

Psychological Contract Development during Different Career Stages:

A Comparative Study of New Recruits and Veterans in a Japanese Company

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1. Introduction

Employment relationships are an increasingly important topic in management research in Japan (Inagami and Whittaker, 2005). The psychological contract lies at the core of this issue (Morishima, 1996; Hattori, 2010). A psychological contract constitutes “an individual’s belief regarding the terms and conditions of a reciprocal exchange agreement between the focal person and another party” (Rousseau, 1989, p. 123). It is fundamental in regulating the employee-employer relationship because it influences an employee’s effort on behalf of the employer (Rousseau, 1995; Lee, Liu, Rousseau, Hui, and Chen et al., 2011) as well as their reactions to organizational change and an employer’s contract breach (Conway and Briner, 2005). In particular, many researchers conceive psychological contract breach as the most compelling linkage between the psychological contract and the employee’s attitudes and behaviors. One consistent finding in the body of such research is that psychological contract breaches conducted by employers are a strong predictor of several work attitudes and behaviors such as organizational commitment, job satisfaction, intent to leave, organizational citizenship behavior, and job performance (Conway and Briner, 2005; Zhao, Wayne, Glibkowski, and Bravo, 2007).

Despite the fundamental role of the psychological contract in employee attitudes and behaviors, there is only limited research concerning the development of psychological contracts (Robinson, Kraatz, and Rousseau, 1994; Thomas and Anderson, 1998; De Vos, Buyens, and Schalk, 2003; De Vos, Buyens, and Schalk, 2005; De Vos and Freese, 2011). An important finding from a newcomer adjustment study is that, in addition to investigating employers’ socialization policies, it is essential to include the proactive role of the employee during the socialization period (Rousseau, 2001; De Vos, Buyens, and Schalk, 2005; De Vos and Freese, 2011). At the theoretical level, Rousseau (2001) describes the early socialization period as a continual exchange of promises by means of information-seeking activities by new employees.

According to Rousseau (2001), in the beginning of the employment relationship, new recruits have incomplete information on the nature of the psychological contract. Certain information, including perceived contract breach by the employer, serves as a trigger for sense making. After entry, new employees experience events that may trigger a process through which prior expectations are changed and predictions about future experiences are revised (Louis, 1980) However, empirical evidence supporting such an assumption is lacking (De Vos and Freese, 2011). Although a few empirical efforts do describe

the early socialization period as a critical stage in the development of psychological contracts (Robinson, Kraatz, and Rousseau, 1994; Thomas and Anderson, 1998; De Vos, Buyens, and Schalk, 2005; De Vos and Freese, 2011), there is no established pattern for the changing perception of psychological contracts for new recruits over time. Moreover, we can find no research concerning contract change in the post-socialization period.

The purpose of this study, then, is to gain a better understanding of psychological contract development by comparing new recruits and veterans. Specifically, the study advances theory development on psychological contract formation in early and post socialization period. As discussed above, the socialization period has been considered as an important stage in the formation of a psychological contract (Thomas and Anderson, 1998; De Vos, Buynes, Schalk, 2003). Then, how does contract formation occur during post-socialization period? As almost all of the extant research concerning contract formation focuses on early socialization period, we know little about the development of those for veteran. In this study, we examine how psychological contracts change in these periods.

2. Theoretical background

In their comprehensive literature review, Conway and Briner (2009) say that, in psychological contract researches, contract breach provides the most compelling idea for linking the psychological contract to outcomes. Psychological contract breach occurs “when one party in a relationship perceives another to have failed to fulfill promised obligation(s)” (Robinson and Rousseau, 1994, p. 247). According to Conway and Briner (2009), contract breach and its consequences are “the only area in which there are a reasonable number of studies showing fairly consistent findings” (p. 94). In more detail, one consisting finding in the body of research is that psychological contract breaches conducted by the employer are a reasonably strong predictor of several work attitudes and behaviors such as job satisfaction, organizational commitment, intention to leave, and job performance. However, these researchers, with a few exceptions, have not examined the effect of contract breach on contract obligations. There is the great divide between contract breach research and contract change/development research. In this study, we try to build some connections between these two separated areas. In this section, we first examine a few challenges to the developing nature of psychological contracts.

2.1 Developing psychological contracts: existing theoretical foundation

In psychological contract theory, the dynamics of a contract’s development arise from its functioning as a cognitive schema (Rousseau, 2001; De Vos and Schalk, 2005; Lee et al., 2011). A schema is a cognitive organization or a mental model of conceptually related elements (Rumelhart and Norman, 1978). Schemas affect the perception of information, the retrieval of stored information, and inferences based on that information (De Vos, Buyens, and Schalk, 2003). Once individuals form a schema, they tend to maintain it and interpret new information in light of the existing schema. One applies new information to an appropriate set of schemas and stores the newly created memory structures in long-term memory. Sometimes this process involves tuning or making a minor modification of the schema to bring it more into congruence with functional demands (Rumelhart and Norman, 1978).

As Rousseau (2001) noted, “Psychological contracts themselves can form schema” (p. 515). At entry,

most new employees have only limited/incomplete information on the nature of their employment relationship (Rousseau, 2001). This is because employment schemas are acquired through prior socialization such as recruiting practices, societal, occupational, or previous employment (Louis, 1980; Rousseau, 2001). This motivates new employees to seek information and to interpret their own initial experiences as the bases for predicting future events and for completing the psychological contract schema. Once on the job, recruits try to acquire information through coworkers (Feldman, 1976), their immediate managers (Tekleab and Taylor, 2003), and socialization practices (Lee et al., 2011) in order to update their contracts. The development of such complete and detailed psychological contracts requires considerable cognitive effort and devotion (Rousseau, 2001; De Vos, Buyens, and Schalk, 2003). Once established, the psychological contract in turn helps new employees to make their work setting and employer's practices more predictable (Rousseau, 2001). Once employees attain more complete contracts, they tend to reduce information gathering concerning the employment relationship (Ashford, 1986).

