), May 2011, 485-500.

Original Items	Modified items: Expectations	Modified items: Perceptions
<p>1. My organization has programs and policies that help employees to advance in their functional specialization.</p> <p>2. My organization provides opportunities for employees to develop their specialized functional skills.</p> <p>3. My organization has programs and policies that help employees to reach higher managerial levels.</p> <p>4. My organization has career development programs that help employees develop their specialized functional skills and expertise.</p> <p>5. My organization provides opportunities for employees to develop managerial skills.</p> <p>6. My organization has career development programs that help employees develop their managerial skills.</p>	<p>1. I expect my employer to provide programs and policies that help me to advance in my functional specialization.</p> <p>2. It is an expectation of mine that my employer provides opportunities for me to develop my specialized functional skills.</p> <p>3. I expect my employer to provide programs and policies that help me to reach higher managerial levels.</p> <p>4. It is important to me that my employer provides career development programs that help me develop my specialized functional skills and expertise.</p> <p>5. It is important to me that my employer will provide me opportunities to develop managerial skills.</p> <p>6. I desire my employer to provide career development programs that help employees to develop their managerial skills.</p>	<p>1. The programs and policies that my employer provides help me to advance in my functional specialization.</p> <p>2. My employer provides opportunities for me to develop my specialized functional skills.</p> <p>3. My employer provides programs and policies that help me to reach higher managerial levels.</p> <p>4. My employer provides me with career development programs that help develop my specialized functional skills and expertise.</p> <p>5. My employer provides me opportunities to develop managerial skills.</p> <p>6. My employer provides career development programs that help employees develop their managerial skills.</p>

Continued: Opportunities for Career Advancement Scale

Original items source: Kraimer, Maria L.; Seibert, Scott E.; Wayne, Sandy J.; Liden, Robert C.; Bravo, Jesus “Antecedents and outcomes of organizational support for development: The critical role of career opportunities”. *Journal of Applied Psychology*, Vol 96(3), May 2011, 485-500.

Original items	Modified items: Expectations	Modified items: Perceptions
7. There are career opportunities within [company] that are attractive to me.	7. It is important that my employer has career opportunities that are attractive to me.	7. My employer provides me career opportunities that are attractive to me.
8. There are job opportunities available within [company] that are interest to me.	8. It is important to me that job opportunities at my employer are available and interesting to me.	8. Job opportunities at my employer are available and interesting to me.
9. [Company] offers many opportunities that match my career goals.	9. My employer should offer many opportunities that match my career goals.	9. I am provided many opportunities that match my career goals by my employer.

Organizational Support scale

Original items source: Eisenberger, R., Huntington, R., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology, 71, 500-507.* (Page 117-118 in Fields, Dail L (2002). *Taking the measure of work: a guide to validated scales for organizational research and diagnosis.* Sage publications, Thousand Oaks, California.)

9-items shortened version of this scale has been used.

Original Items	Modified items: Expectations	Modified items: Perceptions
<p>1. The organization strongly considers my goals and values</p> <p>2. Help is available from the organization when I have a problem.</p> <p>3. The organization really cares about my well-being,</p> <p>4. The organization is willing to extend itself in order to help me perform my job at the best of my ability.</p> <p>5. Even if I did the best job possible, the organization would fail to notice.</p> <p>6. The organization cares about my general satisfaction at work.</p> <p>7. The organization shows very little concern for me[®]</p> <p>8. The organization cares about my opinion</p> <p>9. The organization takes pride in my accomplishments at work.</p>	<p>1. It is important that my organization considers my goals and values.</p> <p>2. I expect that organizational help is available to me when I encounter a problem.</p> <p>3. My employer should care about my well-being.</p> <p>4. It is quite important to me that my employer is willing to extend itself in order to help me perform my job at the best of my ability.</p> <p>5. I expect my employer to notice that I have done my best job possible.</p> <p>6. It is an expectation of mine that my employer must care about my general workplace satisfaction.</p> <p>7. It is important to me that my employer shows concern for me.</p> <p>8. I have expectations that my employer will care about my opinions.</p> <p>9. I expect to be valued by my organization.</p>	<p>1. My goals and value are considered by my organization.</p> <p>2. Organizational help is available to me when I encounter a problem.</p> <p>3. My well-being is cared for by my employer.</p> <p>4. My organization is willing to extend itself in order to help me perform my job at the best of my ability.</p> <p>5. My employer definitely recognizes that I have done my best job.</p> <p>6. I am cared for by management in regards to my satisfaction.</p> <p>7. My employer shows a lot of concern for me.</p> <p>8. My employer definitely cares about my opinions.</p> <p>9. I feel valued by my organization.</p>

Appendix 4: Paper 3 Study Questionnaire

(Turkish version used for data collection)

BOLUM 1

Aciklama: Yeni isinize baslayali tam X gun/ay oldu. Anketin bu bolumunde, sizlerin yeni sirketinizle ilgili **gorus ve dusunceleriniz** ile ilgileniyoruz. Bu bolumde ayrica bir onceki anketimizde oldugu gibi **beklentileriniz** ile ilgili sorulara da yanit vereceksiniz. Bu durum sanki ayni sorulara iki kez yanit veriyormussunuz hissiyati uyandirabilir. Ancak sirketinizden ne beklediginiz ve aslinda ne aldiginiz birbirinden oldukca farkli seylerdir. Bu sebeple lutfen sorulara dikkatli yanitlar veriniz.

Lutfen butun sorulara acik ve durust cevaplar veriniz. Birkez daha hatirlatmak isteriz ki butun cevaplariniz anonimdir ve hicbir sekilde kisisel cevaplar Denizbank ile paylasilmayacaktır

Lutfen asagidaki onermelere katilim seviyenizi verilen index dogrultusunda isaretleyiniz:

1. Kesinlikle Katilmiyorum
2. Katilmiyorum
3. Biraz Katilmiyorum
4. Ne Katiliyorum Ne Katilmiyorum
5. Biraz Katiliyorum
6. Katiliyorum
7. Kesinlikle Katiliyorum

