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**PSYCHOLOGICAL CONTRACT DEVELOPMENT
DURING ORGANIZATIONAL SOCIALIZATION:
ADAPTATION TO REALITY AND
THE ROLE OF RECIPROCITY**

ANS DE VOS

Ans.DeVos@vlerick.be

DIRK BUYENS

Dirk.Buyens@vlerick.be

RENÉ SCHALK

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RENÉ SCHALK

Contact

Ans De Vos

Vlerick Leuven Gent Management School

Reep 1, 9000 Gent, Belgium

Phone: ++32 9 210 97 38

Fax: ++32 9 210 97 61

ABSTRACT

Based on the theoretical framework of newcomer sensemaking this study examines factors associated with changes in newcomers' psychological contract perceptions during the socialization process. More specifically, two mechanisms are addressed that could explain changes in newcomers' perceptions of the promises they have exchanged with their employer: (1) unilateral adaptation of perceived promises to reality and (2) adaptation of perceived promises as a function of the reciprocity norm. To test our hypotheses, a four-wave longitudinal study among 333 new hires has been conducted, covering the first year of their employment relationship. Results show that changes in newcomers' perceptions of the promises they have made to their employer are affected by their perceptions of their own contributions as well as by their perceptions of inducements received from their employer. Changes in newcomers' perceptions of employer promises are affected by their perceptions of employer inducements received, but the impact of perceived employee contributions is less clear. The data provide limited support for the idea that the adaptation of perceived promises to perceived inducements and contributions occurs to a stronger extent during the encounter stage than during the acquisition stage of socialization.

INTRODUCTION

The psychological contract has been viewed as a relevant construct to explain important employee attitudes and behaviors like commitment, turnover and organizational citizenship behaviors (e.g. Conway & Briner, 2002; Lester, Turnley, Bloodgood & Bolino, 2002; Robinson & Morrison, 1995; Turnley & Feldman, 1999, 2000). Psychological contracts are defined as the beliefs individuals hold regarding the terms and conditions of the exchange agreement between themselves and their organizations (Rousseau, 1989). Most prior research has focused on employees' perceptions of and responses to psychological contract breach (e.g. Conway & Briner, 2002; Lester *et al.*, 2002; Robinson & Morrison, 1995; 2000; Turnley, Bolino, Lester & Bloodgood, 2003). These findings, which relate to the aftermath of the psychological contract, call for research into its formation (Rousseau, 2001). However, the process of psychological contract formation remains theoretically underdeveloped and has received limited empirical attention, with two exceptions (Robinson, Kraatz & Rousseau, 1994; Thomas & Anderson, 1998). Both studies found that during the socialization process, newcomers came to perceive that their employers owed them more. In addition, Robinson *et al.* (1994) found that newcomers came to perceive that they owed less to their employers. These findings support the idea that newcomers change their psychological contract perceptions based on the reality they encounter after entry. However, both studies only focused on changes in the mean level of newcomers' psychological contract perceptions without investigating the factors associated with these changes over time.

The main objective of this study, then, is to gain a better understanding of the process of psychological contract formation by examining the factors associated with changes in newcomers' psychological contracts during socialization. Specifically, this study advances theory development on psychological contract formation in three ways.

First, this is the first study to investigate psychological contract formation as a sensemaking process taking place during organizational socialization (Louis, 1980). Central to the conceptualization of the psychological contract is that it is a perceptual cognition which exists "in the eye of the beholder" (Rousseau, 1989). This makes it especially relevant to study psychological contract formation from a sensemaking perspective. Starting from the sensemaking framework this study examines how changes in newcomers' perceived promises are associated with their interpretations of experiences encountered after organizational entry. Based on this sensemaking framework we investigate the role of two principles, (1) unilateral

adaptation of perceived promises to perceptions of reality and (2) changes in perceived promises as a function of the reciprocity norm.

Second, this study relates the process of psychological contract formation to the socialization process. The socialization period is generally considered as an important stage in the formation of employees' psychological contracts (e.g. Anderson & Thomas, 1996; Nelson *et al.*, 1991; Rousseau, 1995; Shore & Tetrick, 1994; Thomas & Anderson, 1998). Socialization research has shown that during this period sensemaking plays an important role in the adjustment of the newcomer to the organization, especially during the first months after entry (Morrison, 1993a; 1993b; Saks & Ashforth, 1997). Therefore the present research examines how sensemaking processes about the psychological contract operate during both socialization stages (encounter and acquisition).

Third, this study takes into account newcomers' perceptions of both parties' promises and actions (employer and employee). To date most research has focused exclusively on employer inducements, although reciprocity between employer inducements and employee contributions is considered to be a defining element of the psychological contract (Millward & Brewerton, 2000; Rousseau, 1995). Taking into account newcomers' perceptions of both parties' promises and actions makes it possible to examine how both are dynamically interrelated over time.

This study also makes a methodological contribution by using a longitudinal research design involving multiple data collection waves. This is the only way in which the factors explaining changes in newcomers' psychological contracts over time can adequately be captured. The psychological contract is widely assumed to reflect an exchange process (Millward & Brewerton, 2000; Rousseau, 1995; Shore & Tetrick, 1994). By using four data collection waves it becomes possible to track variations over time and to empirically assess reciprocity between employer inducements and employee contributions. Also, by using theoretically relevant time spans between data collections it is possible to study hypotheses about the adaptation process during different socialization stages.

THEORY

Psychological contract formation as a sensemaking process

The period of organizational entry and socialization is characterized by sensemaking processes through which newcomers come to understand, interpret, and respond to their new environment (Louis, 1980). Sensemaking refers to cognitive processes that individuals employ in organizational settings to cope with surprise and novelty (Louis, 1980). These sensemaking processes are seen as critical to the development of attitudes and behaviors that enable newcomers to function effectively within their new work environment (Bauer *et al.*, 1998; Morrison, 1993a; 1993b; Saks & Ashforth, 1997). Sensemaking helps newcomers to bring their expectations in line with reality, thereby reducing feelings of unmet expectations or broken promises (Louis, 1980).

The sensemaking process is viewed as a cycle of events occurring over time (Louis, 1980). This cycle begins before entry, when future employees form unconscious and conscious anticipations and assumptions about their future employment relationship. After entry, newcomers experience events that may trigger a process through which prior expectations are changed and predictions about future experiences are revised (Louis, 1980). These retrospective interpretation processes thus involve an active change of expectations and assumptions based on actual experiences. (Meyer *et al.*, 1991; Salancik & Pfeffer, 1978). The updated anticipations and revised assumptions are analogous to changes in cognitive schemas. A schema is defined as a cognitive structure that represents organized knowledge about a person or situation (Fiske & Taylor, 1984). Schemas typically affect the perception of incoming information, the retrieval of stored information, and inferences based on that information (Fiske & Taylor, 1984).

The description of sensemaking as a process through which newcomers actively form and change their cognitive schemas makes it relevant to apply this to psychological contract formation. The psychological contract is conceived as a cognitive schema that individuals hold about the terms of their employment relationship. It consists of individuals' beliefs about what is expected to occur in the organization and what is expected of the individual in return (Rousseau, 1995; 2001; Shore & Tetrick, 1994). The psychological contract is a perceptual cognition defined at the level of the individual. This means that it is the perception of reality, not reality as such, which is the central focus of psychological contract research (Rousseau,

1989; 1995; Schalk & Freese, 1997). What's important in this conceptualization is that the perceiver is conceived as an active constructor of reality (Robinson, 1996). This means that employees actively make sense of their psychological contract based upon their experiences within the organization (Rousseau, 1995; 2001; Shore & Tetrick, 1994).

This relates psychological contract formation to newcomer sensemaking. At entry, most newcomers have only limited or incomplete information about the terms of their employment relationship (Rousseau, 2001). This motivates newcomers to actively interpret their initial experiences as a basis for predicting future events and for changing their expectations, thereby making their psychological contract schema more complete. This in turn should help them to reduce uncertainty and make their experiences in their new work setting more predictable (Shore & Tetrick, 1994). This sensemaking process implies that perceptions of promises are adapted based upon newcomers' interpretations of their experiences in the work setting (Rousseau, 2001). These experiences relate to the contractual behavior of both parties to the employment relationship, i.e. the inducements provided by the employer and the contributions made by the employee.