2.2 Psychological contract formation during socialization stage

As discussed above, psychological contract researchers consider the socialization period to be a crucial stage in the development of psychological contracts (De Vos et al., 2003; De Vos and Freese, 2011; Lee, et al., 2011). To date, however, only a few studies have focused on the development of contracts during this period (Robinson, Kraatz, and Rousseau, 1994; Thomas and Anderson, 1998; De Vos, Buyens, and Schalk, 2004, 2005; De Vos and Freese, 2011).

For example, Robinson et al. (1994) surveyed MBA students prior to their graduation and again two years later. Over this two year period, employees' perceptions of employer obligations increased for three of the seven items examined (high pay, advancement, and merit pay), and decreased for one item (training). With regard to employee obligations, five of the seven items (minimum stay, transfer, notice, work overtime, and loyalty) decreased. Based on these findings, Robinson et al. concluded that the overall psychological contract shifted over time, with the employer's obligations increasing and the employee's obligations decreasing. They also found that the employer's failure to fulfill his or her obligations (psychological contract breach) was significantly associated with a decrease in some types of employee obligations.

Thomas and Anderson (1998) conducted research into changes in the psychological contract held by new recruits in the British Army. They found that in the initial six months, new recruits' expectations of the Army increased for several items. More importantly, these changes generally shifted toward the norms of more experienced soldiers. In line with this work, De Vos et al. (2003) examined not the psychological contract changes themselves but the factors associated with changes in new recruits' psychological contract development during the socialization process, by using a four-wave longitudinal study among new recruits. Results showed that changes in the new recruits' perceptions of employer obligations were affected by (1) their own contributions and (2) inducements received from the employer. Accordingly, recruits' perceptions of employee obligations were also affected by their own contributions and inducements received from the employer. And interestingly, the relationship between the fulfillment of expectations and employee obligations was stronger during the early socialization stage than at any of the other stages. De Vos, Buyens, and Schalk (2005) and De Vos and Freese (2011) explored not the contract

change itself but the information-seeking activities new employees engage in related to their psychological contract. De Vos, Buyens, and Schalk (2005) conducted a two-wave longitudinal study for 527 new employees from eight organizations. The result showed that new employees' work values (such as advancement, autonomy, locus of control) did have a unique effect on contract-related information-seeking activity, which supports the notion of psychological contract formation as an active information-seeking and sense-making process. De Vos and Freese (2011) examined the pattern of changes in the frequency of information seeking with 280 employee data. The results indicated that information seeking about the psychological contract decreases significantly over the first year of employment. Interestingly, they found that younger new employees engaged more frequently in information seeking than older new employees.

In summary, empirical research to date describes the early socialization period as a critical stage in the development of psychological contracts, consistent with the established theoretical arguments (Rousseau, 2001). In this period, new recruits actively gather information from several sources to fine-tune their psychological contracts with respect to expectations for the employment relationship and what they need to provide in exchange. Yet, these studies present some mixed findings. Specifically, there was no consistent pattern for changes in new recruits' perception of psychological contracts over time. And more, these researchers have not examined, except for Robinson, Kraatz, and Rousseau (1994), the effect of contract breach on contract obligations. In addition, as almost all of the extant research focuses on the development of new recruits' psychological contracts, we know little about the development of those for veterans. In this study, we examine how psychological contracts change as the result of employees' contract breach both in socialization and post-socialization periods.

3. Hypotheses

3.1 Psychological contract formation in the early socialization period

In much contract breach literature, researchers explain the effects of the employer's contract breach from the perspective of "reciprocity" or "discrepancy" (Conway and Briner, 2009). For example, according to Robinson, Kraatz, and Rousseau (1994), employees seek to maintain equity between their own cost and benefit. As perceived contract breach by the employer reduces the benefits that employee receive, employees try to readjust what they are prepared to offer. This is the reciprocity perspective. Another explanation is discrepancy. Following this perspective, a discrepancy between what an employee is promised and what they receive from their employer is likely to lead to feelings of dissatisfaction, which result in lower job satisfaction, organizational commitment and job performance, and higher intention to leave (Zhao, et al., 2007). In short, these researchers conceive contract breach as a result of the employer's "fault" or "negligence."