	1	2	3	4	5	6	7
Yeni isimden beklentim, isimle ilgili kararlar alirken ozeklige sahip olmak							
Umit ediyorum ki yeni isimde karar alma ve verme yetkilerimde oldukca bagimsiz olacagim							
Benim icin isimde inisiyatif alabilmek ve kendi kararlarimi verebilmek cok onemlidir.							
Isimle ilgili kararlar alirken ozeklige sahip oldugumu dusunuyorum							
Isimde karar alma ve verme yetkilerimde oldukca bagimsiz oldugumu dusunuyorum							
Isimde inisiyatif alabildigimi ve kendi kararlarimi verebildigimi dusunuyorum.							
Benim icin bana verilen is sorumluluklarinin adil olmasi onemlidir.							
Umit ediyorum ki yeni isverenim hakettigimde beni adil bir sekilde odullendirecektir.							
Umit ediyorum ki yeni isverenim hakettigimde beni adil bir sekilde odullendirecektir.							
Umit ediyorum ki yeni isverenim bana adil miktarlarda maas verecektir.							
Umit ediyorum ki yeni isimde calisma saatlerim adil olacaktir.							
Bana verilen is sorumluluklarinin adil oldugunu dusunuyorum.							
Bana verilen is sorumluluklarinin adil oldugunu dusunuyorum.							
Yeni isimde is yogunlugumun adil oldugunu dusunuyorum							

	1	2	3	4	5	6	7
Yeni isimde is yogunlugumun adil oldugunu dusunuyorum							
Yeni isimde calisma saatlerimin adil oldugunu dusunuyorum.							
Isimde bana verilen sorumluluklari zamaninda yerine getirdigim zaman mudurumun beni takdir etmesini beklerim.							
Isimde bana verilen sorumluluklardan daha fazlasini yerine getirdigim zaman mudurumden daha cok takdir beklerim.							
Isimde en iyisini yaptigim zaman mudurumle aramdaki iliskinin dah iyi olacagini beklerim.							
Isimde mudurumun en basarili calisanlarin fikirlerine daha fazla onem vermesi gerektigini dusunuorm.							
Benim icin isimdeki basarimla takdir gormek onemlidir							
Isimde bana verilen sorumluluklari zamaninda yerine getirdigim zaman mudurumun beni takdir ettigini dusunuyorum.							
Isimde bana verilen sorumluluklardan daha fazlasini yerine getirdigim zaman mudurumun beni daha cok takdir ettigini dusunuyorum							
Isimde en iyisini yaptigim zaman mudurumle aramdaki iliskinin daha iyi oldugunu dusunuyorum.							
Isimde mudurumun en basarili calisanlarin fikirlerine daha fazla onem verdigini dusunuyorum.							
Isimde basarimla takdir gordugumu dusunuyorum.							
Yeni is yerimde profesyonel becerilerimi gelistirebilecegim programlarin olmasını beklerim.							
Is verenimin profesyonel yetenek ve becerilerimi gelistirebilecegim imkanlar sunmasını beklerim.							

	1	2	3	4	5	6	7
Is verenimin kariyerimde yukselebilmem icin destek programlar sumnasini beklerim.							
Is verenimin profesyonel yetenek ve becerilerimi gelistirebilmem icin özel programlar saglamasini benim icin onemlidir.							
Is verenimin beni ilerde yoneticilik seviyesine tasiyabilecek beceriler gelistirmem icin beni desteklemesi onemlidir.							
Umut ediyorum ki is verenim calisanlarinin ileri kariyer basamaklarini tirmanabilmesi icin özel gelism programlari sunacaktır.							
Is verenimin benim ilgilenebilecegim kariyer olanaklari sunmasi beklerim.							
Is yerimde benim ilgilenebilecegim is olanaklarinin bulunmasi benim icin onemlidir.							
Is verenim benim kariyer hedeflerime onem vermelidir ve beni bu konuda desteklemelidir.							
Yeni is yerimde profesyonel becerilerimi gelistirebilecegim programlarin oldugunu dusunuyorum.							
Is verenimin profesyonel yetenek ve becerilerimi gelistirebilecegim imkanlar sundugunu dusunuyorum.							
Is verenimin kariyerimde yukselebilmem icin destek programlar sundugunu dusunuyorum.							
Is verenimin profesyonel yetenek ve becerilerimi gelistirebilmem icin özel programlar sagladigini dusunuyorum.							
Is verenimin beni ilerde yoneticilik seviyesine tasiyabilecek beceriler gelistirmem icin beni destekledigini dusunuyorum.							
Is verenim calisanlarinin ileri kariyer basamaklarini tirmanabilmesi icin özel gelism programlari sundugunu dusunuyorum.							
Is verenimin benim ilgilenebilecegim kariyer olanaklari sundugunu dusunuyorum.							

	1	2	3	4	5	6	7
Is yerimde benim ilgilenebilecegim is olanaklarinin bulundugunu dusunuyorum.							
Is verenimin benim kariyer hedeflerime onem verdigini ve beni bu konuda destekledigini dusunuyorum.							
Is verenimin benim amac ve deger yargilarima onem vermesini beklerim.							
Is verenimin bir problemim oldugunda bana gereken destegi vermesini beklerim.							
Is verenim benim iyi olmama onem vermelidir.							
Is verenimin isimi en iyi sekilde yapabilmem icin gerekirse kendisinden odun vermesini beklerim.							
Is verenimin elimden gelenin en iyisini yaptigim durumlarda bunu farketmesini beklerim.							
Is verenimin benim genel is memnuniyetime onem vermesini beklerim.							
Is verenimin genel olarak bana onem vermesini beklerim							
Is verenimin benim gorus ve dusuncelerime onem vermesini beklerim.							
Is verenimin basarilarimdan gurur duymasini beklerim.							
Is verenimin benim amac ve deger yargilarima onem verdigini dusunuyorum							
Is verenimin bir problemim oldugunda bana gereken destegi verdigini dusunuyorum.							
Is verenimin benim iyi olmama onem verdigini dusunuyorum.							

	1	2	3	4	5	6	7
Is verenimin isimi en iyi sekilde yapabilmem icin gerekirse kendisinden odun verdigini dusunuyorum.							
Is verenimin elimden gelenin en iyisini yaptigim durumlarda bunu farketmesini dusunuyorum.							
Is verenimin benim genel is memnuniyetime onem verdigini dusunuyorum.							
Is verenimin genel olarak bana onem verdigini dusunuyorum.							
Is verenimin benim gorus ve dusuncelerime onem verdigini dusunuyorum.							
Is verenimin basarilarimdan gurur duyduğunu dusunuyorum.							

BOLUM 2

Aciklama: Bu bolumde su anda kadar yeni is yerinizde kurmus oldugunuz sosyal iliskilerinizle ilgileniyoruz. Lutfen asagidaki sorulara cevap verirken yeni is yerinizi ve cevrenizde simdiye kadar iletisime gectiginiz insanlari dusununuz.

Asagidaki bazi sorularda, sizlerden su ana kadar iliski kurdugunuz insanlari isimlerini yazmaniz istenecektir. Bu kisiler cok iyi tanidiginiz, birlikte calistiginiz ya da yeni tanistiginiz kisiler olabilir. Ayni isimleri birden fazla soruda rahatlikla yazabilirsiniz.