Patterns of change in newcomers' perceived promises

Newcomers' psychological contracts are comprised of beliefs about the inducements they have been promised by their employer (e.g. career opportunities, financial rewards, an interesting job content) and the contributions they have promised to make in return (e.g. performance, extra-role behavior, flexibility, loyalty). To understand the patterns of change in newcomers' perceived promises it is important to consider both parties' contributions (see Figure 1). Based on sensemaking theory we expect that the adaptation of perceived promises to the interpretation of experiences can occur both unilaterally and reciprocally. Unilateral adaptation implies that newcomers change their perceptions of promises made by one party (themselves or their employer) based on their interpretation of the contributions made by that party. Reciprocal adaptation means that newcomers change their perceptions of promises made by one party based on their interpretation of the contributions made by the other party.

For example, newcomers could change their perceptions of employer promises about career opportunities (1) as a function of their evaluation of the career development opportunities their employer actually offers or (2) as a function of their evaluation of the contributions they make to their employer. The former principle refers to the unilateral

adaptation of perceived promises to evaluations of reality, while the latter reflects changes in perceived promises as a function of the reciprocity norm. Both principles are complementary in the sense that they both explain why newcomers change their psychological contract perceptions as a consequence of their interpretations of their experiences within the work setting. This means that, in order to fully understand psychological contract formation as a sensemaking process, we have to focus on newcomers' perceptions of promises made by both parties (employer and employee) and on their evaluations of the contributions made by both parties.

Insert Figure 1 About Here

Unilateral adaptation of perceived promises to interpretations of experiences

Unilateral adaptation of perceived promises to interpretations of experiences implies that newcomers change their perceptions of promises conveyed by one party (themselves or their employer) as a consequence of their interpretations of that party's actions. These actions are an important source of feedback to the newcomer about his or her anticipations because they signal that commitments are actually made (Rousseau, 2001). This feedback can stimulate the newcomer to revise his or her original expectations.

First, organizational actions inform newcomers about the commitments the organization is willing to make. For example, the amount of training a newcomer receives can inform him or her about the extent to which the organization makes commitments relating to learning and development. Newcomers who believe to receive a lot of training might increase their initial level of perceived employer promises about learning and development after entry. Inversely, newcomers who believe that they receive insufficient training might decrease their initial level of perceived promises. Sensemaking of employer promises thus implies that depending on their interpretations of organizational actions after entry, newcomers change the level of their initial perceptions of promises conveyed by their employer.

Hypothesis 1: The greater the perception of employer inducements received, the greater the employer promises are perceived to be over time.

The same reasoning holds for promises about employee contributions. Newcomers entering an organization take on a set of tasks and must learn how to perform these tasks. They also must learn the level of commitment they have to show to their employer in different areas like performance level, flexibility, loyalty or ethical behavior. These commitments may be different from what they initially believed to have promised their employer, i.e. the promises reflected in their initial psychological contract schema. For example, newcomers can initially believe to have promised a high level of flexibility in working hours. After entry they might experience that they are actually showing a rather low level of flexibility. Based upon this self-evaluation they could decrease the level of perceived promises about flexibility. Thus, perceived employee promises are adapted to newcomers' interpretations of their actual contributions within the work environment.

Hypothesis 2: The greater the perception of employee contributions made, the greater the employee promises are perceived to be over time.

Reciprocal adaptation of perceived promises to interpretations of experiences

Adaptation of perceived employer and employee promises can also occur reciprocally, based upon the newcomer's interpretation of the other party's actions in the work setting. For example, organizational actions not only inform newcomers about the promises the organization is willing to make (thereby affecting changes in perceived employer promises) but also about the promises the newcomer should make in return (thereby affecting changes in perceived employee promises).

The latter relates sensemaking to the conceptualization of psychological contract formation as an exchange process unfolding between employer and employee. Psychological contract theory is based upon exchange theory. It expands the reciprocity norm (Gouldner, 1960) to include employees' beliefs about the reciprocal employer and employee obligations being part of their employment deal (Rousseau, 1995). Basic to the norm of reciprocity is that one party's receipt of a benefit obligates him or her to return a payment. Continued receipt and payment over time is likely to create an increasing number and diversity of obligations between the parties to the exchange relationship (Blau, 1964; Homans, 1961). The reason for

this escalation is that individuals strive to create imbalance in their exchange relationships to avoid becoming indebted to the other party (Blau, 1964).

Previous longitudinal research has provided evidence for the role of the reciprocity norm in explaining psychological contract outcomes like organizational citizenship behavior, performance and intentions to stay (e.g. Robinson, 1996; Robinson & Morrison, 1995). While these studies directly focused on outcome variables, our study illuminates intervening processes by focusing on the relationship between newcomers' interpretations of their experiences and changes in perceived promises. We expect that, in order to retain balance, newcomers will change their perceptions of what they have promised their employer (e.g. about loyalty or performance) as a function of their evaluations of the inducements received from their employer. This means that a greater perception of employer inducements will be related to a greater perception of employee promises over time.

Hypothesis 3: The greater the perception of employer inducements received, the greater the employee promises are perceived to be over time.

As to date the reciprocity norm has mainly been studied in one direction, i.e. in explaining changes in employee outcomes as a function of employer inducements. To fully assess reciprocity in psychological contract formation it is necessary to investigate the bi-directional influence between newcomer and organization (Coyle-Shapiro & Kessler, 2000). Employees, in making contributions, are conferring a benefit to their employer. Following exchange theory, this creates an obligation for the employer to reciprocate (Coyle-Shapiro & Kessler, 2000). Thus, in order to restore balance, newcomers with a greater perception of their own contributions will increase their perceptions of what their employer has promised them (e.g. in terms of career opportunities or financial rewards).

Hypothesis 4: The greater the perception of employee contributions made, the greater the employer promises are perceived to be over time.

Psychological contract formation during different socialization stages

The need for sensemaking will be greatest when uncertainty is high (Rousseau, 1995; 2001; Shore & Tetrick, 1994). Schemas are most likely to change when people are motivated to make the cognitive effort change requires. Socialization research suggest that it is mainly

during the encounter stage of socialization, i.e. the first months after entry, that newcomers actively test their anticipations against the reality of their new work experiences. During this period, differences between anticipations and experiences become apparent and contribute to a “reality shock” (Louis, 1980; Schein, 1978). Coping with such differences through active sensemaking and adaptation of expectations is central during this period (Morrison, 1993a; 1993b). Relating this to psychological contract formation it means that this is the period during which perceived promises are most likely to change as a consequence of newcomers’ interpretations of their experiences.

The individual’s adjustment to the organization further occurs during the sixth to twelfth month after entry, i.e. the acquisition stage of socialization (Louis, 1980; Schein, 1978). During this period newcomers become better acquainted with their new employment setting. As a more stable cognitive schema about the employment relationship develops, uncertainty about the new employment relationship is reduced and active sensemaking processes decrease (Anderson & Thomas, 1996; Louis, 1980; Rousseau, 1995; 2001; Schein, 1978). Therefore we expect that during this period newcomers’ experiences will become less likely to affect changes in their perceived promises.

Hypothesis 5: The relationship between newcomers’ interpretations of experiences and changes in perceived employer and employee promises will be stronger during the encounter stage than during the acquisition stage of socialization.

METHOD

Sample and procedure

The respondent population for this study consisted of 975 newcomers from six large private firms in Belgium. These firms represent four industries (telecommunication, electronics, consulting and financial services). In each of these organizations, all newcomers who had been hired with a permanent employment contract were contacted and invited to participate in the study. In four of the firms employees were informed about the study during the introduction day. In the other two firms, which had no formal introduction session for newcomers, they were informed by the recruitment specialist when signing their contract. Participation in the study was voluntary. Confidentiality of responses was formally guaranteed

by the researchers and by the organization. Written surveys were used to collect data at four points in time: 2 weeks after entry (T1) and then 3 months (T2), 6 months (T3), and 12 months (T4) after entry. These intervals were based on socialization literature research suggesting that 3, 6 and 12 months are meaningful intervals in the socialization process (Bauer *et al.*, 1998; Morrison, 1993a; 1993b).