In this study, however, we use a self-regulation perspective (Bandura, 1989, 1991; Zimmerman and Schunk, 2001) to describe the relationship between contract fulfillment/breach and contract obligation. According to Frayne (1991), self-regulation is an effort by an individual to control his or her behavior. Previous studies have shown that self-regulation processes consist of three phases: (1) self-observation, (2) self-evaluation, and (3) self-reaction (Kanfer and Hagerman, 1987). In the self-observation phase,

people observe their own actual states. In the self-evaluation phase, they compare those actual states with the desired states. In the case of a significant discrepancy, people are motivated to take several corrective actions that decrease the discrepancy (self-reaction phase). People perform corrective actions because a discrepancy between an actual state and a desired state implies the existence of cognitive dissonance (Festinger, 1957). In employment relations, the desired state is equal to the employee's perception about the employer's obligations while the actual state is that of the employer's level of fulfillment. According to Rousseau (2001), psychological contracts are naïve and discrete in early socialization periods because new employees are likely to have limited or incomplete information regarding the nature of the employment relationship. This motivates new employees to actively gather and use several sources of information to build and fine-tune their initial expectations. In more detail, employees observe the employer's fulfillment level (self-observation) and then compare the level of fulfillment with their level of expectation (self-evaluation). In the event of some discrepancy, they will be motivated to take several corrective actions that decrease these discrepancies (self-reaction). In the case of psychological contracts, the information that employees obtain from observing their employer's may alter their ideas about what they can expect from the employer (Salancik and Pfeffer, 1978; Schalk and Roe, 2007). Such information obtained by new employees from multiple information sources during the socialization period contributes to a more realistic understanding of the terms of the employment relationship (Rousseau, 2001; De Vos, Buyens, and Schalk, 2005). Taking the self-regulation perspective, we can see contract breach not as a result of "fault" or "negligence" on the part of the employer but as a result of "misunderstanding" and "over(under)estimation" by the employees themselves.

From this perspective, employers' fulfillment/breach is an information source for building and fine-tuning an employee's contract. In more detail, we propose that when an employer's fulfillment at t1 falls short of the expectation level at t1, employees will correspondingly decrease their expectations at t2 (downward self-regulation). In line with this, we propose that when an employer's fulfillment at t1 exceeds an employee's expectations at t1, employees will be more likely to increase their expectations at t2 (upward self-regulation). Finally, in the absence of a discrepancy, there will be no corrective actions.

Accordingly, we hypothesize the following:

Hypothesis 1: For employees in the early socialization period, a discrepancy between employee expectation and employer fulfillment at t1 will be associated with a change in expectation at t2. More specifically:

- (1a) When fulfillment at t1 is less than the expectation at t1, expectations at t2 will decrease (downward regulation).
- (1b) When fulfillment at t1 exceeds expectations at t1, expectations at t2 will increase (upward regulation).
- (1c) When expectations and fulfillment at t1 are equal at t1, expectations at t2 will be stable.

3.2 Psychological contract formation in the post-socialization period

The same thing will happen in the post socialization period. For employees with long tenure, contract fulfillment/breach also has critical importance to understanding the relationship between the employer

and the employees. They will observe the employer's fulfillment level (self-observation) and then compare the level of fulfillment with their level of expectation (self-evaluation). In the self-reaction phase, however, there may be some differences between the socialization period and post-socialization period. This may be because post-socialization employees develop stable and fine-tuned psychological contracts as result of active information gathering and self-regulation in the socialization period. As research in schema change suggests, once a stable schema is formed, employees will have schemas that are more accurate and they are better able to apply their schemas to their circumstances (Rumelhart and Norman, 1978). These schemas provide a lens through which employees view employers' attitudes and behaviors. Stable schema, however, tend to resist change (Rousseau, 2001). Such employees are more willing to focus upon information that supports their existing schema (Rumelhart and Norman, 1978). As a result, having a fine-tuned psychological contract as a schema, employees' experiences in the organization are more and more consistent with their beliefs (Rousseau, 2001). Employees with long tenure will tend to have a more difficult time accommodating changes in the perceived psychological contract than do more recent employees. Then, we hypothesize that:

Hypothesis 2: For employees in the post-socialization period, a discrepancy between expectations at t1 and employer fulfillment at t1 will not be associated with a change in expectations at t2. More specifically:

- (2a) When fulfillment at t1 is less than the expectations at t1, expectations at t2 will not decrease (no downward regulation).
- (2b) When fulfillment at t1 exceeds expectations at t1, expectations at t2 will not increase (no upward regulation).
- (2c) When expectations and fulfillment are equal at t1, expectations at t2 will be stable.

4. Methods

4.1 Sample and data collection procedure

The sample population used in this study consisted of 6,380 employees from a large Japanese pharmaceutical company. We conducted a two-wave, web-based survey. On July 18, 2008 (t1), we surveyed all of the employees of the company. A total of 3,789 employees (59.4% response rate) voluntarily responded to the first questionnaire. On July 28, 2009 (t2), we conducted another survey in the same way. A total of 3,926 employees (61.3% response rate) responded to the second questionnaire. This interval was based on the socialization literature, which suggests that three-, six-, nine-, and twelve-month intervals are meaningful in the socialization process (Morrison, 1993). The 2,514 respondents (39.2%) who responded to both questionnaires provided the sample for this study. All responses were anonymous. At t1, the average participant age was 39.81 years (SD = 8.716) and their average tenure was 12.46 years (S.D. = 9.14); 17% of the respondents were women. It is probable that respondents who only completed the survey at t1 differed from those respondents who completed it at both t1 and t2. We therefore conducted ANOVAs with respect to several variables (tenure, age, level of expectations, and level of fulfillment) to identify whether our data are subject to any sort of response bias. Results failed to establish

evidence of a response bias.