Lutfen butun sorulara acik ve durust cevaplar veriniz. Birkez daha hatirlatmak isteriz ki butun cevaplariniz anonimdir ve hicbir sekilde kisisel cevaplar Denizbank ile paylasilmayacaktır.

Lutfen yeni is yerinizde tanidiginiz kisilerin isim ve soyisimlerini asagida iliski tipleri tanimlanmis bosluklara uygun gordugunuz bicimde yaziniz.

- Egitim sinifinizdaki arkadaslariniz:
- Egitim sinifinizda yakindan calistiginiz kisiler:
- Is ile ilgili bir tavsiyeye ihtiyaciniz olsa tavsiye alacaginiz kisiler:
- Is ile ilgili bir sorunuz olsa bilgi almak icin basvuracaginiz kisiler:
Birlikte sosyallestiginiz kisiler: (ornek: kahve molasi, ogle yemegi vb.)

Bu ilk tam zamanli isiniz midir? Evet Hayir

Lutfen yasinizi belirtiniz:

Lutfen cinsiyetinizi belirtiniz. Kadin Erkek

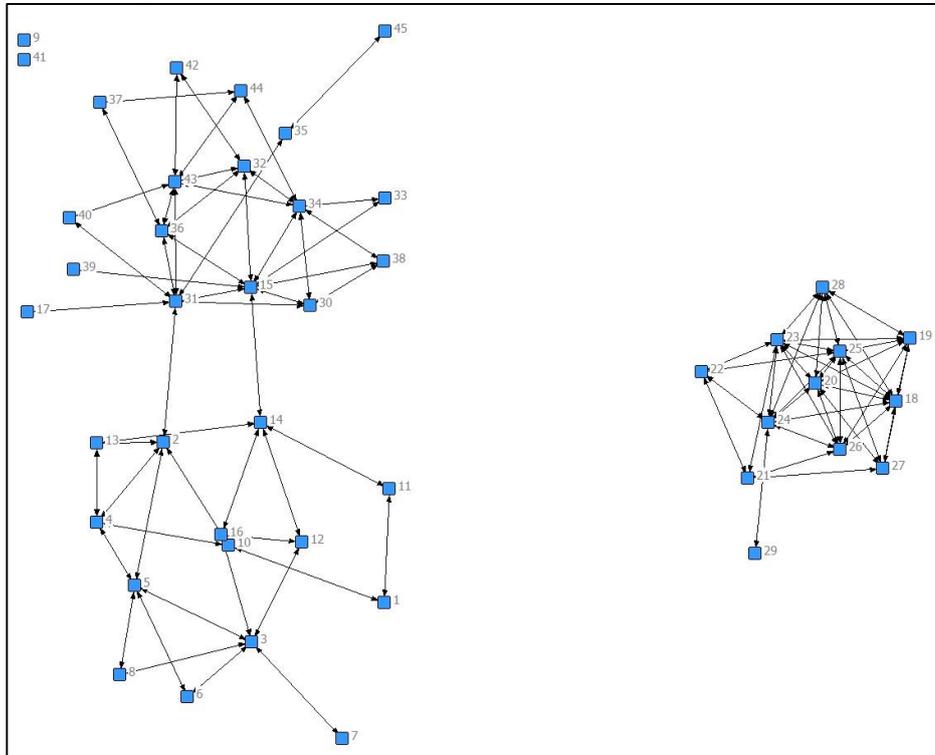
Lutfen egitim seviyenizi belirtiniz. Yuksek Lisans Universite / Yuksek Okul Lise

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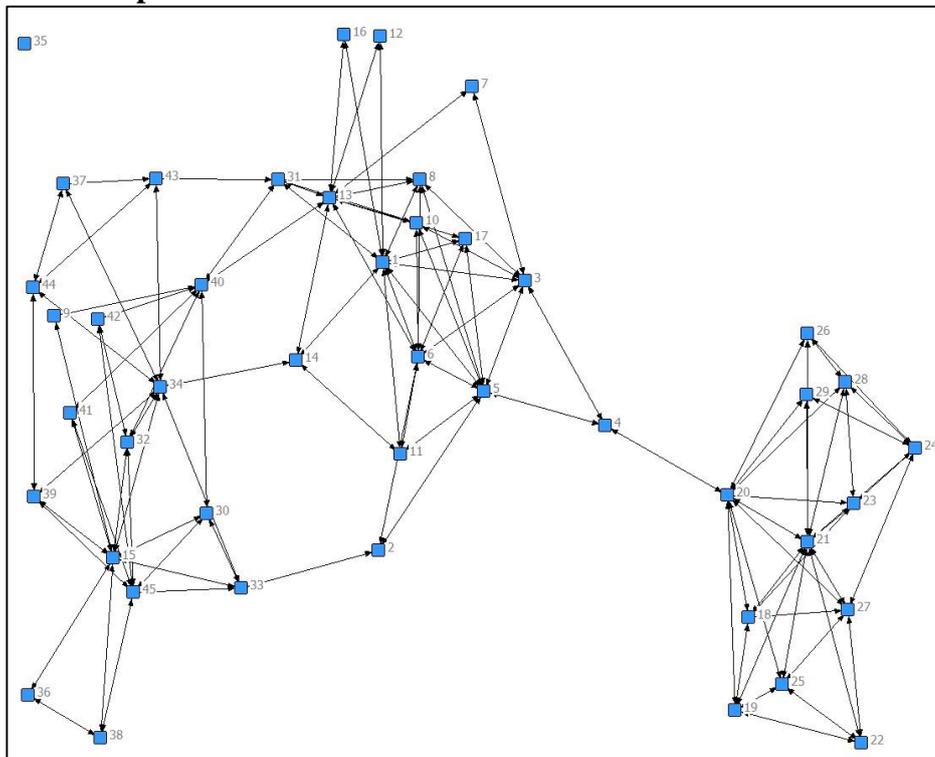
ANKETIMIZE KATILDIGINIZ ICIN COK TESEKKUR EDERIZ!