All questionnaires were sent by mail to potential respondents, together with a letter providing clarifications about the research and a pre-stamped return envelope addressed to the researchers. 720 newcomers filled out the first questionnaire, representing a 74 percent response rate. The final sample consisted of 333 participants. These represent 34 percent of the originally contacted sample and 46 percent of the respondents at T1. Mean age of respondents was 26.96 years (S.D. = 5.77) and 35 percent were female. For 40.2 percent of the respondents, this was their first job. Comparison of newcomers who participated in the full study with those who stopped their participation on demographic characteristics and study variables, did not show significant differences as a function of subject dropout.

Measures

Perceived promises were assessed at T1, T3 and T4. Perceived inducements and contributions were assessed at T2, T3 and T4. Commensurate measures were used for assessing perceived promises and perceived inducements and contributions. For employer inducements, 19 items were used tapping five content dimensions of the psychological contract (career development, job content, social atmosphere, financial rewards, work-life balance). For employee contributions, 19 items focusing on five content dimensions were selected (in & extra-role behavior, flexibility, ethical behavior, loyalty, employability). These items and the content dimensions to which they refer were selected based upon previous work by Coyle-Shapiro & Kessler (1998; 2000), Freese & Schalk (1996), Guest & Conway (1997; 1998), Herriot *et al.* (1997), and Rousseau (1990; 1998). The items used to measure each content dimension are presented in the Appendix.

Perceived employer promises were assessed at T1 by asking respondents to indicate the extent to which their employer has made promises to them – implicitly or explicitly – about each of the 19 inducements listed. At T3 and T4 the instruction was slightly changed in order to assess respondents' perceptions of employer promises at that point in time: "Now that you have several months of experience in your new job, please indicate to which extent, based

upon the knowledge you have now, you currently believe that the items listed are promises your employer has made to you”. Answers were given on a five-point scale ranging from ‘not promised at all’ to ‘promised to a very great extent’.

Perceived employee promises were assessed using the same five-point response scale. At T1 respondents were asked to indicate the extent to which they have made promises to their employer – implicitly or explicitly – about each of the 19 contributions listed. At T3 and T4 the instruction was changed in the same way as for perceived employer promises, in order to measure respondents’ perceptions of employee promises at the time of the data collection.

Perceived employer inducements. At each time point respondents’ perceptions of the inducements they received from their employer were assessed by asking them to indicate the extent to which they believe their employer actually offers them each of the 19 inducements listed. A five-point response scale was used, ranging from ‘not at all’ to ‘to a very great extent’.

Perceived employee contributions were assessed using the same five-point response scales. At each time point respondents indicated the extent to which they believe they actually offer each of the 19 employee contributions to their employer.

RESULTS

Table 1 reports the correlations between the psychological contract measures together with the alpha coefficients for the scales. All scales showed sufficient to high reliabilities at each time point, with only a few exceptions. At T1 the Cronbach’s alpha of the scales measuring perceived employer promises about financial rewards and work-life balance were lower than 0.70 (0.63 and 0.66 respectively). This was also the case for perceived employee promises about flexibility (0.63). At T2 the alpha for perceived employee contributions relating to ethical behavior was 0.66. All other alpha’s were higher than 0.70.

Insert Table 1 About Here

Because these scales had not been used previously, it was important to demonstrate their construct validity. This was done through four sets of confirmatory factor analyses on T3 data, conducted with AMOS 4.1 (Arbuckle, 1999). We assessed the validity of the 5-dimensional model for perceived employer promises, perceived employer inducements, perceived employee promises and perceived employee contributions. The 5-dimensional models always indicated a good fit. Inspection of the measurement models showed that with only a few exceptions standardized factor loadings were always higher than 0.50, providing evidence for convergent validity (Kline, 1998). The average variance explained by each content dimension was always larger than the squared latent correlations between dimensions, which provides evidence for the discriminant validity of our scales (Fornell & Larcker, 1981). Correlations between dimensions never exceeded 0.85, suggesting that no bivariate multicollinearity exists between scales (Kline, 1998). The detailed results from these analyses are available from the first author on request. Descriptive statistics for all scales are reported in Table 2.

Insert Table 2 About Here

Hypotheses 1 to 4 were tested using hierarchical regression analyses, following the procedure for the analysis of residual change models (Cohen & Cohen, 1983). For each content dimension, we assessed the relationship between perceived inducements or contributions and changes in perceived promises by controlling for the value of perceived promises at the appropriate earlier point in time. A significant increase in R^2 at the second step indicates that perceived inducements / contributions are related to a change in perceived promises. Analyses focused on changes in both socialization stages separately. Changes during the encounter stage were assessed using T3 perceived promises as the dependent variable. Changes during the acquisition stage were assessed using T4 perceived promises as the dependent variables. To assess Hypotheses 3 and 4 the predictor variable was a mean score across the five content dimensions of inducements (H3) and contributions (H4). The results for changes in perceived employer promises (H1 and H3) are reported in Table 3. Table 4 reports the results for changes in perceived employee promises (H2 and H4). Hypothesis 5 was tested by conducting paired-samples *t*-tests comparing the average change in explained variance across content dimensions during both socialization stages.

Relationship between perceived inducements and changes in perceived employer promises.

Hypothesis 1 proposed that the greater newcomers' perceptions of employer inducements received, the greater their perception of employer promises over time. During the encounter stage significant increases in R^2 were obtained for perceived promises about the five dimensions of employer inducements, which were due to the perception of inducements received. Thus, a greater perception of inducements received at T2 was related to a positive change in perceived promises from T1 to T3. The strongest results were for perceived employer promises relating to job content. Respondents' perceptions of inducements received relating to their job content explained 4% of the variance of the change in perceived promises about their job content ($F? = 24.15, p < 0.001$).

During the acquisition stage the perception of inducements received at T3 was related to a significant increase in explained amount of the variance in perceived promises about job content ($R^2? = 0.01, F? = 5.06, p < 0.05$), financial rewards ($R^2? = 0.01, F? = 4.53, p < 0.05$), and work-life balance ($R^2? = 0.01, F? = 3.73, p < 0.05$). Together these results provide support for Hypothesis 1.

Hypothesis 5 proposed that the relationship between perceived inducements and changes in perceived employer promises would be stronger during the encounter stage than during the acquisition stage. For the five dimensions of employer inducements, the average change in explained amount of variance in perceived promises due to the perception of employer inducements received was significantly greater during the encounter stage than during the acquisition stage (Mean difference = 0.02 (S.D. = .007), $t(4) = 6.325, p < .01$). This supports Hypothesis 5.

Relationship between perceived contributions and changes in perceived employee promises.

Hypothesis 2 proposed that the greater newcomers' perceptions of contributions made, the greater their perception of employee promises over time. During the encounter stage perceived contributions were significantly related to a positive change in perceived promises

about employee contributions from T1 to T3. Between 3% and 6% of the variance of the change in perceived promises about in & extra role behavior, flexibility, ethical behavior and employability was accounted for by respondents' perceptions of their contributions. Only changes in perceived promises about loyalty were not significantly explained by respondents' perceptions of their contributions.

During the acquisition stage perceived contributions significantly explained changes in respondents' perceived promises about all five dimensions of employee contributions. The amount of explained variance was between 1% for loyalty and 4% for employability.

Hypothesis 5 proposed that the relationship between perceived contributions and changes in perceived employee promises would be stronger during the encounter stage than during the acquisition stage. However, results of the paired-samples *t*-tests show that the average change in explained amount of variance in perceived employee promises due to the perception of employee contributions did not differ significantly between both socialization stages (Mean difference = 0.016, S.D. = .021, $t(4) = 1.725$, $p > .05$).

Relationship between perceived employer inducements and changes in perceived employee promises.

Hypothesis 3 proposed that the greater newcomers' perceptions of inducements received, the greater their perception of employee promises over time. During the encounter stage changes in the five dimensions of perceived employee promises are significantly explained by respondents' perceptions of employer inducements received. Thus, a greater perception of inducements received at T2 is related to a positive change from T1 to T3 in perceived employee promises about in & extra role behavior, flexibility, loyalty, ethical behavior and employability. The amount of variance of the change in perceived employee promises accounted for by perceived employer inducements is between 1% (loyalty and flexibility) and 4% (in & extra role behavior and ethical behavior).

