

Incremental and Discontinuous Change of Psychological Contracts over Time

Yasuhiro Hattori* and Kohei Arai⁺

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Abstract/Summary

This paper investigates the effect of tenure (length of employment with current employer) on psychological contracts as employees perceive, using empirical methods through data from 3,789 employees in a Japanese pharmaceutical company. Results show that psychological contracts measured by the strength of obligation decreased incrementally over time. The paper suggests that employees' perceived obligations can change discontinuously. Events such as promotions bring reconfirmation of psychological contracts and increase perceived obligations discontinuously. Although employees' perceived obligations can decrease over time, it can increase through employer's intervention. Implications for managing an employee-organization relationship and perspectives on future research are discussed.

* Department of Economics, Shiga University, Banba Hikone Shiga 522-8522, Japan.

⁺ Hirao School of Management, Konan University, Takamatsu-Cho Nishinomiya 8-33, Japan

I . Introduction

The employee–organization relationship has been mainly conceptualized as a “psychological contract” in the past 20 years (De Vos, Buyens, and Shalk, 2005; Chen, Tsui, and Zhong, 2008). Confronted with globalization and the need to restructure and downsize, many Japanese companies are faced with the requirement to make a decisive shift in the employment system. Such changes have altered employees’ ways of thinking. Scholars frequently apply terms such as “boundaryless career,” “individualism,” and “autonomy” to the relationship between employees and organizations. Under such circumstances, psychological contracts have an important role in helping us understand several organizational behaviors. In particular, many researchers consider the breach of psychological contracts as the main way of understanding how psychological contracts affect feelings, attitudes, and behaviors in an organization (Conway and Briner, 2005). It is not surprising that most previous studies about psychological contracts have focused on breach (Conway and Briner, 2005; Rousseau and Tijoriwala, 1998), because the above-mentioned changes simply imply a psychological contract breach. These studies demonstrated that an employer’s psychological contract breach is associated with various negative outcomes such as reduction of organizational commitment, trust, satisfaction, and intent to leave (Zhao et al., 2007).

Although such findings are important, they have overlooked the fact that psychological contracts between an employee and organization could change over time. Over time, employees have an improved knowledge about their employer and a better understanding of what the company requires of them and what it provides to its employees (Schein, 1978). Thus, psychological contracts could change with time. Given the apparent relationship between time and psychological contracts, it is imperative for us to investigate this linkage. However, regrettably, little theoretical and empirical studies exist on the role of time in contract change. Such a lapse of attention to the influence of time is found not only in the study of psychological contracts but also in organizational science in general (George and Jones, 2000). Time can and should play a

more important and significant role in theory because time directly impacts the very nature of the core constructs. In this case, an important question left unresolved is how tenure (length of employment with current employer) influences psychological contracts as employees perceive them.

In this paper, we examine the need to clarify the role that tenure plays in the change in psychological contracts.

II. Theory

Psychological Contracts Defined

Although Argyris (1960) and Levinson et al. (1962) originally introduced the concept of psychological contracts, it has been argued that the most influential paper in this area is Rousseau (1989). Rousseau (1989) defined a psychological contract as “an individual belief regarding the terms and conditions of a reciprocal exchange agreement between the focal person and another party” (p. 123). Studies on psychological contracts that were developed after the 1990s were based on Rousseau’s definition (1989). The four key concepts—individual belief, agreement, terms, and obligation—that characterize Rousseau’s concept of psychological contracts are delineated in this definition. In contrast to the previous work that emphasized a dyad-level notion, Rousseau (1989) did not view psychological contract as involving the perspectives of two interconnected parties. Instead, she posited it as an individual-level, subjective phenomenon. This holds true irrespective of whether the contract is legal/written or unwritten. All types of promises are deemed psychological contracts. Consistent with this view, Rousseau (1989) suggested that “agreement exists in the eye of the beholder” (p. 123). Furthermore, agreements are not general concepts such as the notion of “trust”; instead, they comprise concrete contents (e.g., high pay, training). Finally, she emphasized the binding power of psychological contracts, suggesting that parties are bound by a set of reciprocal obligations when agreements are signed.

Since Rousseau’s seminal paper, many empirical studies on psychological contracts have been conducted. Conway and Briner (2005) classified the existing studies into two

groups.

The first group is content-based research. The contents of psychological contracts refer to “the promises an employee believes they have made to their organization and what the employee believes the organization has promised in return” (p. 37). Content-based research examines the specific terms of the contracts. The contents of psychological contracts are not what employees actually receive and provide, but rather the implicit and explicit obligations. For example, Rousseau (1990) generated contents by asking personnel and human resources managers about obligations. In her list, employers’ obligations included items such as rapid advancement, high pay, and career development, and employees’ obligations included items such as working extra hours, loyalty, and willingness to accept transfer. Now we have a satisfactory list of mutual obligations.

The second group is evaluation-based research. Most evaluation research examines the degree of breach. Breach of psychological contracts occurs “when one party in a relationship perceives another to have failed to fulfill promised obligation(s)” (Robinson and Rousseau, 1994: 247). The opposite of breach is fulfillment. These studies demonstrated that an employer’s psychological contract breach is associated with various negative outcomes such as reduced organizational commitment (Chen, Tsui, and Zhong, 2008; Raja, Johns, and Ntalianis, 2004; Restubog, Bordia, and Tang, 2006; Zhao et al., 2007), trust (Robinson, 1996; Zhao et al., 2007), and satisfaction (Raja, Johns, and Ntalianis, 2004; Zhao et al., 2007). Given that a psychological contract breach affects the feelings, attitudes, and behaviors of an employee, it is not surprising that almost all of the psychological contracts studies have focused on breach (Conway and Briner, 2005; Rousseau and Tijoriwala, 1998).