4.2 Measures of key constructs

Level of Expectations. In defining and operationalizing psychological contracts, some researchers strictly distinguish between terms such as “expectation,” “obligation,” and “promise” and state that psychological contracts are not perceived expectations but perceived obligations (Rousseau, 1995; 2010, Roehling, 2008) or promises (Conway and Briner, 2005). In this paper, however, we use the term “expectation.” Item piloting comparing the expectation phraseology of Thomas and Anderson (1998) revealed that in this company “obligations” and “promise” terminology are unusable. More specifically, the question “to what extent is this company obligated to give you (or to what extent do they promise you) high pay” was viewed as inappropriate in the prior study (Hattori, 2010). In Japanese companies, people use the term “obligation” and “promise” as a belief about the commitment to act in a certain way towards one another, which is based on an explicit source (e.g., written contract or explicit oral communication). Psychological contracts, however, include commitments based on more indirect or implicit sources, such as the observations and messages in corporate personnel practices. In other words, in the Japanese context, the terms “obligation” and “promise” are too narrow relative to Rousseau’s definition of psychological contract. Thus, at t1 and t2 we measured the employee’s expectations of their employer using the Japanese version of the psychological contract scale developed by Hattori (2010). After compiling their responses, we incorporated items developed by Rousseau (1990). The participants were asked to indicate the extent to which their employer was expected to provide them with a set of items. They were asked to indicate their response using a five-point Likert-type scale, ranging from 1, “not at all,” to 5, “to a great extent,” for each item. Among the 24 items, we selected 7 items based upon previous research (Rousseau, 1990).

Table 1 presents the results of our exploratory factor analysis using the principal factors method of promax rotation. As Conway and Briner (2005) suggested, although the distinction between transactional and relational contracts may be theoretically reasonable, there is also evidence that this distinction is suspect. They also said that there may be many types or dimensions of psychological contracts depending on the context. Thus, in this paper, we conducted an exploratory factor analysis rather than a confirmatory factor analysis to investigate the factor structure in this company, although the measure is already developed and has been validated by Hattori (2010).

Two factors emerged from these items, replicating many existing research findings from the West (e.g., Conway and Briner, 2005). The first factor included items such as “pay based on current level of performance,” “rapid advancement,” and “high pay.” Because these items reflect high extrinsic inducements (Rousseau 1995), the factor was defined as a “transactional contract” (Cronbach’s $\alpha = 0.82$). The second factor included items as “long-term job security,” “support with personal problems,” and “career development.” These patterns were consistent with the Rousseau’s (1995) notion that employment can be characterized by relational issues involving the creation and maintenance of a relationship between an employee and employer, i.e., a “relational contract” (Cronbach’s $\alpha = 0.92$).

Level of fulfillment by employer. At t1, we measured the employers' fulfillment. As with expectations, for each item, participants were asked to indicate the extent to which their employers actually fulfilled their expectations. Participants were asked to respond to each item using a five-point Likert-scale, ranging from 1, "not at all fulfilled," to 5, "totally fulfilled." A high score indicated high perceived fulfillment and a low score indicated little or no fulfillment.

Table 1: Results of Factor Analysis for Organization's Obligations

Items	Factor	
	Relational contract	Transactional contract
Performance-based pay	0.85	-0.05
Rapid advancement	0.82	0.04
High pay	0.75	0.06
Provision of adequate training	0.68	0.16
Long-term job security	-0.03	0.93
Support with personal problems	0.06	0.81
Career development	0.08	0.80
Eigenvalue	3.92	3.80

Factor correlation: 0.33

Career-related variables. We measured other demographic and career-related variables such as sex (0 = female; 1 = male), age, tenure, job change experience (0 = no; 1 = yes), position as a manager (0 = no; 1 = yes), and job function. For job function, organizational records were used to convert the respondents' job functions into binary codes. We coded two functions: medical representative (*MR_d*) and research and development (*RandD_d*). For the MR dummy variable (*RandD*), the MR (*RandD*) represents one, and others represent zero.

4.3 Data analyses

We tested hypotheses using polynomial regression analysis and the response surface method (Edwards, 1994; Lambert, Edwards, and Cable, 2003). Using this method, we were able to circumvent several known problems associated with the use of difference score (Edwards, 1994). To test the hypotheses mentioned above, we divided our samples into two sub-samples: those who were in their initial three years of employment and those who had greater than three years of employment. According to the *Annual Report on Health, Labour and Welfare* published by the Japanese Ministry of Health, Labour and Welfare, the unemployment rate of employees within their initial three years is relatively high. We therefore compared employees within their initial three years ($n = 307$) with those having more experience ($n = 2207$). The hypotheses were tested with regression analyses in which the dependent variable was level of expectations at t2. In step 1 of the regression analysis, we partialled out the effects of the various factors we believed to be related to the level of expectation. In step 2, we regressed the level of expectations at t1 and fulfillment at t1 on the higher order terms (i.e., squared expectation at t1, fulfillment at t1, and their interaction) in step 3.

To test these hypotheses, we used values from the regression analyses to plot the response surfaces (Edwards, 1994; Lambert, et al., 2003) and analyzed these surfaces. To view the interpretation of response surfaces, consider the relations shown in Figure 1. For Figure 1, the vertical axis represents the dependent variable (level of expectations at t2) and the two horizontal axes represent the level of expectations at t1 and fulfillment at t1. The comparison of expectations at t1 and fulfillment level at t1 is captured by the two-dimensional space on the floor. In Zone A, both expectations at t1 and fulfillment at t1 are low. In Zone D, both the expectations at t1 and fulfillment at t1 are high. In both cases, the discrepancies are relatively small. In contrast, the discrepancies between expectations at t1 and fulfillment at t1 are relatively large for Zones B and C.