During the acquisition stage perceived inducements at T3 significantly explain changes in perceived employee promises about flexibility, in & extra role behavior and loyalty. For changes in perceived promises about ethical behavior and employability the amount of variance explained by perceived employer inducements is not significant anymore.

Results of the paired-samples *t*-tests show that the average change in explained amount of variance in perceived employee promises due to the perception of employer inducements did not differ significantly between both socialization stages. (Mean difference =

-0.004, S.D. = .011, $t(4) = -0.704$, $p > .05$). Thus, Hypothesis 5 is not supported when we compare the strength of the relationship between perceived inducements and changes in perceived employee promises during both socialization stages.

Relationship between perceived contributions and changes in perceived employer promises.

Hypothesis 4 proposed that the greater newcomers' perceptions of contributions made, the greater their perception of employer promises over time. During the encounter stage, only changes in perceived promises about job content are significantly explained by perceived employee contributions. During the acquisition stage significant increases in R^2 are obtained for perceived employer promises about job content, financial rewards and work-life balance, which were due to respondents' perceptions of their contributions. The amount of variance of the change in perceived employer promises accounted for by perceived employee contributions is 1% for work-life balance and 2% for job content and financial rewards. These results thus partially support Hypothesis 4.

Results of the paired-samples t -tests show that the average change in explained amount of variance in perceived promises due to the perception of contributions made did not differ significantly between both socialization stages (Mean difference = 0.018, S.D. = .018, $t(4) = 2.250$, $p > .05$). Thus, Hypothesis 5 is not supported when we compare the strength of the relationship between perceived contributions and changes in perceived employer promises during both socialization stages.

DISCUSSION

This study used the conceptual framework of newcomer sensemaking to study the factors associated with changes in newcomers' perceived promises during the encounter and acquisition stage of socialization. It provides a theoretical outline and empirical assessment of some basic processes by which newcomers change their psychological contract perceptions after entry. First, this study offers a theoretical framework for understanding changes in the mean level of newcomers' psychological contracts as these have been found in earlier research (Robinson *et al.*, 1994; Thomas & Anderson, 1998). Second, this study empirically assessed some of the theoretical propositions regarding the dynamics of psychological

contract formation (Rousseau, 1995; 2001; Shore & Tetrick, 1994). Based on existing empirical work and theoretical models this study addressed psychological contract formation as a sensemaking process occurring during the socialization period. In general our results support the idea that during the socialization process newcomers actively make sense of promises based on their interpretations of experiences encountered in the work setting. More specifically, our results provide evidence for the occurrence of a unilateral and a reciprocal adaptation process.

First, unilateral adaptation refers to changes in perceived promises conveyed by one party based on the interpretation of that party's actions. As expected, newcomers changed their perceptions of what their employer has promised them based on their perceptions of the employer inducements actually received. They also changed their perceptions of what they have promised their employer based on their perceptions of what they actually contribute to their employer. This implies that newcomers use their experiences within the work environment as feedback about their initial expectations and that they are flexible in adapting their initial expectations based upon this feedback. The evidence for unilateral adaptation of perceived promises provides a first empirical confirmation of the importance of sensemaking processes after organizational entry put forward in existing theoretical models on psychological contract formation (Rousseau, 1995; 2001; Shore & Tetrick, 1994). It also is a first concrete application of Louis' (1980) sensemaking theory within psychological contract research. Our findings highlight the importance for organizations to pay attention to newcomers' first experiences within their new employment relationship. Active communication about what employees can expect and what is expected of them could enhance changes in perceived promises that are in line with organizational objectives.

Second, we proposed that newcomers would also change their perceptions of promises based upon their interpretations of the other party's actions in the work setting, i.e. reciprocal adaptation. As expected, a greater level of perceived employer inducements received was associated with a greater level of perceived employee promises over time. Thus, newcomers not only adapt their promises based on their perceptions of what they contribute to the organization, but also as a function of their perception of the inducements they receive from their employer. This supports the validity of the norm of reciprocity (Gouldner, 1960) as a central element in explaining the dynamics of the psychological contract. It supports the notion of the psychological contract as an exchange construct (Rousseau, 1995; Shore & Tetrick, 1994). It confirms earlier findings on the role of reciprocity in explaining the relationship between psychological contract evaluations and employee attitudes and behaviors

(e.g. Conway & Briner, 2002; Robinson, 1996; Robinson & Morrison, 1995; Turnley *et al.*, 2003). Our results extend this research by demonstrating that reciprocity also operates during the stage of psychological contract formation and that it explains changes in newcomers' psychological contract perceptions. Moreover, our findings show that it is important for future researchers to take into account both employee contributions and employer inducements when studying the dynamics of psychological contract changes. This is an important extension of prior research, which has focused almost exclusively on the employer obligations comprised in the psychological contract.

Contrary to our expectations, newcomers' perceptions of employee contributions were only related to changes in perceived employer promises about job content. This suggests that the reciprocity principle does not operate to the same extent in both directions. An explanation could be that the relationship between perceived employee contributions and perceived employer promises is curvilinear. For newcomers with greater perceptions of contributions made, this perception might be associated with greater levels of perceived employer promises over time, while for those with lower perceptions of their own contributions this might not be associated with lower perceptions of employer promises over time. This interpretation is in line with the proposition that individuals' cognitive schemas about what they are entitled to receive from their employer are more stable than schemas about their own contributions (Heatz, Knez & Camerer, 1993).

We proposed that the adaptation of perceived promises to interpretations of experiences would mainly occur during the encounter stage of socialization, i.e. the first months after entry. We expected that during this period newcomers would experience a stronger need for sensemaking in order to reduce uncertainty about the terms of their employment relationship. However, this hypothesis was only partially confirmed by our data. In line with our expectations, we found that the unilateral adaptation of perceived employer promises to the perception of employer inducements received was stronger during the encounter than during the acquisition stage of socialization. This implies that the first months after entry are important for employers in order to "set the stage" for what newcomers can realistically expect. Thus, employers should not postpone the exchange of information about their inducements to a later stage of the employment relationship because at that time employees might have become less flexible in adapting their initial expectations.

In contrast, the unilateral adaptation of perceived employee promises to perceived employee contributions continued during both socialization stages. This suggests that newcomers allow themselves more time to adapt their promises about their own contributions.

A possible explanation is that employees are more flexible in changing their perceptions of their own promises than in changing their perceptions of their employer's promises because the latter are more likely to become perceived as "entitlements" (Heath *et al.*, 1993). Alternatively it is possible that newcomers are more motivated to adapt their perceptions of their own promises in order to avoid negative self-evaluations, a psychological process which is not restricted to the initial stages of an employment relationship.

Contrary to our expectations, the reciprocal adaptation of perceived promises to interpretations of experiences occurred to the same extent during both socialization stages. This finding suggests that reciprocity, as a central principle explaining the dynamics of the psychological contract, does not only operate during the initial months after entry. It suggests that the dynamic relationship between employees' perceptions of both parties' promises and contributions is not restricted to the first months after entry. The latter is in line with previous findings about the role of reciprocity in explaining employee attitudes and behaviors (Coyle-Shapiro & Kessler, 2000; Robinson, 1996; Robinson & Morrison, 1995; Turnley *et al.*, 2003).

Together our findings show that during the first year after entry, newcomers' interpretations of their experiences within the work setting are associated with changes in their perceptions of the terms of their employment deal. This implies that newcomers' psychological contracts are not formed once and for all at the time they enter the organization. They evolve and are periodically revised as a result of sense made of experiences encountered after entry.

These results highlight several potential implications for employers. They imply that employers should pay more attention to managing newcomers' beliefs regarding the promises they have exchanged with their new organization. The relationship between organizational actions and changes in newcomers' perceptions of both employer and employee promises indicates that it is important for employers to be aware of the impact of their human resource policies on employees' expectations and on their intended contributions. In addition the results also suggest that employers can manage employees' perceptions of their own promises directly by providing them concrete information and feedback about their own contributions within the work setting.

Limitations and suggestions for future research

When interpreting our results a number of limitations should be kept in mind, which need further attention in future research. First, despite its many advantages we are aware that a longitudinal research design is not without problems such as testing effects, selection and mortality of subjects (Cook & Campbell, 1979). For example, it is possible that over time subjects became weary of completing multiple surveys or that their responses became biased by communicating about the survey topics with other respondents. Our analyses are only based on those respondents who participated in the full study, and, by implication, those who stayed with the organization during the study period. This limits the generalizability of our findings.