Although such findings are important, previous studies have overlooked the fact that psychological contracts could change over time. As George and Jones (2000) said, all phenomena, including psychological contracts, exist in and through time. Both employer and employee may be affected by the duration of their relationship. In line with this, many researchers have acknowledged that psychological contracts are dynamic (Robinson, Kraatz, and Rousseau, 1995; Rousseau, 1995; Schein, 1978; Shore

and Tetrick, 1994; Thomas and Anderson, 1998). Despite the importance of understanding how employees change their psychological contracts over time, there are only a few examples of empirical studies that looked at change over time. Moreover, they focused on relatively short-term change. Both content- and evaluation-based research have focused on only a temporary psychological contract that could change over time.

Effects of Time on Psychological Contracts

Rousseau (1995) theoretically explained why psychological contracts can change over time, citing Herbert Simon's "zone of acceptance" (Simon, 1976)¹. Simon (1976) advocated a zone of acceptance wherein organizations can ask something new of employees without the employees noticing it. For many Japanese employees, whether an employer orders a personnel change is probably a matter of indifference. Both employees and employers can modify their obligations without the other party experiencing a change in the deal (Rousseau, 1995). Schein (1978), one of the initial contributors in this area, said that psychological contracts inevitably change over time as the organizations' and employees' needs change. He emphasized that organizations and employees must repeatedly renegotiate, accommodate, and alter the contract to adapt to changing circumstances. As such, researchers in this area clearly acknowledged that psychological contracts continue to change over the full course of an individual's employment.

However, regrettably, only a few empirical and theoretical studies have been conducted on the change of employees' psychological contracts. In an exploratory longitudinal study of business school alumni, Robinson et al. (1994) investigated employees' perceptions of the changes in psychological contracts. During the first two years in an organization, employers' obligations increased significantly for three of seven items (advancement, high pay, and merit pay), and decreased significantly for one item (training). With regard to employees' obligations, five of the seven items decreased

¹ Simon (1976) adapted this concept from Chester Barnard's "zone of indifference."

significantly (overtime, loyalty, transfer, notice, and minimum stay). Overall, the mutual obligations that new employees perceive change during the initial years they spend in their organization. Furthermore, employees' perceived obligations decrease over time, while their employer's obligations increase. Thomas and Anderson (1998) conducted a similar study for the British Army. Data were collected on the first day after the recruits' entry, and again at the end of week eight. Results indicated that the recruits' obligations significantly increased for job security, social/leisure aspects, effects on family, and accommodations.

Robinson et al. (1994) and Thomas and Anderson (1998) showed that as a construct, a psychological contract is "dynamic and evolving" (Robinson et al., 1994: 149). They interpreted results such as showing an individual's desire to maintain equity and a self-serving bias. Generally speaking, employees desire to maintain equity between rewards and their own contribution (Robinson et al., 1994). Over time, they gain relevant knowledge about how to work and how to perform well in the organization, which leads to an increase in the employees' contributions (Thomas and Anderson, 1998). The employees also contribute by continuing to work for the same employer. Moreover, people are likely to believe they have fulfilled their obligations and less likely to believe others have done the same. Such a self-serving bias may increase an employer's obligations and decrease the employees' own obligations. Thus, employees will believe that "they owe less while their employer owes more" (Robinson et al., 1994, 140). Both researchers postulated that recruits have only rudimentary psychological contracts, and that they will adjust their perceptions of obligations during the socialization period.

Although Robinson et al. (1994) and Thomas and Anderson, (1998) clarified that psychological contracts could change over time, they only focused on short-term change (at least few months–few years). Then how do psychological contracts change over the long run (throughout employees' careers)?

Incremental Change of Psychological Contracts

According to George and Jones (2000), in theory building, we must focus on whether

phenomena change in an incremental or a discontinuous manner. Furthermore, for some classes of phenomena, both types of change (incremental and discontinuous) can occur. Understanding whether phenomena change in an incremental or a discontinuous manner, or both, may be crucial to understanding the very nature of the construct (George and Jones, 2000). In this and the following section, we discuss incremental or/and discontinuous types of change in psychological contracts.

Psychological contracts between employees and organizations will change incrementally over time. This phenomenon can be better understood by considering it on a schema of an employee–organization relationship and regarding an employee as a discontinuous information processor (Rousseau, 1995). A schema is a cognitive organization or a mental model of conceptually related elements (Rumelhart and Norman, 1978; Stein, 1992). One gradually develops a schema from past experience, and it subsequently guides the manner in which information is processed. Once an individual forms a schema, he/she tends to maintain it (Stein, 1992) and new information tends to be interpreted in light of the existing schema. We apply new information to an appropriate set of schema and tuck the newly created memory structures away in long-term memory, and sometimes this process involves tuning or making a minor modification of schema to bring them more into congruence with functional demands (Rumelhart and Norman, 1978). As Rousseau (2001) said, “psychological contracts themselves can form schema” (p. 515). According to career theory, during the first few months, employees are primarily concerned with establishing and clarifying their identities within the organization (Berlew and Hall, 1966; Schein, 1978). They use several forms of information to fine-tune their initial understanding of psychological contracts regarding what they can expect and what they need to provide (e.g., “My employer offers long-term employment instead of loyalty.”). If employees’ experiences in an organization are consistent with their beliefs, then their schemas tend to reach a stage of completeness. Within a few years, psychological contracts can evolve from discrete perceptions of several obligations to more

elaborately organized schemas (Schein, 1978)². Employees working in the organization over a long period will develop stable and fine-tuned psychological contracts (schemas).