Appendix 5: Paper 3 Friendship and Advice Networks Illustrations

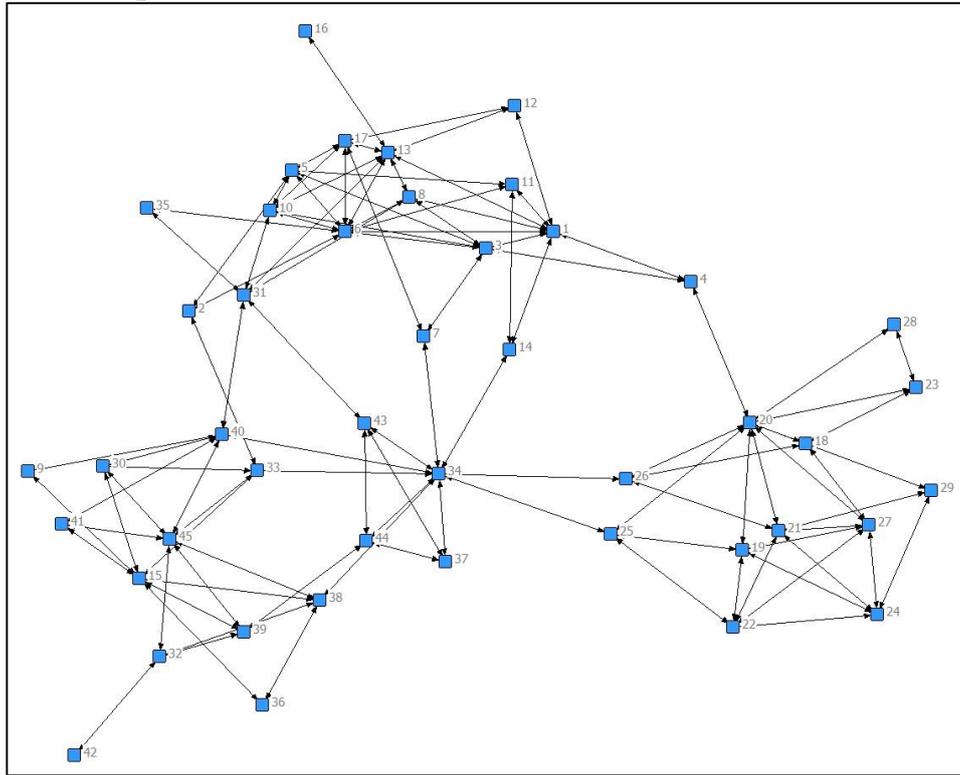
Friendship network illustration at Time 1



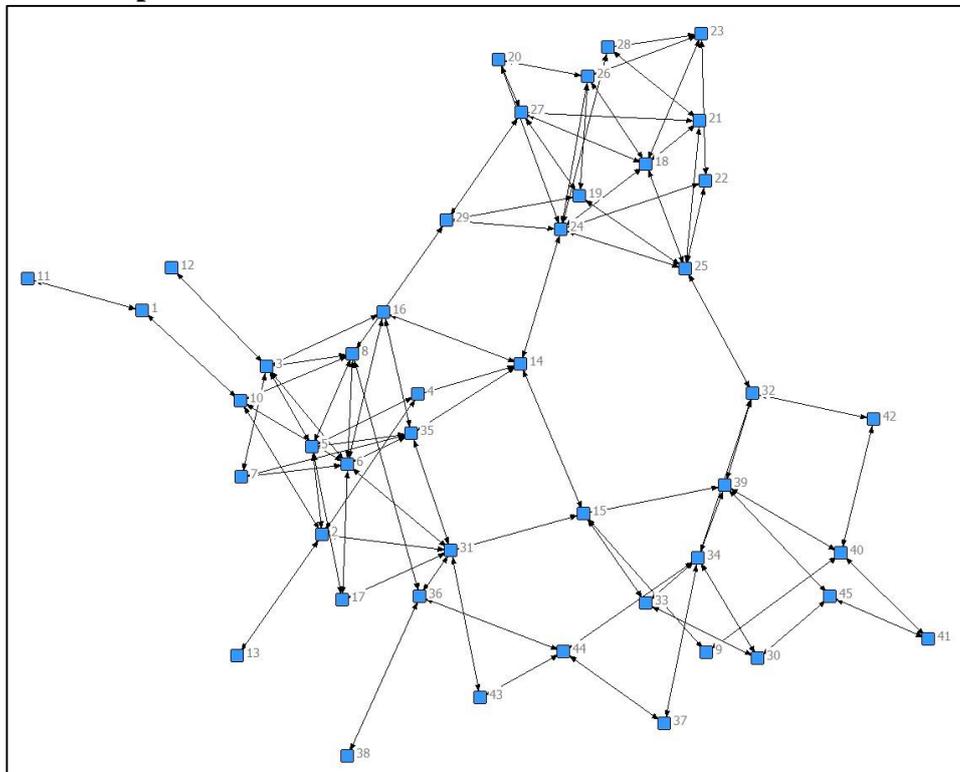
Friendship network illustration at Time 2



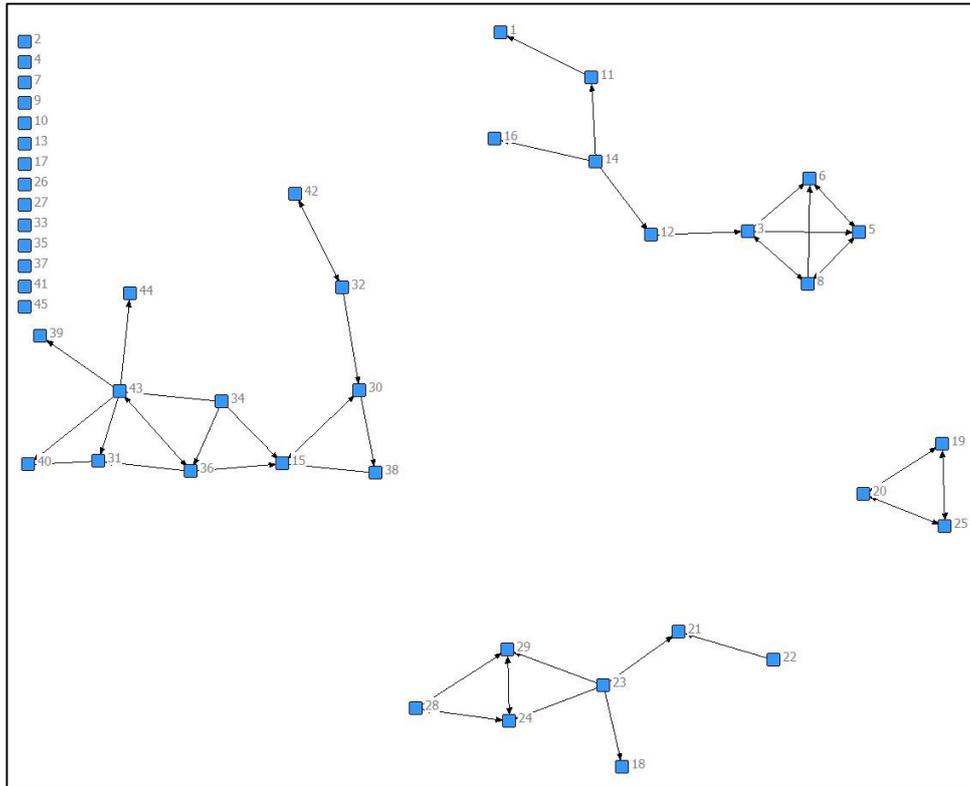
Friendship network illustration at Time 3