Second, the results of our study should be considered in view of the characteristics of our research sample. This consisted of well-educated, relatively young and inexperienced newcomers from six large profit firms. Although exploratory analyses showed no significant impact of age, experience, hierarchical level, and organizational membership, cross-validation of our findings is important in order to assess whether the relationships we have found also hold within different research populations.

Third, in our study we only focused on newcomers, without considering the organizational viewpoint. In order to more fully understand changes in psychological contract perceptions it is necessary for future research to include the employer perspective. Related to this is the use of self-reports for assessing both dependent and independent variables. Since we were primarily interested in newcomers' perceptions and subjective evaluations of their employment relationship, the use of self-report data is justified. However, this justification does not eliminate the problems of common method variance due to single-source bias, which might have inflated the magnitude of the relationships found. Although the likelihood of common method bias was somewhat reduced by measuring independent and dependent variables at different points in time and by focusing only on the change portions of psychological contract perceptions, future research should supplement self-report measures with data from supervisors, peers or both. The use of self-report measures also might have caused social desirable responses, certainly when measuring employees' evaluations of their own contributions. Therefore our results ask for further validation from research using multiple sources.

Fourth, future research should complement the current findings by assessing more objective factors contributing to changes in newcomers' psychological contract perceptions. Examples are a change of supervisor or the type of introduction activities put in place by the organization.

Finally, individual factors such as exchange ideology, personality and values could play a role in explaining changes in newcomers' psychological contracts. Including this type of factors is also a suggestion for future research.

CONCLUSION

In conclusion, the findings of this study contribute substantially to the research on psychological contracts. To date the majority of research has focused exclusively on the aftermath of psychological contracts. In contrast, this study focused on the important but neglected issue of psychological contract formation. Departing from the framework of newcomer sensemaking, it provided a theoretical outline and empirical account of the factors associated with changes in newcomers' perceived promises. The results show that it is important to view the psychological contract as a dynamic set of expectations which, at least during the socialization process, are affected by newcomers' interpretations of their experiences after entry. While earlier research has shown that psychological contracts are dynamic and evolving during the socialization period (Robinson *et al.*, 1994; Thomas & Anderson, 1998), our study takes these earlier findings one step further by illuminating the intervening processes that contribute to observed changes. These findings suggest interesting and useful implications for future research and for organizational practice.

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CONTEXTUAL SIDEBAR

Sample

The sample consisted of full-time employees with a permanent employment contract, working for six large, private-owned firms in Belgium. These firms represent four industries (telecommunication, electronics, consulting and financial services) and they are all part of international groups. All firms consisted of several business units spread over the country. This means that there was both between and within-firm variability in location and specific activity of respondents. The fact that these were all large organizations may have affected the type of promises made to newcomers, the socialization activities employed and the more general HR-practices put in place in order to realize these promises. It may also have played a role in determining newcomers' expectations towards their employment relationship. All respondents had a high school or college degree. They were all hired for clerical or white-collar jobs: 28 percent were hired for a job as consultant, 22 percent for an ICT-job, 17 percent for a job in logistics and production, and 16 percent for a job in sales and marketing.

Time Frame

When T1 and T2 data were collected (fall 2000 and winter 2001), the economic conditions in Belgium were very favorable. At that time, a major concern for employers was their ability to attract qualified job candidates in a very tight labor market. This was especially the case for the industries and professional groups involved in our study. Consequently, the companies involved in our study were promising attractive inducements to their future employees. However, during the study period (T3 and T4 data collections) the economic situations has changed which made it difficult for these organizations to deliver all of the inducements promised. At the same time these employers have probably increased their expectations towards employees' contributions (e.g. their flexibility or productivity). These economic changes might have affected the changes in mean level of respondents' perceived promises and experiences.

TABLE 1: Correlations^a

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30											
T1 Perceived employer promises																																									
1. Career	.84																																								
2. Job	.39	.75																																							
3. Social	.16	.32	.87																																						
4. Financial	.35	.31	.26	.63																																					
5. Private life	.09	.17	.32	.33	.66																																				
T1 Perceived employee promises																																									
6. Role behavior	.15	.27	.53	.21	.20	.84																																			
7. Flexibility	.17	.21	.23	.22	.12	.45	.63																																		
8. Loyalty	.06	.10	.31	.18	.18	.39	.45	.76																																	
9. Ethics	.15	.17	.36	.18	.22	.55	.35	.35	.77																																
10. Employability	.07	.06	.20	.08	.15	.40	.48	.47	.38	.78																															
T2 Perceived employer inducements																																									
11. Career	.44	.29	.21	.31	.12	.18	.18	.19	.20	.08	.86																														
12. Job	.17	.40	.18	.19	.13	.14	.14	.12	.14	.04	.52	.86																													
13. Social	.13	.06	.32	.13	.16	.12	.08	.17	.14	.06	.32	.35	.86																												
14. Financial	.16	.20	.22	.41	.22	.21	.21	.23	.17	.13	.44	.34	.19	.73																											
15. Private life	.10	.09	.15	.12	.45	.05	.04	.13	.06	.09	.16	.20	.32	.23	.74																										
T2 Perceived employee contributions																																									
16. Role behavior	.06	.08	.18	.13	.08	.20	.08	.13	.15	.07	.18	.32	.44	.18	.23	.86																									
17. Flexibility	.06	.15	-.02	.06	-.08	.11	.37	.07	.07	.12	.14	.23	.00	.18	-.07	.26	.70																								
18. Loyalty	.12	.10	.14	.13	.07	.14	.09	.25	.14	.10	.24	.29	.22	.21	.21	.22	.18	.76																							
19. Ethics	.11	.13	.13	.15	.04	.16	.07	.12	.24	.12	.16	.17	.20	.12	.17	.48	.23	.36	.66																						
20. Employability	.02	.03	.02	.01	.12	.15	.13	.17	.14	.45	.06	.02	-.03	.17	.14	.14	.22	.14	.12	.75																					
T3 Perceived employer promises																																									
21. Career	.55	.19	.11	.28	.02	.12	.10	.12	.12	.06	.40	.16	.14	.18	.04	.10	.07	.12	.11	.03	.85																				
22. Job	.24	.53	.23	.19	.13	.28	.22	.11	.15	.10	.18	.40	.09	.19	.12	.18	.20	.15	.15	.10	.42	.74																			
23. Social	.08	.18	.63	.18	.26	.43	.25	.23	.29	.15	.15	.09	.30	.17	.11	.17	.01	.02	.11	.01	.23	.44	.89																		
24. Financial	.26	.20	.21	.57	.21	.19	.23	.18	.13	.01	.22	.10	.08	.41	.13	.07	.06	.06	.04	.04	.42	.33	.32	.72																	
25. Private life	.13	.16	.26	.22	.61	.24	.11	.18	.24	.14	.14	.11	.19	.20	.41	.10	-.08	.00	.03	.14	.18	.34	.47	.42	.77																
T3 Perceived employee promises																																									
26. Role behavior	.13	.21	.42	.21	.23	.59	.37	.37	.42	.27	.22	.20	.26	.24	.12	.34	.10	.07	.23	.06	.20	.42	.60	.26	.41	.75															
27. Flexibility	.11	.19	.20	.20	.12	.32	.64	.33	.24	.33	.18	.19	.12	.21	.06	.06	.44	.11	.07	.17	.11	.23	.27	.26	.22	.47	.70														
28. Loyalty	.06	.16	.24	.25	.23	.35	.36	.60	.29	.34	.14	.12	.21	.20	.12	.11	.16	.17	.12	.17	.06	.13	.27	.19	.26	.41	.52	.88													
29. Ethics	.19	.16	.32	.21	.28	.42	.30	.32	.63	.23	.26	.19	.24	.17	.11	.22	.07	.13	.30	.03	.19	.24	.35	.21	.37	.54	.35	.37	.79												
30. Employability	.08	.09	.10	.17	.24	.24	.33	.31	.25	.56	.15	.09	.08	.18	.13	.09	.17	.11	.13	.46	.15	.18	.19	.17	.32	.33	.54	.51	.33	.74											