Once a stable psychological contract (schema) is formed, employees gradually do not intentionally seek information and are unconcerned about the relationship between them and their employers. We could indeed classify the reasons for this into the following three categories: attention shift, seeking stability, and experiencing awareness of lack of change.

Employees working in an organization over a long period of time shift their attention from social or organizational issue toward task concern (Louis, 1980). For example, a recruit asks about the organization while he/she does not know much about it, and once he/she starts to understand, he/she gradually stops asking. A veteran may do little asking because he/she is able to concentrate on task assignments. As a result, a veteran employee's no longer thinking about his/her relationship with the employer.

What is more, as Hall (1988) discussed, people in mid-career tend to establish certain stable behaviors and relationships (called "career routine") simply because this keeps them feeling secure and confident. They will rely more and more on their customary way of doing things to complete everyday work. Consequently, over time, they will gradually be less concerned about the relationship between them and their employer and will not intentionally seek information as their organizational tenure increases (Ashford, 1986).

There is another reason that employees with long tenure tend not to think about the employer–employee relationship. For recruits, everything in the organization is brand new and unfamiliar, which tends to direct their attention toward social and organizational events. As an employee continues with the organization, however, it is likely that everything will eventually seem routine and habitual, resulting in a lack of new learning and growth for him/her (Schein, 1978; Hall, 1988). Such an awareness of

² Results of Robinson (1994) and Thomas and Anderson (1998) may reflect recruits' tuning of their schema. An individual's desire to maintain equity and a self-serving bias can occur only when he/she considers seriously the relationship with an employer.

customary practices gives rise to the employee's no longer thinking about his/her relationship with the employer.

To sum up, employees working in an organization over a long period of time gradually are less concerned about the relationship between them and their employer, because their information process is discontinuous one. With increasing organizational tenure, they no longer think about his/her relationship with the employer. This assertion is consistent with the findings of research in feedback-seeking. Ashford (1986) found that organizational tenure was significantly and negatively related to the frequency of information gathering. As such, people in organization are discontinuous information processor (Rousseau, 1995). They intentionally seek and process contract-related information only at certain points. Then, as Berlew and Hall (1966) said, the probability that psychological contracts are internalized will be higher when the employee has joined the organization and is searching for some definition of the reality of his/her new environment. Veteran employees whose psychological contracts have been formed over a long period rarely tend to seek contract-related information and do not strongly internalize obligations.

Accordingly, the following are hypothesized:

Hypothesis 1: Employees' perceptions of their employer's obligations will incrementally decrease over time.

Hypothesis 2: Employees' perceptions of their own obligations will incrementally decrease over time.

Discontinuous Change of Psychological Contracts

The change in psychological contracts can be viewed not only as incremental or continuous but also as discontinuous. Active information gathering will be triggered when an individual feels the need for it (Ashford, 1986; Rousseau, 1995). As many researchers said, each passage and role change involves socialization into the new role and setting (Ashford, 1986; Louis, 1980). Any time individuals cross organization,

hierarchical and functional resocialization can occur. It can be hypothesized that several events in an employee's career trigger an increase in perceived obligations. In this paper, we focus on events such as promotion and job change experience³ that will punctuate contracts (Rousseau, 1995). The transition from individual contributors to managers forces employees to rethink their identity within an organization (Schein, 1978; Hill, 1992). More or less, they may ask themselves questions such as "Who am I?" or "What can I do for my employer and subordinates?" Certain types of change will remind them of their initial contracts. Although in the early socialization stage, the goal was to ratify psychological contracts (Schein, 1978), in mid-career, the goal is to reconfirm these contracts.

Accordingly, the following are hypothesized:

Hypothesis 3a: Employees' perceptions of their employer's obligations will discontinuously increase with promotion.

Hypothesis 3b: Employees' perceptions of their own obligations will discontinuously increase with promotion.

A change in the organization can also be a potent means of stimulating rethinking about the employer–employee relationship. What organizational change does is reactivate the sense-making process (Louis, 1980). It enables established employees to feel as if they are newcomers and to start to seek active information again.

Accordingly, the following are hypothesized:

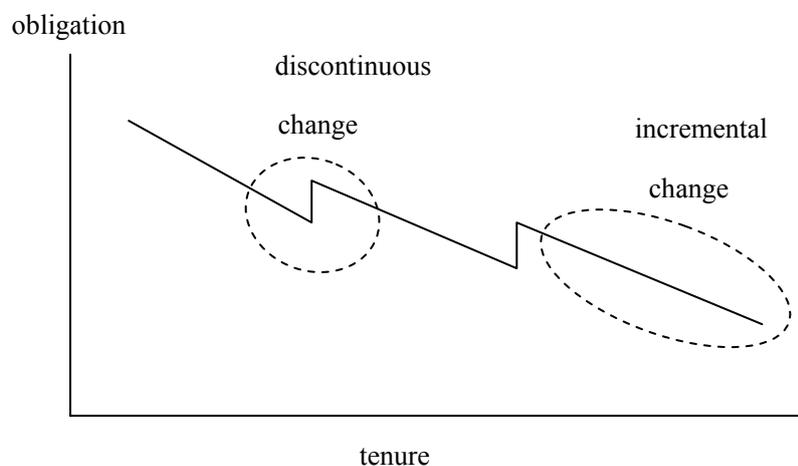
Hypothesis 4a: Employees' perceptions of their employer's obligations will discontinuously increase when they change their employer.