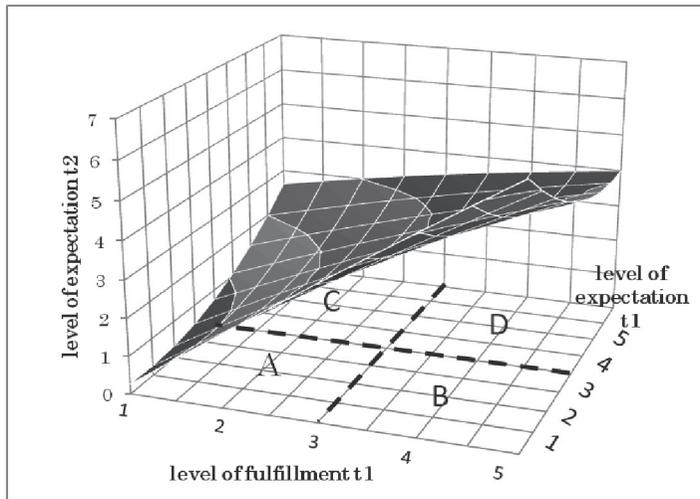


Figure 1 Response surface methodology

5. Results

The means, standard deviations, and correlations for employees within their initial three years and those with longer tenure are presented in Tables 2 and 3. Expectations at t1 and fulfillment at t1 were positively correlated with expectations at t2. Given the two-wave study, we investigated the extent to which the magnitude and variance of psychological contracts change differed between t1 and t2. According to Table 2, for employees in their initial three years, their expectations of the employer increased (both relational and transactional contracts), which is inconsistent with previous research (Robinson et al., 1994; Thomas and Anderson, 1998; Lee et al. 2011). According to Table 3, after four years, employee perceptions of relational contracts and transactional expectations decrease. In both samples, the degree of change in expectations was quite small. Interestingly, we found consistent decreases in the standard deviation for both contracts only for the initial three years sample.

5.1 Polynomial regression and response surface: the initial three years

The results of the polynomial regression analysis for employees within their initial three years are shown in Table 4. In step 1, the control variables explained 12% of the variance in relational expectations

at t2 and 7% for transactional expectations at t2. In step 2, expectations and fulfillment at t1 accounted for an additional 38% of the variance in expectations t2 (relational contract) and 43% of the variance in expectations (transactional contract). In step 3, higher order terms explained an additional 7% of the variance in expectations (relational contract) and 3% for transactional contracts.

Hypothesis 1 predicted that the employer's fulfillment of the psychological contract would be associated with an increase in expectations at t2 toward the employer. As shown in Table 4, only the employer's fulfillment was positively related to expectations at t2, expectations at t1, and higher order terms (i.e., squared expectations and fulfillment at t1 as well as their interaction) were not significant. We then used values from the regression analyses to plot the response surfaces (Edwards, 1994; Lambert, et al., 2003) and analyzed these surfaces. As shown in Figures 2 and 3, surfaces were positively sloped along the fulfillment line and exhibited no significant curvature. In more detail, when an employer's fulfillment falls short of the expectation level at t1 (zone C), employees decrease their expectations at t2. And when the employer's fulfillment exceeds the employees' expectations at t1 (zone B), employees increase their expectations at t2. Finally, in the absence of a discrepancy (zone A and D), there are no corrective actions. Thus, Hypotheses 1a, 1b, and 1c are supported.

5.2 Polynomial regression and response surface: after four years

The results of the polynomial regression analysis are shown in Table 5. In step 1, the control variables explained 4% of the variance in both relational and transactional contract expectations. In step 2, expectations and fulfillment accounted for an additional 34% of the variance in expectations (relational contracts) and 40% of the variance in expectations (transactional contract). In step 3, higher order terms explained an additional 3% of the variance in expectations (relational contract) and 2% for transactional contracts.

Hypothesis 2 predicted that, for employees with a long tenure, a discrepancy between expectations and employer fulfillment at t1 would not be associated with an increase in expectations at t2. More specifically: (2a) when fulfillment is less than expectations at t1, expectations at t2 will not decrease (downward regulation), (2b) when fulfillment exceeds expectations at t1, expectations at t2 will not increase (upward regulation), (2c) when expectations and fulfillment are equal at t1, expectations at t2 will be stable.

As shown in Table 5, all higher order variables were related to expectations at t2, a stark contrast to the initial three-year sample. As in the preceding analysis, we examined the shape of the three-dimensional surface using the regression coefficients. As shown in Figures 4 and 5, in the absence of a discrepancy (zone A and D), there are no corrective actions. This supports Hypothesis 2c. Also, when an employer's fulfillment falls short of the expectation level at t1 (zone C) employees do not decrease their expectations at t2. Thus, Hypotheses 2a is supported. Finally, even when an employer's fulfillment exceeds an employee's expectations at t1 (zone B) employees increase their expectations at t2. Thus, Hypothesis 2b is not supported.

6. Discussion

The purpose of this paper is to gain a better understanding of psychological contract development by comparing new recruits and veterans. Despite the fundamental role of psychological contracts in employee attitudes and behaviors, there is little research concerning the development of psychological contracts. Although a few empirical efforts describe the early socialization period as a critical stage in the development of psychological contracts (Rousseau, 2001), no consistent pattern has emerged for new recruits' perception of change in psychological contracts over time. To our knowledge, there is also no research concerning contract change in the post-socialization period. We therefore investigated the developing nature of psychological contracts as well as the development of contracts for veteran employees. Our results provide evidence for the determinants of contract change and its impact. However, the pattern of contract change itself differed between employees within their initial three years and those with a longer tenure.