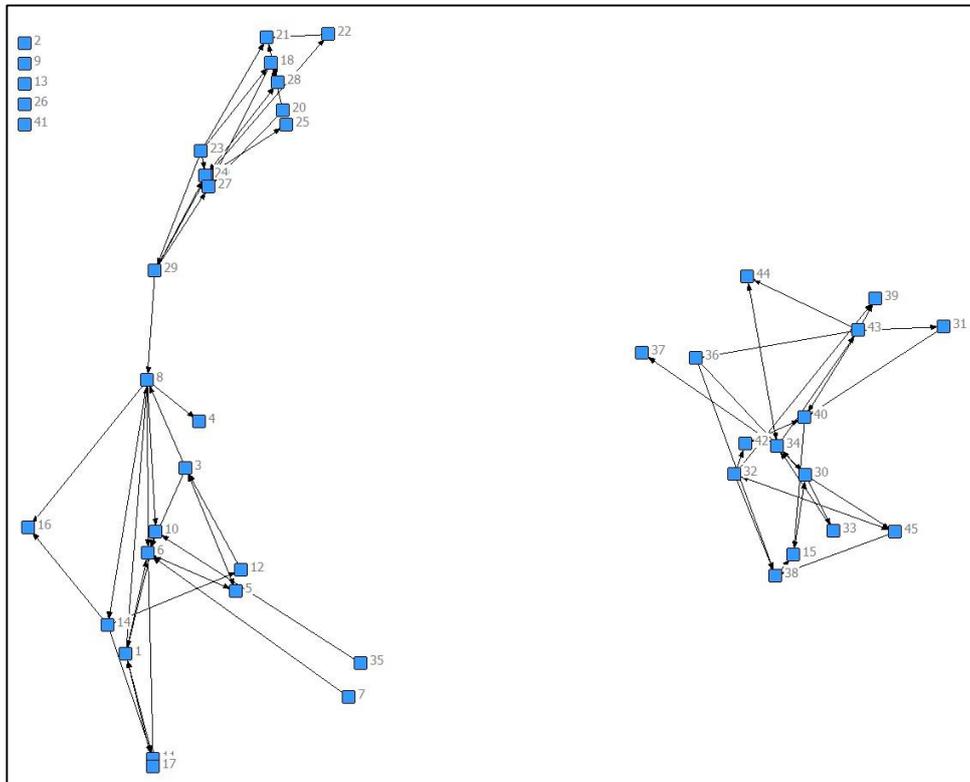
Friendship network illustration at Time 4