³ Events such as major organizational changes (mergers and acquisitions, introduction of a new CEO or HRM, reorganization) and transfer (occupational and geographical) evoke information gathering, although we cannot investigate those in this paper.

Hypothesis 4b: Employees' perceptions of their own obligations will discontinuously increase when they change their employer.

The review described above suggests that psychological contracts can change in both incremental and discontinuous manners. Employees gradually do not seek information intentionally, and they become less concerned about their relationship with their employers over time. A decrease in perceived obligations, however, could disrupt this relationship. Events such as promotion and change in the organization will bring reconfirmation of psychological contracts. Consequently, perceived obligations will increase discontinuously. Figure 1 provides both types of change on the basis of the review described above.

Figure 1: Incremental and discontinuous change in psychological contracts



III. Method

Research Context

Since the government's encouragement of the generic medicine and increasing in global competition, Japanese pharmaceutical companies are confronted with decisive shift in employment systems. From the 1990s onward, many Japanese pharmaceutical

companies started considering the introduction of performance-based evaluation, with several of these companies (including our subject) adopting it by the end of the twentieth century. Japanese companies now are very similar to Western companies in employment systems. The sample consisted of full-time employees with a permanent employment contract, working for a Japanese pharmaceutical company. Conducting our research in a company enable us to completely control organization specific factors (e.g. organizational culture, HR practices, organization size) in our analysis.

Sample

The population sampled for this study was 3,789 employees in a large Japanese pharmaceutical company. In July 2008, we conducted a web-based survey with all employees in this company. A total of 3,789 of those employees responded to the questionnaire. The average age of the participants at the time of the study was 39.81 years (S.D. = 8.716), their average tenure (length of employment with current employer) was 12.46 (S.D = 9.14), and percentage of women was 17 percent.

We must be cautious when interpreting the results of this study, because our data represent only a cross-sectional view of what has been presented as longitudinal phenomena. Strictly speaking, we must conduct a longitudinal study or a cohort analysis to test our hypothesis. This study may serve as an exploratory first step. We then assume that in this study, factors other than tenure, promotions, and job-change experiences do not have a systematic influence on the employees' contract.

Measures

Perceived obligation. Since a standard psychological contract scale did not exist in Japanese, we developed an original version. First, 72 items (45 items related to an organization's obligations and 27 items pertaining to an employee's obligations) were extracted by translating the existing study, such as Millward and Hopkins (1998), Robinson et al. (1994), and Rousseau (1990). Subsequently, seven original items (five items related to an organization's obligations and two items pertaining to an employee's

obligations) were extracted on the basis of interviews. In addition, two items (related to an organization's obligations) were extracted from the literature on Japanese management (e.g., Ouchi, 1981). Finally, the items that could be divided into two or more categories were classified accordingly. Consequently, 94 items (57 items related to an organization's obligations and 37 items pertaining to an employee's obligations) were obtained (see Table 1).

**Table 1:
Result of Factor Analysis for Organization's Obligations**

Items	Factor		
	Relational contract	Transactional contract	
Good career prospects	0.87	-0.05	
Participation in career-related decision making	0.85	-0.02	
Support with personal problems	0.81	0.01	
Development of marketable skills	0.80	-0.02	
Job assignments based on my experience	0.74	0.10	
Good work atmosphere	0.70	0.12	
Benefits for my family	0.69	0.07	
Participative decision making	0.66	0.15	
Adequate job support	0.65	0.23	
Adequate opportunity for OJT	0.60	0.29	
Frequency of feedback	0.59	0.14	
Flexibility in working hours	0.58	0.05	
Interesting work	0.55	0.30	
Provision of adequate training	0.50	0.31	
Significant task for society	0.50	0.33	
Adequate job status	0.48	0.23	
Adequate allocation	-0.03	0.89	
Adequate difficulty of work	-0.02	0.85	
Performance-based pay	-0.03	0.83	
Meaningful tasks for me	0.19	0.68	
High pay	0.18	0.63	
Career development	0.28	0.47	
	Eigenvalue	12.36	11.10

Correlation

Factors	F1	F2
F1	1	
F2	0.80	1

With regard to an employer's obligations, participants were asked to indicate the extent to which their employer was obligated to provide them with a set of items. With regard to an employee's obligations, participants were asked to indicate the extent to which they were obligated to provide a set of items to an employer. Participants were provided with a five-point Likert-type scale, ranging from "not at all obligated" to "highly obligated" for each item. A high score indicated high perceived obligations, and a low score indicated little or no obligation.

An exploratory factor analysis of the items was conducted to reduce the item pool and assess the factor structure.