In both samples, the amount of expectation change was quite small, which is inconsistent with extant findings (Robinson, Kraatz, and Rousseau, 1994; Thomas and Anderson, 1998). Interestingly, the results also show a consistent decrease in the standard deviation for both contracts only for those within their initial three years. Is this result incompatible with the established notion that the early socialization period is a critical stage in the development of psychological contracts (Rousseau, 2001)? As socialization theorists and psychological contract theorists suggest, new recruits often have unrealistic expectations for their employers (Louis, 1980; Wanous, 1976; De Vos and Freese, 2011). New recruits are primarily concerned with establishing and clarifying their own identities (Katz, 1980; Schein 1978). They try to adapt to their organization by tuning their expectations to fit the new environment (Ashford, 1986). In addition, they try to insure that the organization reality is suitable for them. In seeking information about their organization's fulfillment, employees devote themselves to conducting self-regulating actions to arrive at more realistic expectation levels (Wanous, 1976). Recruits with inappropriately elevated expectations may take downward corrective actions while recruits with inappropriately low expectations may take upward corrective actions. Thus, contract change may occur not as a changing expectation level but as a convergence in variance of expectation levels.

Table 2: Descriptive statistics for variables (initial three years)

Variables	M	S.D.	a	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Sex (dummy)	0.90	0.30		1												
2 Age	40.3	7.75		0.14***	1											
3 Job change (dummy)	0.16	0.37		0.01	0.04*	1										
4 MR (dummy)	0.65	0.48		0.11***	0.01	0.18***	1									
5 R and D (dummy)	0.20	0.40		-0.05**	-0.05**	-0.11**	-0.66***	1								
6 Manager (dummy)	0.38	0.49		0.19***	0.66***	-0.06**	-0.00	-0.04*	1							
7 Expectation (relational) t1	3.72	1.01	0.89	0.11***	-0.03	0.02	0.11***	-0.07***	0.03	1						
8 Expectation (transactional) t1	3.89	0.94	0.91	0.11***	-0.00	0.01	0.06**	-0.05**	0.06**	0.69***	1					
9 Fulfillment (relational) t1	3.16	0.84	0.81	0.05**	0.03	0.03*	0.15***	-0.09***	0.09***	0.25***	0.24***	1				
10 Fulfillment (transactional) t1	3.78	0.74	0.79	0.05**	0.03	-0.00	0.09***	-0.06***	0.16***	0.28***	0.33***	0.68***	1			
11 Expectation (relational) t2	3.78	0.87	0.83	0.07**	-0.03	0.03	0.15***	-0.10***	0.06***	0.49***	0.44***	0.47***	0.43***	1		
12 Expectation (transactional) t2	3.97	0.77	0.89	0.10***	-0.03	-0.01	0.11***	-0.08***	0.10***	0.47***	0.51***	0.39***	0.57***	0.74***	1	
13 Expectation t1 × Fulfillment (relational) t1	14.06	4.75		0.10***	0.01	0.03	0.17***	-0.10***	0.08***	0.75***	0.56***	0.79***	0.61***	0.57***	0.51***	1
14 Expectation t1 × Fulfillment (transactional) t1	15.44	4.62		0.10***	0.03	-0.00	0.10***	-0.07**	0.14***	0.59***	0.80***	0.56***	0.81***	0.52***	0.64***	0.73***

*** p < .01, ** p < .05, * p < .10

Table 3: Descriptive statistics for variables (after four years)

Variables	M	S.D.	α	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Sex (dummy)	0.81	0.40		1												
2 Age	29.02	5.96		0.17	1											
3 Job change (dummy)	0.31	0.46		0.23**	0.65***	1										
4 MR (dummy)	0.50	0.50		0.09	-0.25**	0.22**	1									
5 R and D (dummy)	0.40	0.49		0.00	0.08	-0.40***	-0.81***	1								
6 Manager (dummy)	0.16	0.36		0.07	0.34***	0.19*	0.22**	-0.24**	1							
7 Expectation (relational) t1	3.66	0.87	0.83	-0.19*	0.11	0.01	-0.07	-0.02	-0.07	1						
8 Expectation (transactional) t1	3.86	0.87	0.90	-0.17*	0.10	-0.07	-0.19*	0.11	-0.09	0.75***	1					
9 Fulfillment (relational) t1	3.22	0.84	0.91	-0.12	0.07	0.04	0.00	-0.07	-0.06	0.24**	0.16	1				
10 Fulfillment (transactional) t1	3.55	0.79	0.82	-0.27**	0.04	-0.09	0.03	-0.03	-0.05	0.16	0.16	0.67***	1			
11 Expectation (relational) t2	3.77	0.88	0.80	-0.17*	-0.01	-0.14	-0.16	0.05	-0.17	0.34***	0.30**	0.63***	0.54***	1		
12 Expectation (transactional) t2	3.97	0.86	0.83	-0.11	0.06	-0.03	-0.06	0.00	-0.16	0.29**	0.30**	0.50***	0.66***	0.73***	1	
13 Expectation t1 × Fulfillment (relational) t1	13.80	4.78		-0.22**	0.11	0.03	-0.04	-0.06	-0.06	0.74***	0.57***	0.81***	0.56***	0.59***	0.48***	1
14 Expectation t1 × Fulfillment (transactional) t1	13.70	4.78		-0.29**	0.09	-0.11	-0.11	0.07	-0.08	0.59***	0.77***	0.52***	0.74***	0.52***	0.59***	0.74***

*** p < .01, ** p < .05, * p < .10

Table 4: Hierarchical regression analysis (initial three years)