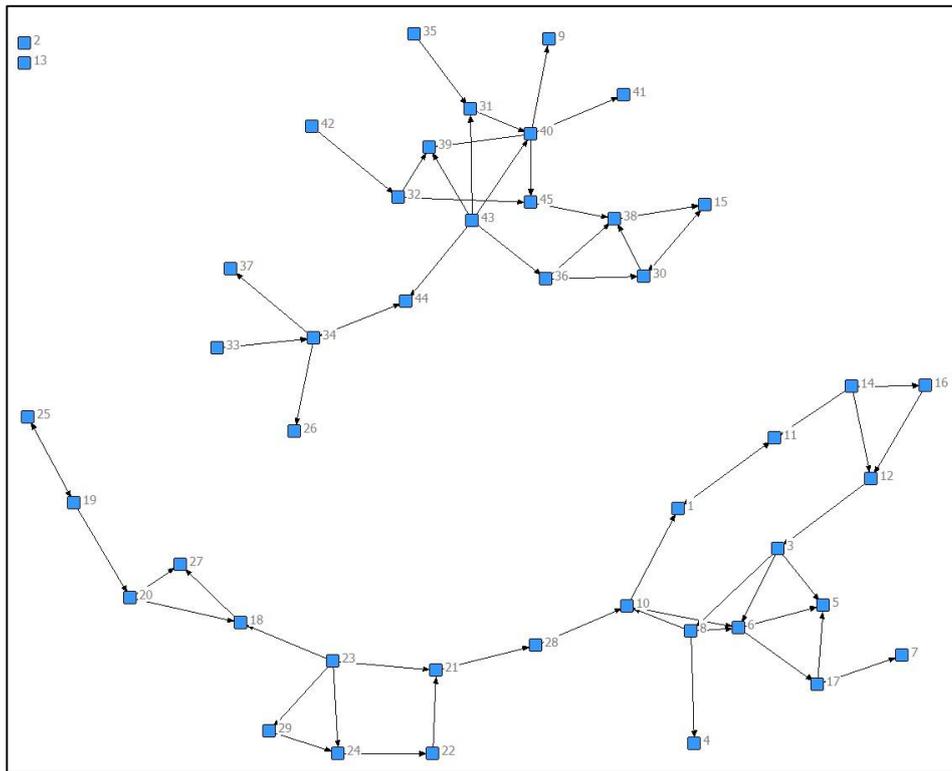
Advice network illustration at Time 1



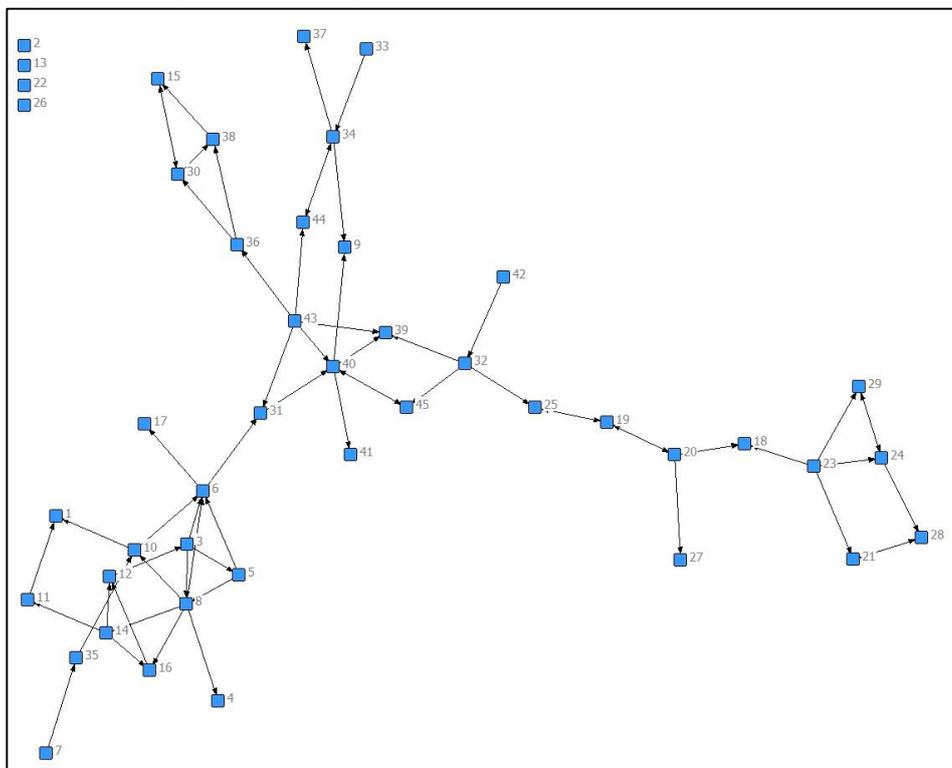
Advice network illustration at Time 2



Advice network illustration at Time 3



Advice network illustration at Time 4



Appendix 6: Paper 3 Sample SIENA model scripts

(#: explanatory comments, >: codes)

```
# Read in the adjacency matrices, covariates and dependent
behavioral variable

>friend.data.t1 <- as.matrix(read.table("friendship.t1.csv"))
>friend.data.t2 <- as.matrix(read.table("friendship.t2.csv "))
>friend.data.t3 <- as.matrix(read.table("friendship.t3.csv "))
>friend.data.t4 <- as.matrix(read.table("friendship.t4.csv "))

>advice.data.t1 <- as.matrix(read.table("advice.t1.csv"))
>advice.data.t2 <- as.matrix(read.table("advice.t2.csv "))
>advice.data.t3 <- as.matrix(read.table("advice.t3.csv "))
>advice.data.t4 <- as.matrix(read.table("advice.t4.csv "))

>career.exp <- as.matrix( read.table("career
expectation.txt"))
>autonmy.exp <- as.matrix( read.table("autonmy
expectation.txt"))
>recognition.exp <- as.matrix( read.table("recognition
expectation.txt"))
>os.exp <- as.matrix( read.table("os expectation.txt"))
>fairness.exp <- as.matrix( read.table("fairness
expectation.txt"))

>career.per <- as.matrix( read.table("career
perception.txt"))
>autonmy.per <- as.matrix( read.table("autonmy
perception.txt"))
>recognition.per <- as.matrix( read.table("recognition
perception.txt"))
>os.per <- as.matrix( read.table("os perception.txt"))
>fairness.per <- as.matrix( read.table("fairness
perception.txt"))

>gender <- as.matrix( read.table("gender_F_1.txt"))

# Now the data must be given the specific roles of variables
# in an RSiena analysis.
# Tell RSiena that the adjacency matrices are network data and
in what order they should be treated
>?sienaDependent
# First create a 45 * 45 * 4 array composed of the friendship
and advice adjacency matrices
>friendshipData <- array( c( friend.data.t1, friend.data.t2,
friend.data.t3, friend.data.t4),
dim = c( 45, 45, 4 ) )
```

```

>adviceData <- array( c( advice.data.t1, advice.data.t2,
advice.data.t3, advice.data.t4),
                    dim = c( 45, 45, 4 ) )

# and next give these arrays the role of the dependent
variables:
>friendship <- sienaDependent(friendshipData)
>advice <- sienaDependent(adviceData)
# Tell RSiena that the variable "career.exp" should be treated
as a dependent variable

# The same logic applies to all the other expectation and
perception variables. Here as an example I continue with the
coevolution model between friendship and career expectations.

>CareerExp <- sienaDependent(career.exp, type = "behavior" )
>gender <- coCovar( gender[ , 1 ] ) # define gender as
covariate

# Define the data set and obtain the basic effects object

>CareerExpFriendCoEvolData <- sienaDataCreate( friendship,
CareerExp, gender)
>CareerExpFriendCoEvolEff <-
getEffects(CareerExpFriendCoEvolData)

# Define the effects to include in the coevolution model

>effectsDocumentation(CareerExpFriendCoEvolEff)

# Start with some structural effects (network control effects:
transivity and popularity)
> CareerExpFriendCoEvolEff <-
includeEffects(CareerExpFriendCoEvolEff, transTrip,inPop)

# Social selection part of the coevolution: Include a
homophily effect (simX) of career expectations for friendship
formation i.e. the effect of behavior the network:

>CareerExpFriendCoEvolEff <-
includeEffects(CareerExpFriendCoEvolEff, simX,
              interaction1 = "CareerExp" )

# Social influence part of the coevolution: Include
assimilation effect of friendship for formation of career
expectations, # we specify the following effects:

> CareerExpFriendCoEvolEff <-
includeEffects(CareerExpFriendCoEvolEff,
              name = " CareerExp ", avAlt,
              interaction1 = "friendship")

```

```

# Include same gender effect as a control variable
> CareerExpFriendCoEvolEff <-
includeEffects(CareerExpFriendCoEvolEff,
               sameX,
               interaction1 = "gender")

# Check what effects I have included:

>myCoEvolutionEff

# Now I have to define the algorithm settings.
# I use model type 2 for friendship networks since it is the
model type for non-directed (reciprocal) networks. For advice
networks, the default model type 1 is used since advice ties
are directed.

>myCoEvAlgorithm <- sienaAlgorithmCreate( projname =
'Friend.CareerExp', modelType = 2 )

# Finally, estimate the model; the whole command is put in
parentheses
# to have the results printed directly to the screen.

>(ans <- siena07(myCoEvAlgorithm,
data=CareerExpFriendCoEvolData,
               effects= CareerExpFriendCoEvolEff ))

# For good convergence, the t-ratios for convergence
# all should be less than .1 in absolute value,
# and the overall maximum convergence ratio should be less
than 0.25.
# If this is not yet the case, run the simulation multiple
times using the answer from the previous simulation as a
starting point:

>(ans1 <- siena07 myCoEvAlgorithm,
data=CareerExpFriendCoEvolData,
               effects= CareerExpFriendCoEvolEff,

               prevAns = ans ))

# This was an example model script developed for the
coevolution of friendship ties and career expectations, there
are 19 more models following the same logic but the type of
network and expectation/perception dimensions change in the
codes.