First, a factor analysis (the principal factor method with promax rotation) for 57 items related to an organization's obligations was conducted. Items with loading less than .40 were deleted. Variables with eigenvalues less than one were not included in the factor structure. When items were reduced, there were no longer any cross-loadings. Two factors emerged from the items (see Table 2). The first factor comprised items such as "good career prospects," "support for personal problems," and "good work atmosphere." These patterns were consistent with the notion that employment can be characterized by relational issues involving the creation and maintenance of a relationship between an employee and employer; in other words, a "relational contract" (Rousseau, 1990; 1995). The second factor comprised items such as "performance-based pay," "high pay," and "career development." Because these items reflect high extrinsic inducements (Rousseau, 1990; 1995), it was termed "transactional contract." These patterns were consistent with the notion that distinct types of employment relationship can be discerned from the patterns of employee and employer obligations (Rousseau, 1990; Robinson et al.; 1994; Millward and Hopkins, 1998).

Then a factor analysis (the principal factor method with promax rotation) for 37 items related to an employee's obligations was conducted. Items with loading less than .40 were deleted. Variables with eigenvalues less than one were not included in the factor structure. When items were reduced, there were no longer any cross-loadings. Three factors emerged from the items (see Table 2). The first factor comprised items such as "voluntary refrain from pro-competitor behavior," "following instructions," and

“minimum length of employment,” Therefore, this factor was termed “faithful manner.” The second factor comprised items concerning deviation from formally assigned roles. To put it concretely, it included items such as “behavior that is not recognized by the reward system,” “willingness to go beyond the job description,” and performance of a “nonrequested task on the job.” Therefore, this factor was termed “nonreward work.” The third factor comprised items such as “association with clients outside work,” “acceptance of change in occupations,” and “association with supervisor outside work.”

**Table 2:
Result of Factor Analysis for Employees’ Obligations**

Items	Faithful manner	Nonreward work	Maintenance of relationship
Faithful to management by objective sheet	0.79	-0.06	0.02
Voluntary refrain from pro-competitor behavior	0.74	0.08	-0.21
Voluntary acquisition of skill	0.66	0.10	0.01
Following instructions	0.64	0.03	0.03
Minimum length of employment	0.47	0.04	0.12
Behavior that is not recognized by the reward system	0.01	0.92	-0.05
Willingness to go beyond the job description	0.11	0.69	-0.02
Nonrequired task on the job	0.07	0.59	0.13
Association with clients outside work	-0.13	0.08	0.62
Acceptance of change in occupations	-0.12	0.01	0.56
Acceptance of transfers	0.22	-0.15	0.55
Association with superiors outside work	0.15	0.16	0.45
Eigenvalue	3.91	3.68	2.56

Correlation

Factors	F1	F2	F3
F1	1		
F2	0.71	1	
F3	0.51	0.54	1

All of these items were related to the maintenance of relationships inside and outside the organization. Hence, this factor was termed “maintenance of relationship.” Results of the factor analysis were contrary to the findings of previous studies (Rousseau, 1990; Millward and Hopkins, 1998.) Employees’ obligations in Japanese companies did not emerge as a simple dichotomy (transactional/relational), but rather as a combination of such contracts.

Tenure (TENURE). With regard to organizational tenure, each participant stated how many years he/she had been working for this company.

Ranks. Organizational records were used to code the respondents’ ranks into binary codes. In Japanese rank order, there are two decisive points of promotion. The first point involves an employee becoming a sector manager, and the second point involves an employee becoming a department manager. Considering this, we use two dummy variable concerning ranks. For the sector manager dummy (*SECTOR_MANAGER_D*), the employee over the sector manager represents one, and the employee under the sector manager represents zero. For the department manager dummy (*DEPART_MANAGER_D*), the employee over the department manager represents one, and the employee below the department manager represents zero.

Job-change experience. For job-change experience (*JOBCHANGE_D*), respondents were asked to indicate whether they have changed their employer. The employees with job-change experience represent one, and those without job-change experience represent zero.

Other control variables. Several variables were controlled to rule out alternative explanations. For all analysis, employees’ occupations were controlled because it may strongly influence an employee’s perceptions of the obligations. Organizational records on the job were used to code the respondents’ occupations into binary codes. For eight variables, we controlled two occupations, medical representative (MR) section (*MR_D*)

and research and development (R&D) section (*RANDD_D*). In the pharmaceutical industry, the mobility of MR and R&D staffs is relatively high because of their portable skills. Thus, instead of linear progression of upward moves or predictable regular career patterns, these employees prefer a more flexible, mobile career course, and they actually move from one employer to another. It is possible that sales staffs and R&D staffs have quite different ways of thinking about employment.

We include the variable of the initial five years of employment (*INITYEARS_D*) in the equation dummy, because Robinson et al. (1994) and Thomas and Anderson (1998) indicated that employees' perceptions of psychological contracts immediately after joining a company is dynamic and evolving. In the Japanese context, Kanai, Suzuki, and Matsuoka (1998) examined the change in employees' affective commitment in the initial few years in a large retailing company. They found that affective commitment incrementally decreases over the initial few years. Schein (1978) also suggested that psychological contracts could be ratified within the initial few years. This variable was controlled to obtain a purer assessment of long-term effects that tenure can have on perceived obligations.

Furthermore, fulfillment of each psychological contract was controlled because it may exert a strong influence on employees' perceptions. Participants were asked to indicate the extent to which their employer fulfilled a set of items. Participants were provided with a five-point Likert-type scale, ranging from "very poorly fulfilled" to "very well fulfilled" for each item. A high score indicated high perceived contract fulfillment, and a low score indicated little fulfillment.