	Relational contract t2			Transactional contract t2		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Intercept	4.711 ***	2.071 **	-1.01 ***	4.03 ***	0.98	-1.44
Sex (dummy)	-0.24	0.02	-0.32 **	-0.21	0.24	0.18
Age	-0.00	-0.02	-0.28 **	0.02	-0.01	-0.02
Job change (dummy)	-0.31	-0.24	-0.05	-0.12	0.08	0.19
MR (dummy)	-0.68 *	-0.58 **	-0.43 **	-0.13	-0.21	-0.19
R and D (dummy)	-0.73 *	-0.48	-0.29	-0.31	-0.21	-0.11
Manager (dummy)	-0.53 *	-0.28	-0.17	-0.58 **	-0.34 *	-0.37 *
Expectation t1		0.18 **	0.51		0.18 **	0.30
Fulfillment t1		0.66 ***	1.16 **		0.71 ***	2.13 **
Expectation t1 × Fulfillment t1			-0.12			-0.12
(Expectation t1) ²			0.08			0.04
(Fulfillment t1) ²			0.08			-0.14
Adjusted R ²	0.06	0.46	0.51	0.01	0.46	0.47
R ²	0.12	0.50	0.57	0.07	0.50	0.53
Δ R ²		0.38	0.07		0.43	0.03
F value	2.06 *	11.52 ***	10.40 ***	1.11	11.46 ***	9.05 ***

*** p < .01, ** p < .05, * p < .10

Table 5: Hierarchical regression analysis (others)

	Relational contract t2			Transactional contract t2		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Intercept	3.99 ***	1.44 ***	1.01 ***	4.31 ***	1.36 ***	0.91 ***
Sex (dummy)	0.13 *	-0.00	-0.01	0.20 **	0.10 **	0.09 *
Age	-0.02 ***	-0.01 **	-0.01 **	-0.02 ***	-0.01 ***	-0.01 **
Job change (dummy)	0.04	0.02	-0.00	-0.01	-0.02	-0.03
MR (dummy)	0.29 ***	0.11 **	0.10 **	0.13 **	0.04	0.03
R and D (dummy)	0.00	0.02	0.01	-0.07	-0.05	-0.06
Manager (dummy)	0.27 ***	0.12 **	0.13 **	0.32 ***	0.08 **	0.08 **
Expectation t1		0.36 ***	0.30 **		0.32 ***	0.27 **
Fulfillment t1		0.39 ***	0.61 ***		0.46 ***	0.70 ***
Expectation t1 × Fulfillment t1			-0.18 ***			-0.16 ***
(Expectation t1) ²			0.09 ***			0.08 ***
(Fulfillment t1) ²			0.07 ***			0.06 ***
Adjusted R ²	0.04	0.37	0.41	0.04	0.44	0.46
R ²	0.04	0.38	0.41	0.04	0.44	0.46
Δ R ²		0.34	0.031		0.40	0.02
F value	15.83 ***	174.44 ***	146.65 ***	16.90 ***	230.98 ***	181.28 ***

*** p < .01, ** p < .05, * p < .10

Figure 2 Response surface predicting level of expectations at t2 from expected and fulfilled relational contracts: initial three years

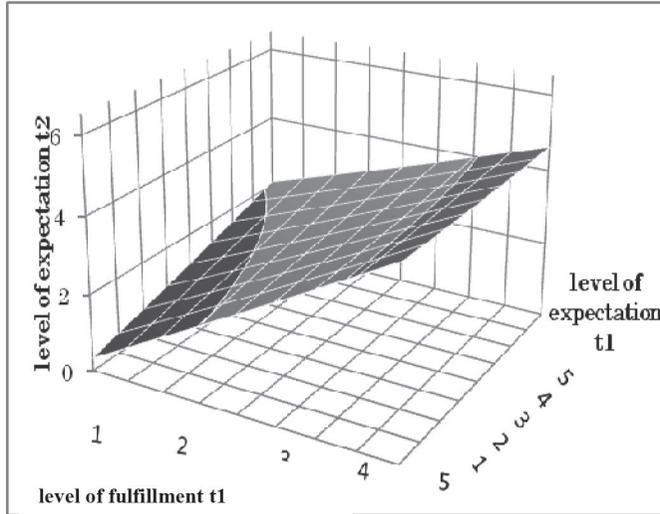


Figure 3 Response surface predicting level of expectations at t2 from expected and fulfilled transactional contracts: initial three years

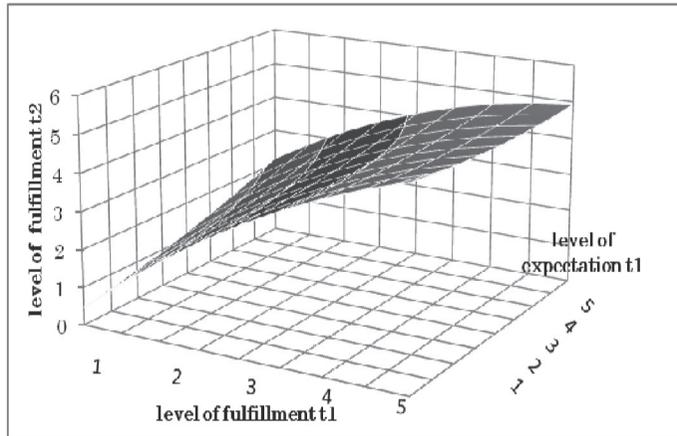


Figure 4 Response surface predicting level of expectations at t2 from expected and fulfilled relational contracts: others