TABLE 1 (continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
T3 Perceived employer inducements																														
31. Career	.29	.20	.20	.23	.09	.21	.24	.20	.22	.10	.39	.25	.26	.28	.01	.18	.11	.11	.06	.13	.36	.23	.20	.26	.13	.29	.26	.22	.27	.20
32. Job	.15	.43	.13	.17	.13	.15	.20	.12	.17	.03	.27	.56	.24	.26	.17	.24	.20	.23	.13	.06	.16	.50	.22	.17	.21	.27	.18	.16	.22	.12
33. Social	.14	.09	.26	.11	.20	.15	.11	.14	.15	.04	.20	.20	.66	.15	.22	.33	-.04	.13	.12	-.02	.17	.19	.36	.15	.29	.35	.13	.18	.30	.09
34. Financial	.16	.18	.20	.39	.15	.17	.29	.24	.16	.07	.30	.25	.27	.51	.13	.16	.15	.13	.02	.05	.20	.16	.24	.46	.23	.27	.35	.27	.24	.22
35. Private life	.06	.07	.03	.06	.42	.01	.01	.02	-.01	.05	.07	.06	.18	.12	.58	.15	-.12	.09	.07	.13	.07	.15	.15	.17	.55	.14	.07	.11	.15	.22
T3 Perceived employee contributions																														
36. Role behavior	.12	.12	.20	.11	.12	.30	.13	.13	.23	.12	.14	.21	.35	.09	.14	.60	.12	.19	.33	.11	.18	.26	.28	.14	.20	.47	.16	.18	.31	.12
37. Flexibility	.09	.17	-.02	.05	-.07	.05	.38	.11	.07	.15	.14	.22	.04	.12	-.11	.12	.69	.20	.13	.23	.06	.17	.02	.09	-.05	.13	.52	.20	.10	.26
38. Loyalty	.13	.11	.05	.11	.13	.07	.13	.25	.12	.18	.10	.17	.14	.16	.14	.19	.21	.45	.25	.22	.12	.18	.10	.13	.15	.13	.20	.42	.20	.30
39. Ethics	.12	.10	.13	.08	.07	.17	.10	.15	.31	.16	.11	.15	.15	.03	.11	.35	.11	.27	.51	.08	.10	.13	.15	.06	.12	.28	.11	.17	.47	.16
40. Employability	.12	.03	-.03	.04	.13	.03	.15	.13	.16	.45	.02	.05	.01	.12	.09	.10	.14	.16	.10	.66	.08	.06	.02	.06	.12	.04	.23	.22	.13	.54
T4 Perceived employer promises																														
41. Career	.53	.22	.11	.22	.01	.14	.15	.08	.14	-.01	.32	.09	.07	.13	.07	.11	.13	.05	.18	.00	.59	.29	.10	.30	.13	.14	.11	.05	.16	.02
42. Job	.25	.49	.23	.23	.10	.29	.27	.09	.19	.06	.19	.33	.07	.21	.09	.15	.25	.13	.18	.00	.33	.62	.30	.30	.17	.32	.27	.08	.24	.09
43. Social	.15	.23	.56	.21	.20	.42	.27	.22	.32	.12	.22	.13	.26	.20	.15	.17	-.01	.08	.14	.02	.19	.31	.68	.28	.33	.46	.31	.27	.38	.12
44. Financial	.22	.17	.16	.45	.11	.22	.25	.11	.12	.07	.18	.11	.04	.34	.14	.14	.22	.07	.10	.10	.27	.25	.18	.61	.22	.19	.24	.15	.16	.11
45. Private life	.12	.10	.24	.22	.54	.25	.14	.16	.26	.15	.14	.11	.12	.25	.48	.08	-.01	.07	.12	.16	.16	.22	.37	.33	.68	.29	.23	.22	.32	.29
T4 Perceived employee promises																														
46. Role behavior	.15	.20	.38	.20	.17	.56	.36	.29	.46	.26	.16	.10	.14	.21	.16	.27	.11	.09	.21	.14	.22	.38	.49	.32	.33	.64	.37	.31	.42	.24
47. Flexibility	.08	.22	.14	.16	.08	.33	.61	.30	.24	.34	.15	.16	.07	.21	.11	.13	.45	.13	.09	.24	.07	.26	.24	.30	.17	.35	.71	.40	.22	.41
48. Loyalty	.00	.14	.17	.13	.18	.34	.35	.60	.26	.34	.11	.08	.14	.12	.16	.09	.11	.14	.08	.12	.02	.12	.23	.20	.23	.34	.40	.64	.28	.30
49. Ethics	.17	.13	.23	.20	.19	.36	.24	.28	.62	.23	.26	.19	.15	.20	.12	.21	.07	.11	.31	.07	.22	.26	.25	.24	.28	.37	.22	.26	.65	.21
50. Employability	.01	.13	.06	.03	.16	.25	.32	.21	.15	.56	.04	.05	.03	.16	.15	.09	.16	.04	.08	.45	.07	.16	.14	.10	.23	.23	.42	.30	.16	.61
T4 Perceived employer inducements																														
51. Career	.26	.27	.16	.19	.03	.26	.19	.15	.15	.06	.36	.23	.18	.23	.01	.12	.17	.05	.12	-.03	.32	.24	.13	.17	.04	.21	.22	.13	.18	.13
52. Job	.10	.39	.12	.16	.10	.20	.16	.10	.11	.07	.25	.51	.23	.24	.18	.19	.17	.17	.13	-.01	.16	.45	.15	.13	.12	.25	.22	.11	.21	.08
53. Social	.09	.07	.29	.16	.11	.21	.13	.14	.19	.05	.22	.18	.60	.06	.20	.25	-.02	.08	.10	-.09	.20	.18	.34	.19	.21	.30	.15	.15	.31	.07
54. Financial	.09	.15	.16	.30	.11	.21	.20	.19	.13	.07	.25	.25	.18	.47	.17	.14	.11	.13	.07	.05	.16	.17	.07	.31	.13	.17	.23	.22	.22	.15
55. Private life	.02	.04	.04	.07	.35	.07	.01	.05	.04	.08	.05	.04	.12	.11	.58	.10	-.13	.11	.14	.12	.07	.11	.12	.16	.46	.13	.03	.07	.18	.16
T4 Perceived employee contributions																														
56. Role behavior	.11	.10	.17	.13	.11	.28	.10	.12	.20	.03	.16	.21	.29	.08	.17	.51	.07	.12	.29	-.02	.21	.23	.19	.18	.17	.39	.13	.09	.33	-.02
57. Flexibility	.12	.18	-.06	.05	-.08	.03	.34	.04	.03	.13	.13	.18	.04	.06	-.11	.16	.59	.16	.14	.17	.07	.14	-.04	.12	-.05	.10	.48	.17	.12	.18
58. Loyalty	.01	.03	-.02	.10	.07	.08	.15	.25	.07	.15	.16	.19	.14	.16	.16	.10	.11	.43	.23	.05	.10	.14	.10	.15	.15	.15	.24	.37	.20	.24
59. Ethics	.07	.08	.08	.08	.06	.16	.08	.14	.27	.12	.15	.20	.10	.07	.12	.30	.05	.26	.44	.01	.12	.22	.09	.14	.16	.23	.08	.10	.44	.07
60. Employability	-.03	.04	-.08	-.03	.08	.08	.17	.10	.05	.44	-.03	.01	-.05	.02	.04	.07	.14	.04	.08	.55	.02	.01	-.02	.05	.13	.03	.23	.22	.08	.49

TABLE 1 (continued)