Model

In summary, our inclusion of the career concerns variables leads to the following two equations to test our hypotheses.

$$\begin{aligned} \text{OBLIGATION}_n = & a_0 + a_1 \text{TENURE} + a_2 \text{JOBCHANGE}_D + a_3 \text{INITYEARS}_D \\ & + a_4 \text{SECTOR_MANAGER}_D + a_5 \text{DEPART_MANAGER}_D + a_6 \text{MR}_D \\ & + a_7 \text{RANDD}_D + a_8 \text{CONTRACT_FULFILLMENT}_n \end{aligned} \quad (1)$$

(n=1)OBLIGATION_1=*O_1_CONT*,CONTRACT_FULFILLMENT_1=*O_1_CONTF*,
(n=2)OBLIGATION_2=*O_2_CONT*,CONTRACT_FULFILLMENT_2=*O_2_CONTF*,
(n=3)OBLIGATION_3=*E_1_CONT*,CONTRACT_FULFILLMENT_3=*E_1_CONTF*,
(n=4) OBLIGATION_4=*E_2_CONT*, CONTRCT_FULFILLMENT_4=*E_2_CONTF*,
(n=5)OBLIGATION_5=*E_3_CONT*, CONTRACT_FULFILLMENT_5=*E_3_CONTF*

Equations (1) estimate whether psychological contract is a function of tenure, job change experience, and organizational rank. These equations examine whether there exists a direct association between psychological contract and tenure in order to test our hypotheses.

IV. Results

Table 3 presents descriptive statistics for all measures in the equation for the testing of the hypotheses. To construct variables from survey items, we standardize each survey item to the zero mean and unit variance, and sum these items, following a previous study that recommends the use of such standardized factor scores over actual factor scores (Grice and Harris, 1998).

Hypotheses 1 and 2 predict that employees' perceptions of their employer's and their own obligations will incrementally decrease overtime. Table 4 presents the correlations among variables. The simple correlations' results show that there is a positive relationship between expectations of any psychological contract and tenure. Neither of the presented hypotheses supported these results.. However, these results do not consider the effects of an organizational level or rank, and occupation. Thus, we use the ordinary least squares to test the hypotheses.

**Table 3:
Descriptive Statistics for Variables**

Variable	Mean	Median	Standard Deviation	Minimum	Maximum
<i>O_1_CONT</i>	0.00	0.11	0.79	-2.61	1.26
<i>O_2_CONT</i>	0.00	0.10	0.84	-2.63	1.21
<i>E_1_CONT</i>	0.00	0.11	0.76	-3.39	1.28
<i>E_2_CONT</i>	0.00	-0.06	0.86	-3.00	1.40
<i>E_3_CONT</i>	0.00	-0.12	0.70	-2.24	1.93
<i>TENURE</i>	12.46	9	9.14	0	41
<i>JOBCHANGE_D</i>	0.25	0	0.43	0	1
<i>INITYEARS_D</i>	0.31	0	0.46	0	1
<i>SECTOR_MANAGER_D</i>	0.27	0	0.44	0	1
<i>DEPART_MANAGER_D</i>	0.07	0	0.26	0	1
<i>MR_D</i>	0.50	1	0.50	0	1
<i>RANDD_D</i>	0.19	0	0.40	0	1
<i>O_1_CONTEFF</i>	0.00	-0.06	0.74	-2.27	2.02
<i>O_2_CONTEFF</i>	0.00	-0.04	0.80	-2.25	1.81
<i>E_1_CONTEFF</i>	0.00	0.04	0.71	-3.34	1.46
<i>E_2_CONTEFF</i>	0.00	-0.30	0.86	-3.31	1.51
<i>E_3_CONTEFF</i>	0.00	-0.03	0.69	-2.28	1.87

O_1_CONT is the extent of the relational contract's perceived organizational obligation. *O_2_CONT* is the extent of the transactional contract's perceived organizational obligation. *E_1_CONT* is the extent of the faithful manner's perceived employees' obligation. *E_2_CONT* is the extent of the nonreward work's perceived employees' obligation. *E_3_CONT* is the extent of the maintenance of relationship's employees' obligation. *Tenure* is the number of years an employee works for this company. *JOBCHANGE_D* is the dummy variable that takes the value of one if the employee experienced a job change and zero for others. *INITYEARS_D* is the dummy variable that takes the value of one if the period of this employee's relationship to the company is not more than five years and zero for others. *SECTOR_MANAGER_D* is the dummy variable that takes the value of one if the employee's rank order point is more than that of the sector manager and zero for others. *DEPART_MANAGER_D* is the dummy variable that takes the value of one if the employee's rank order point is more than that of the department manager and zero for others. *MR_D* is the dummy variable that takes the value of one if the employee is a medical representative and zero for others. *RANDD_D* is the dummy variable that takes the value of one if the employee belongs to the R&D section. *O_1_CONTEFF*, *O_2_CONTEFF*, *E_1_CONTEFF*, *E_2_CONTEFF*, and *E_3_CONTEFF* indicate the perceived degree of organizational fulfillment in a relational contract, the organizational fulfillment in a transactional contract, the self-fulfillment in a faithful manner, the self-fulfillment in nonreward work, and the self-fulfillment in relationship maintenance.