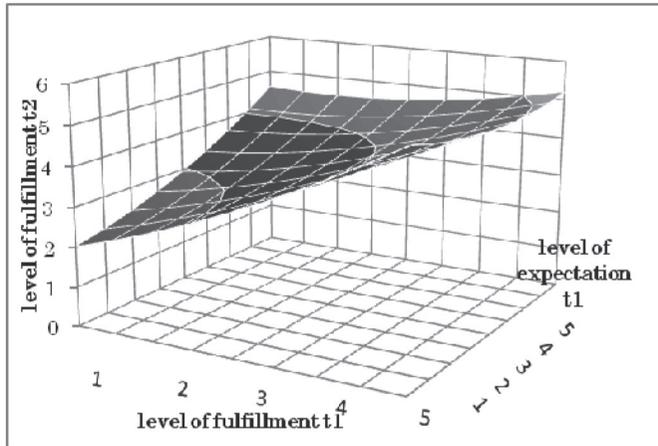
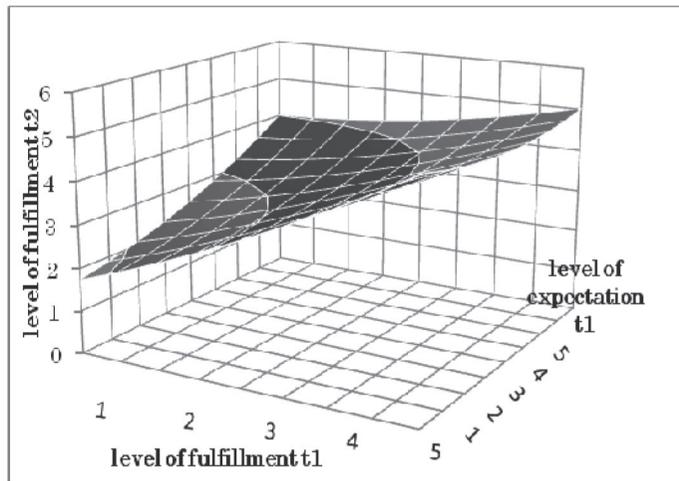


Figure 5 Response surface predicting level of expectations at t2 from expected and fulfilled transactional contracts: others



For employees with longer tenures, the comparison of expectations and fulfillment at t1 was associated with expectations at t2. In case of positive discrepancies between expectations at t1 and fulfillment at t1 (i.e., the level of expectations at t1 was low, but fulfillment at t1 was high), the level of expectations at t2 increases (upward change). In the absence of discrepancies (i.e., both expectations at t1 and fulfillment at t1 are high/low), the level did not change. These results provide evidence for the occurrence of self-regulation in the post-socialization period. However, even when negative discrepancies existed (i.e., the level of expectations at t1 was high, but fulfillment at t1 was low), the level of expectations at t2 was still high. Although employees with longer tenure do change their expectation level, they may have a natural

downward rigidity. This may be understood from the perspective of psychological distortion (Wells and Iyengar, 2005). As indicated by previous researchers, although there are several discrepancies between Japanese employees' expectations and the employers' level of fulfillment (Morishima, 1996; Hattori, 2010), many Japanese employers still maintain their promise of long-term employment (Morishima, 1996). In Japanese companies (as in our sample firm), employees are promoted and receive salary increases more or less in accordance to the length of service (seniority system). In our sample, employees received a relatively high salary. Therefore, it may be objectively and subjectively difficult for long-tenured employees to change employers, which could lead to the loss of future benefits (Lincoln and Kalleberg, 1990). For employees with long tenures, perceptions of negative gaps (where expectations > fulfillment) imply the existence of cognitive dissonance ("I want/have to stay here, but my employer betrayed me"). In such cases, employees may achieve an integration of their internal state ("I want/have to stay here") and perceived external state ("My employer betrayed me") through a process of distortion (e.g., "My employer must be trustworthy," "The breach of contract might be a transient and trivial one," or "So, I can expect better from my employer in the future"). By consciously or unconsciously distorting their perceptions, employees may be able to decrease cognitive dissonance.

Our findings have several implications for psychological contract formation research. First, though the early socialization period is critical—as suggested by current research—the pattern of change is not about the changing expectation level itself, but about the convergence of variance in expectations. Second, the pattern of contract change differs between new recruits and veterans. Although new recruits change their expectation levels following employees' fulfillment, veterans use their perception of expectations as a reference point. This implies that the determinants of the pattern of expectation should be a critical focal point for future research efforts, not the pattern of expectation itself.

In considering these insights, however, it is also important to note several limitations of the present work. The first limitation is that only one side of the psychological contract was included in this study. As previous research indicates, psychological contracts include employees' perception of both (1) expectations of the employer and (2) expectations of the employee. We focused on only one half of the psychological contract. The second limitation was our operationalization. Although Rousseau and other theorists recommend the term "obligation" or "promise" (Conway and Briner, 2005; Roehling, 2008; Rousseau, 2010), we used "expectation" based on the pilot results. Not surprisingly, the way researchers operationalize psychological contracts can influence their findings (Roehling, 2008). The final issue is the generalizability of our sample, namely, employees in a large and stable Japanese company. Our results therefore require replication with other sample populations. Notably, the Japanese context may also influence the results. Previous research has indicated that for Japanese employees, it is objectively and subjectively difficult to change their employer (Lincoln and Kalleberg, 1990). The confirmation of the robustness of our findings thus requires more research in other contexts using standard scales.

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