```

Appendix 7: Paper 3 SIENA Simulation Estimation Results Tables with Advice Networks

SIENA Simulation Estimation Results: Coevolution of Newcomers' Advice Ties and Expectations of Opportunities for Career Advancement

Effect	Parameter	Standard error
Sub-model (A) Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Advice (period 1)	2.938*	(0.667)
rate Advice (period 2)	1.314*	(0.253)
rate Advice (period 3)	0.786*	(0.170)
<i>Network Control Variables</i>		
degree (density)	--1.836*	(0.306)
reciprocity	1.081*	(0.317)
transivity	0.904*	(0.223)
popularity	--0.310*	(0.114)
same gender.covar	0.355	(0.235)
<i>Opportunities for Career Advancement Expectations similarity (homophily) – H3A</i>	--0.289	(1.122)
Sub-model (B) Dependent Variable: Expectations of Opportunities for Career Advancement		
<i>Rate Function</i>		
rate Opportunities for Career Advancement Expectations (period 1)	3.086*	(1.089)
rate Opportunities for Career Advancement Expectations (period 2)	10.179*	(4.221)
rate Opportunities for Career Advancement Expectations (period 3)	6.724*	(2.896)
<i>Behavior Control Variables</i>		
behavior Opportunities for Career Advancement Expectations linear shape	0.366*	(0.093)
behavior Opportunities for Career Advancement Expectations quadratic shape	--0.077	(0.062)
behavior Opportunities for Career Advancement Expectations average alter (assimilation)	0.335	(0.201)
All convergence t ratios < 0.098.		

Overall maximum convergence ratio: 0.2032

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

SIENA Simulation Estimation Results: Coevolution of Newcomers' Advice Ties and Expectations of Autonomy

Effect	Parameter	Standard error
Sub-model (A) Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Advice (period 1)	2.925*	(0.595)
rate Advice (period 2)	1.303*	(0.256)
rate Advice (period 3)	0.776*	(0.172)
<i>Network Control Variables</i>		
degree (density)	--1.897*	(0.317)
reciprocity	1.053*	(0.298)
transivity	0.892*	(0.240)
popularity	--0.293*	(0.120)
same gender.covar	0.397	(0.252)
<i>Autonomy Expectation similarity (homophily) – H3B</i>	--0.292	(1.050)
Sub-model (B) Dependent Variable: Expectations of Autonomy		
<i>Rate Function</i>		
rate Autonomy Expectation (period 1)	3.550*	(1.086)
rate Autonomy Expectation (period 2)	7.194*	(3.385)
rate Autonomy Expectation (period 3)	2.937*	(0.823)
<i>Behavior Control Variables</i>		
behavior Autonomy Expectation linear shape	0.254*	(0.072)
behavior Autonomy Expectation quadratic shape	--0.080	(0.036)
behavior Autonomy Expectation average alter (assimilation)	0.161	(0.147)
All convergence t ratios < 0.078.		

Overall maximum convergence ratio: 0.1924

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

SIENA Simulation Estimation Results: Coevolution of Newcomers' Advice Ties and Expectations of Recognition

Effect	Parameter	Standard error
Sub-model (A) Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Advice (period 1)	2.935*	(0.692)
rate Advice (period 2)	1.294*	(0.239)
rate Advice (period 3)	0.780*	(0.163)
<i>Network Control Variables</i>		
degree (density)	--1.847*	(0.363)
reciprocity	1.066*	(0.318)
transivity	0.889*	(0.234)
popularity	--0.313*	(0.143)
same gender.covar	0.387	(0.250)
Recognition Expectation similarity (homophily) – H3C	--1.307	(1.946)
Sub-model (B) Dependent Variable: Expectations of Recognition		
<i>Rate Function</i>		
rate Recognition Expectation (period 1)	1.738*	(0.477)
rate Recognition Expectation (period 2)	7.435	(6.752)
rate Recognition Expectation (period 3)	4.336*	(1.618)
<i>Behavior Control Variables</i>		
behavior Recognition Expectation linear shape	0.271*	(0.086)
behavior Recognition Expectation quadratic shape	--0.124	(0.082)
behavior Recognition Expectation average alter (assimilation)	0.096	(0.214)
All convergence t ratios < 0.072		

Overall maximum convergence ratio: 0.1939

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

SIENA Simulation Estimation Results: Coevolution of Newcomers' Advice Ties and Expectations of Organizational Support

Effect	Parameter	Standard error
Sub-model (A) Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Advice (period 1)	3.002*	(0.710)
rate Advice (period 2)	1.315*	(0.224)
rate Advice (period 3)	0.776*	(0.163)
<i>Network Control Variables</i>		
degree (density)	--1.898*	(0.316)
reciprocity	1.130*	(0.316)
transivity	0.883*	(0.247)
popularity	--0.308*	(0.123)
same gender.covar	0.409	(0.242)
Organizational Support Expectation similarity (homophily) – H3D	--0.956	(1.731)
Sub-model (B) Dependent Variable: Expectations of Organizational Support		
<i>Rate Function</i>		
rate Organizational Support Expectation (period 1)	1.215*	(0.374)
rate Organizational Support Expectation (period 2)	4.746	(4.667)
rate Organizational Support Expectation (period 3)	3.875*	(1.806)
<i>Behavior Control Variables</i>		
behavior Organizational Support Expectation linear shape	0.419*	(0.131)
behavior Organizational Support Expectation quadratic shape	--0.221	(0.165)
behavior Organizational Support Expectation average alter (assimilation)	0.352	(0.329)
All convergence t ratios < 0.099		

Overall maximum convergence ratio: 0.2207

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

SIENA Simulation Estimation Results: Coevolution of Newcomers' Advice Ties and Expectations of Fairness

Effect	Parameter	Standard error
Sub-model (A) Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Advice (period 1)	2.900*	(0.646)
rate Advice (period 2)	1.306*	(0.235)
rate Advice (period 3)	0.792*	(0.166)
<i>Network Control Variables</i>		
degree (density)	--1.868*	(0.362)
reciprocity	1.083*	(0.330)
transivity	0.912*	(0.231)
popularity	--0.308*	(0.120)
same gender.covar	0.331	(0.270)
<i>Fairness Expectation similarity (homophily) – H3E</i>	1.810	(4.130)
Sub-model (B) Dependent Variable: Expectations of Fairness		
<i>Rate Function</i>		
rate Fairness Expectation (period 1)	6.803	(3.515)
rate Fairness Expectation (period 2)	8.764*	(3.765)
rate Fairness Expectation (period 3)	3.274*	(1.459)
<i>Behavior Control Variables</i>		
behavior Fairness Expectation linear shape	0.360*	(0.088)
behavior Fairness Expectation quadratic shape	--0.049	(0.048)
behavior Fairness Expectation average alter (assimilation)	0.134	(0.179)
All convergence t ratios < 0.094.		