**Table 4:
Pearson Correlations among Variables**

Variable		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>O_1_CONT</i>	(1)									
<i>O_2_CONT</i>	(2)	0.84 ***								
<i>E_1_CONT</i>	(3)	0.65 ***	0.61 ***							
<i>E_2_CONT</i>	(4)	0.49 ***	0.45 ***	0.65 ***						
<i>E_3_CONT</i>	(5)	0.39 ***	0.36 ***	0.42 ***	0.46 ***					
<i>TENURE</i>	(6)	0.04 ***	0.04 ***	0.08 ***	0.08 ***	0.07 ***				
<i>JOBCHANGE_D</i>	(7)	-0.03 *	-0.03 *	-0.02	0.01	-0.02	-0.03			
<i>INITYEARS_D</i>	(8)	-0.08 ***	-0.09 ***	-0.13 ***	-0.14 ***	-0.12 ***	-0.68 ***	0.06 ***		
<i>SECTOR_MANAGER_D</i>	(9)	0.09 ***	0.10 ***	0.12 ***	0.13 ***	0.11 ***	0.68 ***	-0.01	-0.40 ***	
<i>DEPART_MANAGER_D</i>	(10)	0.13 ***	0.14 ***	0.16 ***	0.15 ***	0.13 ***	0.36 ***	0.00	-0.17 ***	0.45 ***
<i>MR_D</i>	(11)	0.15 ***	0.15 ***	0.10 ***	0.15 ***	0.31 ***	0.23 ***	-0.03 *	-0.33 ***	0.10 ***
<i>RANDD_D</i>	(12)	-0.03 *	-0.01	0.04 **	-0.02	-0.17 ***	-0.01	-0.03 *	-0.05 ***	0.01
<i>O_1_CONTRFF</i>	(13)	0.54 ***	0.50 ***	0.44 ***	0.37 ***	0.40 ***	0.04 **	0.01	-0.03	0.08 ***
<i>O_2_CONTRFF</i>	(14)	0.50 ***	0.59 ***	0.45 ***	0.36 ***	0.36 ***	0.08 ***	-0.01	-0.07 ***	0.13 ***
<i>E_1_CONTRFF</i>	(15)	0.52 ***	0.51 ***	0.77 ***	0.53 ***	0.35 ***	0.11 ***	-0.01	-0.13 ***	0.14 ***
<i>E_2_CONTRFF</i>	(16)	0.39 ***	0.35 ***	0.53 ***	0.62 ***	0.31 ***	0.10 ***	0.00	-0.13 ***	0.13 ***
<i>E_3_CONTRFF</i>	(17)	0.33 ***	0.31 ***	0.37 ***	0.38 ***	0.77 ***	0.11 ***	-0.02	-0.14 ***	0.14 ***

Variable		(10)	(11)	(12)	(13)	(14)	(15)	(16)
<i>MR_D</i>	(11)	0.04 ***						
<i>RANDD_D</i>	(12)	-0.01	-0.50 ***					
<i>O_1_CONTRFF</i>	(13)	0.09 ***	0.11 ***	-0.04 **				
<i>O_2_CONTRFF</i>	(14)	0.14 ***	0.11 ***	-0.01	0.81 ***			
<i>E_1_CONTRFF</i>	(15)	0.15 ***	0.07 ***	0.05 ***	0.46 ***	0.43 ***		
<i>E_2_CONTRFF</i>	(16)	0.13 ***	0.10 ***	0.01	0.27 ***	0.23 ***	0.63 ***	
<i>E_3_CONTRFF</i>	(17)	0.13 ***	0.31 ***	-0.19 ***	0.33 ***	0.29 ***	0.41 ***	0.41 ***

*, **, *** Denotes two-tailed significance t, the 10 percent, 5 percent, and 1 percent levels, respectively.

O_1_CONT is the extent of the relational contract perceived organizational obligation. *O_2_CONT* is the

extent of the transactional contract perceived organizational obligation. *E_1_CONT* is the extent of the faithful manner perceived employees' obligation. *E_2_CONT* is the extent of the nonrewarded working perceived employees' obligation. *E_3_CONT* is extent of the relationship maintenance perceived employees' obligation. *Tenure* is the number of years an employee has worked for this company. *JOBCHANGE_D* is the dummy variable that takes the value of one if the employee experienced a job change and zero for others. *INITYEARS_D* is the dummy variable that takes the value of one if the employee's relationship to this company is not more than five years and zero for others. *SECTOR_MANAGER_D* is the dummy variable that takes the value of one if the employee's rank order point is more than that of the sector manager and zero for others. *DEPPART_MANAGER_D* is the dummy variable that takes the value of one if the employee's rank order point is more than that of the department manager and zero for others. *MR_D* is the dummy variable that takes the value of one if the employee is a medical representative and zero for others. *RANDD_D* is the dummy variable that takes the value of one if the employee belongs to the R&D section. *O_1_CONTRFF*, *O_2_CONTRFF*, *E_1_CONTRFF*, *E_2_CONTRFF*, and *E_3_CONTRFF* indicate the perceived degree of organizational fulfillment in a relational contract, the organizational fulfillment in a transactional contract, the self-fulfillment in a faithful manner, the self-fulfillment in a nonrewarded work, and the self-fulfillment in relationship maintenance.