	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60											
T3 Perceived employer inducements																																									
31. Career	.85																																								
32. Job	.48	.86																																							
33. Social	.31	.41	.90																																						
34. Financial	.50	.35	.25	.78																																					
35. Private life	.08	.25	.33	.21	.80																																				
T3 Perceived employee contributions																																									
36. Role behavior	.22	.30	.45	.11	.21	.82																																			
37. Flexibility	.18	.26	.03	.19	-.08	.24	.63																																		
38. Loyalty	.16	.30	.23	.16	.17	.26	.26	.85																																	
39. Ethics	.09	.18	.17	.02	.14	.52	.14	.38	.72																																
40. Employability	.18	.10	.00	.12	.17	.15	.33	.28	.17	.79																															
T4 Perceived employer promises																																									
41. Career	.26	.09	.09	.17	.04	.16	.11	.11	.10	-.02	.84																														
42. Job	.23	.41	.15	.23	.07	.29	.27	.11	.22	.01	.48	.78																													
43. Social	.19	.17	.29	.21	.10	.27	.00	.11	.18	.00	.20	.41	.91																												
44. Financial	.14	.09	.04	.36	.06	.17	.21	.13	.07	.14	.40	.45	.32	.73																											
45. Private life	.07	.16	.18	.15	.46	.14	.00	.16	.17	.18	.15	.28	.42	.42	.74																										
T4 Perceived employee promises																																									
46. Role behavior	.31	.22	.24	.24	.13	.40	.04	.13	.30	.05	.24	.39	.60	.29	.35	.86																									
47. Flexibility	.29	.20	.07	.35	.08	.18	.48	.18	.12	.25	.19	.30	.31	.32	.27	.48	.70																								
48. Loyalty	.17	.12	.14	.27	.10	.15	.14	.31	.09	.18	.05	.11	.26	.17	.23	.31	.46	.88																							
49. Ethics	.23	.15	.18	.18	.11	.29	.00	.13	.46	.14	.19	.29	.36	.23	.30	.57	.29	.29	.81																						
50. Employability	.16	.08	.04	.17	.18	.09	.22	.19	.08	.50	.05	.15	.18	.15	.30	.30	.53	.44	.25	.78																					
T4 Perceived employer inducements																																									
51. Career	.48	.25	.14	.38	.00	.14	.14	.12	.11	.04	.33	.28	.13	.18	.02	.22	.21	.20	.25	.16	.85																				
52. Job	.30	.58	.20	.30	.20	.24	.22	.14	.19	.05	.14	.48	.19	.17	.17	.22	.19	.13	.20	.07	.51	.82																			
53. Social	.21	.21	.60	.21	.15	.35	.04	.06	.19	-.02	.13	.18	.36	.12	.18	.30	.17	.20	.26	.04	.28	.38	.88																		
54. Financial	.29	.24	.08	.56	.11	.14	.14	.12	.11	.12	.15	.20	.15	.43	.22	.15	.20	.21	.25	.17	.53	.39	.22	.76																	
55. Private life	.00	.15	.21	.05	.64	.14	-.07	.07	.24	.10	.04	.15	.15	.18	.59	.17	.08	.09	.16	.15	.02	.29	.25	.23	.84																
T4 Perceived employee contributions																																									
56. Role behavior	.19	.22	.37	.09	.13	.64	.09	.11	.46	.01	.22	.32	.29	.17	.20	.43	.14	.09	.32	.00	.18	.38	.50	.11	.24	.83															
57. Flexibility	.14	.21	.04	.15	-.02	.23	.75	.17	.10	.25	.16	.23	.03	.22	.01	.10	.52	.12	.07	.21	.17	.26	.10	.16	-.01	.25	.71														
58. Loyalty	.14	.17	.12	.17	.17	.20	.22	.47	.20	.16	.07	.11	.11	.07	.11	.14	.22	.40	.20	.18	.19	.29	.25	.20	.15	.27	.30	.87													
59. Ethics	.11	.18	.17	.07	.19	.40	.09	.20	.61	.10	.15	.26	.13	.12	.18	.27	.13	.12	.50	.08	.17	.32	.27	.16	.25	.56	.23	.39	.76												
60. Employability	.09	.00	.00	.06	.16	.10	.27	.19	.10	.60	.00	.08	.07	.08	.16	.12	.29	.24	.14	.59	.03	.03	-.01	.08	.15	.07	.30	.21	.14	.79											

^a $N = 333$. Entries on the diagonal are Cronbach's alphas. Correlations $> .11$, $p < .05$; correlations $> .14$, $p < .01$; correlations $> .19$, $p < .001$

TABLE 2:**Descriptives (mean scores and variances) for variables included in the study**

	Perceived promises			Perception of Actual Experiences			Evaluation of promise fulfillment		
	T1	T3	T4	T2	T3	T4	T2	T3	T4
Career development	3.87 (.73)	3.83 (.63)	3.89 (.59)	3.55 (.60)	3.17 (.81)	3.18 (.66)	3.09 (.68)	2.95 (.70)	2.78 (.78)
Job content	3.71 (.50)	3.74 (.35)	3.81 (.35)	3.80 (.51)	3.75 (.56)	3.73 (.45)	3.23 (.58)	3.31 (.58)	3.27 (.51)
Social atmosphere	3.39 (.80)	3.50 (.70)	3.48 (.76)	4.00 (.46)	3.93 (.55)	3.87 (.52)	3.47 (.59)	3.58 (.65)	3.47 (.70)
Financial rewards	3.19 (.53)	3.09 (.59)	3.21 (.57)	2.86 (.64)	2.73 (.77)	2.83 (.65)	2.96 (.71)	2.81 (.77)	2.77 (.69)
Work-life balance	3.27 (.66)	3.33 (.69)	3.42 (.63)	3.78 (.51)	3.67 (.66)	3.77 (.60)	3.38 (.50)	3.43 (.57)	3.44 (.66)
In & extra role behavior	3.66 (.64)	3.76 (.53)	3.81 (.47)	4.15 (.20)	4.18 (.22)	4.22 (.23)	3.73 (.21)	3.76 (.20)	3.80 (.21)
Flexibility	2.61 (.67)	2.74 (.66)	2.75 (.65)	3.29 (.75)	3.24 (.72)	3.32 (.81)	3.58 (.55)	3.54 (.48)	3.58 (.49)
Loyalty	3.83 (.83)	3.87 (.70)	3.96 (.61)	4.39 (.25)	4.33 (.27)	4.34 (.29)	3.88 (.18)	3.88 (.22)	3.89 (.25)
Ethical behavior	2.15 (1.06)	2.42 (1.36)	2.36 (1.25)	3.93 (1.04)	3.83 (1.23)	3.66 (1.20)	3.79 (.55)	3.73 (.65)	3.64 (.63)
Employability	2.78 (1.34)	2.83 (1.13)	2.76 (1.21)	3.18 (1.35)	3.09 (1.45)	3.10 (1.34)	3.31 (.89)	3.34 (.81)	3.40 (.21)

TABLE 3: Hierarchical regression analyses of change in perceived employer promises

Outcome	Predictor: Perceived employer inducements				Outcome	Predictor: Perceived employee contributions			
	Adj. <i>R</i> ²	<i>F</i>	<i>R</i> ² ?	<i>F</i> ?		Adj. <i>R</i> ²	<i>F</i>	<i>R</i> ² ?	<i>F</i> ?
Perceived employer promises T3					Perceived employer promises T3				
Career development					Career development				
T1 employer promises	.35	228.62**			T1 employer promises	.35	228.11**		
T2 employer inducements	.37	125.79**	.02	15.29**	T2 employee contributions	.35	115.68**	.00	2.47
Job content					Job content				
T1 employer promises	.29	175.80**			T1 employer promises	.29	175.80**		
T2 employer inducements	.33	104.73**	.04	24.15**	T2 employee contributions	.32	102.32**	.03	20.74**
Social atmosphere					Social atmosphere				
T1 employer promises	.41	294.52**			T1 employer promises	.40	294.52**		
T2 employer inducements	.42	158.73**	.02	13.99**	T2 employee contributions	.40	147.61**	.00	.82
Financial rewards					Financial rewards				
T1 employer promises	.35	227.37**			T1 employer promises	.35	229.72**		
T2 employer inducements	.38	130.85**	.03	22.76**	T2 employee contributions	.35	114.60**	.00	.02
Work-life balance					Work-life balance				
T1 employer promises	.37	248.26**	.03	19.21**	T1 employer promises	.37	248.26**		
T2 employer inducements	.39	139.00**			T2 employee contributions	.37	124.01**	.00	.22
Perceived employer promises T4					Perceived employer promises T4				
Career development					Career development				
T3 employer promises	.35	195.92**			T3 employer promises	.35	196.14**		
T4 employer inducements	.36	99.62**	.01	2.76	T4 employee contributions	.35	99.22**	.00	1.84
Job content					Job content				
T3 employer promises	.38	223.58**			T3 employer promises	.38	223.58**		
T4 employer inducements	.39	115.59**	.01	5.06*	T4 employee contributions	.40	119.36**	.02	9.70**
Social atmosphere					Social atmosphere				
T3 employer promises	.47	313.60**			T3 employer promises	.47	313.68**		
T4 employer inducements	.47	157.39**	.00	1.10	T4 employee contributions	.47	157.97**	.00	1.71
Financial rewards					Financial rewards				
T3 employer promises	.38	217.63**			T3 employer promises	.37	217.63**		
T4 employer inducements	.39	112.15**	.01	4.53*	T4 employee contributions	.39	117.15**	.02	10.74
Work-life balance					Work-life balance				
T3 employer promises	.46	315.32**			T3 employer promises	.47	315.21**		
T4 employer inducements	.47	160.74**	.01	3.73*	T4 employee contributions	.48	162.17**	.01	5.25*

Note: T3 outcomes refer to changes in perceived promises during the encounter stage, T4 outcomes refer to changes in perceived promises during the acquisition stage. Results for the impact of perceived employer inducements (adaptation principle) are on the left, results for the impact of perceived employee contributions (reciprocity principle) are on the right).