Overall maximum convergence ratio: 0.2075

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

SIENA Simulation Estimation Results: Coevolution of Newcomers' Advice Ties and Perceptions of Opportunities for Career Advancement

Effect	Parameter	Standard error
Sub-model (A) Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Advice (period 1)	1.305*	(0.231)
rate Advice (period 2)	0.782*	(0.172)
<i>Network Control Variables</i>		
degree (density)	--2.044*	(0.758)
transivity	1.356*	(0.648)
reciprocity	1.732*	(0.446)
popularity	--0.698*	(0.274)
same gender.covar	0.770	(0.496)
Opportunities for Career Advancement Perception similarity (homophily)	1.188	(3.264)
Sub-model (B) Dependent Variable: Perceptions of Opportunities for Career Advancement		
<i>Rate Function</i>		
rate Opportunities for Career Advancement Perception (period 1)	2.395*	(0.763)
rate Opportunities for Career Advancement Perception (period 2)	8.227	(6.243)
<i>Behavior Control Variables</i>		
behavior Opportunities for Career Advancement Perception linear shape	--0.130	(0.118)
behavior Opportunities for Career Advancement Perception quadratic shape	--0.255*	(0.089)
<i>behavior Opportunities for Career Advancement Perception average alter (assimilation) – H4A</i>	0.286	(0.220)
All convergence t ratios < 0.085.		

Overall maximum convergence ratio: 0.1490

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

SIENA Simulation Estimation Results: Coevolution of Newcomers' Advice Ties and Perceptions of Autonomy

Effect	Parameter	Standard error
Sub-model (A) Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Advice (period 1)	1.303*	(0.240)
rate Advice (period 2)	0.795*	(0.188)
<i>Network Control Variables</i>		
degree (density)	--1.785*	(0.604)
transivity	1.374*	(0.536)
reciprocity	1.662*	(0.397)
popularity	--0.682*	(0.232)
same gender.covar	0.704	(0.487)
Autonomy Perception similarity (homophily)	--2.212	(2.147)
Sub-model (B) Dependent Variable: Perception of Autonomy		
<i>Rate Function</i>		
rate Autonomy Perception (period 1)	3.603*	(0.962)
rate Autonomy Perception (period 2)	5.836*	(2.580)
<i>Behavior Control Variables</i>		
behavior Autonomy Perception linear shape	0.005	(0.077)
behavior Autonomy Perception quadratic shape	--0.197*	(0.061)
<i>behavior Autonomy Perception average alter (assimilation) – H4B</i>	0.286	(0.200)
All convergence t ratios < 0.067.		

Overall maximum convergence ratio: 0.1560

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

SIENA Simulation Estimation Results: Coevolution of Newcomers' Advice Ties and Perceptions of Recognition

Effect	Parameter	Standard error
Sub-model (A) Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Advice (period 1)	1.321*	(0.254)
rate Advice (period 2)	0.782*	(0.168)
<i>Network Control Variables</i>		
degree (density)	--1.981*	(0.825)
transivity	1.357*	(0.558)
reciprocity	1.754*	(0.445)
popularity	--0.727*	(0.271)
same gender.covar	0.776	(0.509)
Recognition Perception similarity (homophily)	1.081	(2.616)
Sub-model (B) Dependent Variable: Perception of Recognition		
<i>Rate Function</i>		
rate Recognition Perception (period 1)	2.516*	(0.683)
rate Recognition Perception (period 2)	9.304	(4.494)
<i>Behavior Control Variables</i>		
behavior Recognition Perception linear shape	--0.102	(0.087)
behavior Recognition Perception quadratic shape	--0.223*	(0.081)
<i>behavior Recognition Perception average alter (assimilation) – H4C</i>	0.285	(0.219)
All convergence t ratios < 0.089.		

Overall maximum convergence ratio: 0.1598

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

SIENA Simulation Estimation Results: Coevolution of Newcomers' Advice Ties and Perceptions of Organizational Support

Effect	Parameter	Standard error
Sub-model (A) Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Advice (period 1)	1.296*	(0.237)
rate Advice (period 2)	0.776*	(0.185)
<i>Network Control Variables</i>		
degree (density)	--1.964*	(0.833)
transivity	1.356*	(0.557)
reciprocity	1.745*	(0.460)
popularity	--0.721*	(0.260)
same gender.covar	0.762	(0.478)
Organizational Support Perception similarity (homophily)	1.065	(2.739)
Sub-model (B) Dependent Variable: Perception of Organizational Support		
<i>Rate Function</i>		
rate Organizational Support Perception (period 1)	2.520*	(0.766)
rate Organizational Support Perception (period 2)	10.331	(5.726)
<i>Behavior Control Variables</i>		
behavior Organizational Support Perception linear shape	--0.153	(0.088)
behavior Organizational Support Perception quadratic shape	--0.322*	(0.085)
<i>behavior Organizational Support Perception average alter (assimilation) – H4D</i>	0.289	(0.222)
All convergence t ratios < 0.082.		

Overall maximum convergence ratio: 0.1862

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

SIENA Simulation Estimation Results: Coevolution of Newcomers' Advice Ties and Perceptions of Fairness

Effect	Parameter	Standard error
Sub-model (A) Dependent Variable: Friendship Ties		
<i>Rate Function</i>		
rate Advice (period 1)	1.310*	(0.228)
rate Advice (period 2)	0.786*	(0.173)
<i>Network Control Variables</i>		
degree (density)	--1.992*	(0.757)
transivity	1.395*	(0.566)
reciprocity	1.750*	(0.438)
popularity	--0.733*	(0.257)
same gender.covar	0.780	(0.497)
Fairness Perception similarity (homophily)	1.183	(2.983)
Sub-model (B) Dependent Variable: Perception of Fairness		
<i>Rate Function</i>		
rate Fairness Perception (period 1)	2.521*	(0.762)
rate Fairness Perception (period 2)	9.526*	(4.370)
<i>Behavior Control Variables</i>		
behavior Fairness Perception linear shape	--0.100	(0.083)
behavior Fairness Perception quadratic shape	--0.221*	(0.085)
<i>behavior Fairness Perception average alter (assimilation) – H4E</i>	0.294	(0.225)
All convergence t ratios < 0.088.		

Overall maximum convergence ratio: 0.1978

*, significant at 0.05 level (t-statistics: parameter estimate/ standard deviation > 2)