* $p < .05$; ** $p < .01$

TABLE 4: Hierarchical regression analyses of change in perceived employee promises

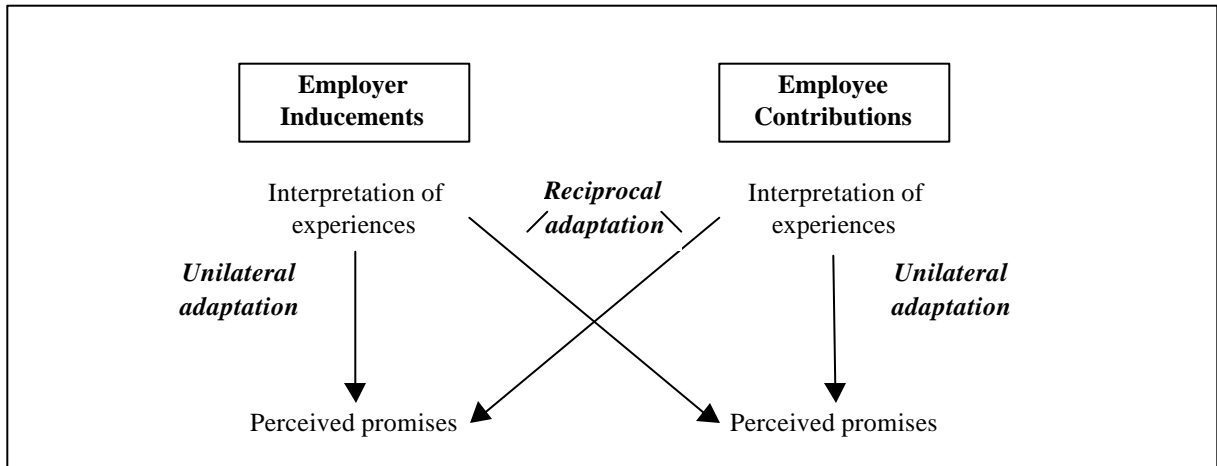
Outcome	Predictor: Perceived employee contributions				Outcome	Predictor: Perceived employer inducements			
	Adj. R^2	F	$R^2?$	$F?$		Adj. R^2	F	$R^2?$	$F?$
Perceived employee promises T3					Perceived employee promises T3				
In & extra role behavior					In & extra role behavior				
T1 employee promises	.37	251.43**			T1 employee promises	.37	251.43**		
T2 employee contributions	.42	159.31**	.06	42.76**	T2 employer inducements	.41	150.71**	.04	31.91**
Flexibility					Flexibility				
T1 employee promises	.41	302.52**			T1 employee promises	.41	302.52**		
T2 employee contributions	.47	186.23**	.05	41.47**	T2 employer inducements	.42	158.40**	.01	8.80**
Loyalty					Loyalty				
T1 employee promises	.37	246.42**			T1 employee promises	.37	254.58**		
T2 employee contributions	.37	124.28**	.00	1.72	T2 employer inducements	.38	132.82**	.01	7.30**
Ethical behavior					Ethical behavior				
T1 employee promises	.40	287.28**			T1 employee promises	.40	287.81**		
T2 employee contributions	.43	161.23**	.03	21.12**	T2 employer inducements	.44	167.59**	.04	28.73**
Employability					Employability				
T1 employee promises	.32	200.35**			T1 employee promises	.32	205.24**		
T2 employee contributions	.38	132.33**	.06	43.90**	T2 employer inducements	.34	112.47**	.02	13.63**
Perceived employee promises T4					Perceived employee promises T4				
In & extra role behavior					In & extra role behavior				
T3 employee promises	.41	247.05**			T3 employee promises	.41	247.05**		
T4 employee contributions	.43	131.07**	.02	9.33**	T4 employer inducements	.42	128.21**	.01	5.95*
Flexibility					Flexibility				
T3 employee promises	.50	361.08**			T3 employee promises	.50	363.45**		
T4 employee contributions	.52	194.28**	.02	14.17**	T4 employer inducements	.51	185.85**	.01	4.60*
Loyalty					Loyalty				
T3 employee promises	.40	235.94**			T3 employee promises	.40	247.07**		
T4 employee contributions	.41	121.42**	.01	4.53*	T4 employer inducements	.41	127.13**	.01	4.67*
Ethical behavior					Ethical behavior				
T3 employee promises	.42	262.24**			T3 employee promises	.42	262.24**		
T4 employee contributions	.45	145.25**	.03	16.73	T4 employer inducements	.42	130.76**	.00	.01
Employability					Employability				
T3 employee promises	.37	203.15**			T3 employee promises	.37	214.55**		
T4 employee contributions	.41	118.29**	.04	21.49**	T4 employer inducements	.37	107.53**	.00	.70

Note: T3 outcomes refer to changes in perceived promises during the encounter stage, T4 outcomes refer to changes in perceived promises during the acquisition stage. Results for the impact of perceived employee contributions (adaptation principle) are on the left, results for the impact of perceived employer inducements (reciprocity principle) are on the right).

* $p < .05$; ** $p < .01$

FIGURE 1:

The role of unilateral and reciprocal adaptation in explaining changes in newcomers' psychological contract perceptions



APPENDIX:

Items used to measure psychological contract content dimensions

Employer Inducements	
<i>Career Development</i>	<ul style="list-style-type: none"> Opportunities for promotion Opportunities for career development within the organization Opportunities to grow
<i>Job Content</i>	<ul style="list-style-type: none"> A job in which you can make decisions by yourself Opportunities to show what you can A job with responsibilities Opportunities to use your skills and capacities
<i>Social Atmosphere</i>	<ul style="list-style-type: none"> A good atmosphere at work Positive relationships between colleagues A good mutual cooperation A good communication among colleagues
<i>Financial Rewards</i>	<ul style="list-style-type: none"> Financial rewards for exceptional performance Wage increases based on your performance An attractive pay and benefits package Regular benefits and extras
<i>Work-Life Balance</i>	<ul style="list-style-type: none"> Respect for your personal situation Opportunities for flexible working hours depending on your personal needs The opportunity to decide for yourself when you take your vacation A flexible attitude concerning the correspondence between your work and private life
Employee Contributions	
<i>In & Extra Role Behavior</i>	<ul style="list-style-type: none"> Work fast and efficiently Cooperate well with your colleagues Assist your colleagues in their work Deliver qualitative work Share information with your colleagues
<i>Flexibility</i>	<ul style="list-style-type: none"> Get along with your colleagues Work extra hours to get your job done Take work home regularly Volunteer to do tasks that are strictly no part of your job if necessary Work during the weekend if necessary
<i>Ethical Behavior</i>	<ul style="list-style-type: none"> Protect confidential information about the company Use the organization's properties honestly Use the resources you receive from the organization honestly (materials, budgets) Follow the policies and norms of the organization
<i>Loyalty</i>	<ul style="list-style-type: none"> Accept no job offers you receive from other organizations Not immediately look for a job elsewhere Remain with this organization for at least some years
<i>Employability</i>	<ul style="list-style-type: none"> Participate in training courses outside your working hours Take personal initiative to follow additional training courses