Table 5 shows the result of the ordinary least squares estimation of Equation (1) to test the hypotheses. All dependent variables' estimators indicated that there was a negative association between *TENURE* and any psychological contract, which supports hypotheses 1 and 2.

Hypotheses 3a and 3b predict that employees' perceptions of their employer's and their own obligations will discontinuously increase with promotion. As Table 5 reveals, we find that *SECTOR_MANAGER_D* and *DEPART_MANAGER_D* are positively related to any psychological contract (except *E_3_CONT*). Thus, hypotheses 3a and 3b are almost supported.

Then hypotheses 4a and 4b predict that employees' perceptions of their employer's and their own obligations will discontinuously increase when the employees change their employer are tested. As Table 5 reveals, we find that all dependent variables' estimators indicated there is no significant effect of *JOB-CHANGE_D* on psychological contracts. Thus, hypotheses 4a and 4b are not supported.

When *O_1_CONT*, *O_2_CONT*, *E_1_CONT* are dependent variables, we find that *MR_D*, *R&D_D*, and *CONTRACT_FULFILLMENT* are positively related to any psychological contracts. When *E_2_CONT* and *E_3_CONT* are dependent variables, we find that *MR_D*, and *CONTRACT_FULFILLMENT* are positively related to any psychological contract.

Table 5:
OLS Estimation Results of Equation (1)

Independent Variables	Dependent Variables				
	<i>O_1_CONT</i>	<i>O_2_CONT</i>	<i>E_1_CONT</i>	<i>E_2_CONT</i>	<i>E_3_CONT</i>
	<i>Coefficient</i> (<i>t-statistics</i>)				
<i>TENURE</i>	-0.010*** (-5.02)	-0.012*** (-5.70)	-0.007*** (-5.09)	-0.010*** (-4.73)	-0.006*** (-4.49)
<i>JOBCHANGE_D</i>	-0.046* (-1.83)	-0.038 (-1.53)	-0.019 (-1.05)	0.035 (1.37)	-0.002 (-0.13)
<i>INITYEARS_D</i>	-0.131*** (-3.86)	-0.129*** (-3.77)	-0.078*** (-3.21)	-0.108*** (-3.14)	-0.032 (-1.43)
<i>SECTOR_MANA GER_D</i>	0.091*** (2.60)	0.068* (1.91)	0.058** (2.28)	0.113*** (3.17)	0.046* (1.94)
<i>DEPARTMENT- MANAGER_D</i>	0.255*** (5.37)	0.257*** (5.34)	0.148*** (4.31)	0.239*** (4.96)	0.121*** (3.79)
<i>MR_D</i>	0.160*** (5.85)	0.175*** (6.34)	0.095*** (4.84)	0.172*** (6.23)	0.124*** (6.63)
<i>RANDD_D</i>	0.067** (2.08)	0.086*** (2.63)	0.054** (2.30)	0.033 (1.01)	0.029 (1.31)
<i>O_1_CONTRFF</i>	0.556*** (37.85)				
<i>O_2_CONTRFF</i>		0.595*** (43.14)			
<i>E_1_CONTRFF</i>			0.808*** (72.50)		
<i>E_2_CONTRFF</i>				0.596*** (46.40)	
<i>E_3_CONTRFF</i>					0.752*** (67.73)
Intercept	0.044 (1.13)	0.055 (1.41)	0.038 (1.38)	0.007 (0.18)	-0.002 (-0.06)
R2	0.308	0.368	0.604	0.402	0.602
Adjusted R2	0.307	0.367	0.603	0.401	0.601

*, **, *** Denotes two-tailed significance at 10 percent, 5 percent, and 1 percent levels, respectively.

O_1_CONT is the extent of relational contract perceived organizational obligation. *O_2_CONT* is the extent of transactional contract perceived organizational obligation. *E_1_CONT* is the extent of faithful manner perceived employees' obligation. *E_2_CONT* is the extent of nonrewarded working perceived employees' obligation. *E_3_CONT* is the extent of relationship maintenance perceived employees' obligation. *Tenure* is the number of years an employee has worked for this company. *JOBCHANGE_D* is the dummy variable that takes the value of one if the employee experienced a job change and zero for others. *INITYEARS_D* is the dummy variable that takes the value of one if the employee has worked for this company for a period of not more than five years and zero for others. *SECTOR_MANAGER_D* is the dummy variable that takes the value of one if the employee's rank order point is more than that of the sector manager and zero for others. *DEPART_MANAGER_D* is the dummy variable that takes the value of one if the employee's rank order point is more than that of the department manager' and zero for others. *MR_D* is the dummy variable that takes the value of one if the employee is a medical representative and zero for others. *RANDD_D* is the dummy variable that takes the value of one if the employee belongs to the R&D section. *O_1_CONTRFF*, *O_2CONTRFF*, *E_1_CONTRFF*, *E_2_CONTRFF*, and *E_3_CONTRFF* indicate the perceived degree of organizational fulfillment in a relational contract, the organizational fulfillment in a transactional contract, the self-fulfillment in a faithful manner, the self-fulfillment in a nonrewarded work, and the self-fulfillment in relationship maintenance.

V. Discussion

We investigate the effect of tenure on psychological contracts that employees perceive. According to George and Jones (2000), we hypothesize two types of change: incremental and discontinuous. The findings described in this paper suggest that employees' perceived obligations can change both incrementally and discontinuously. Over time, perceived obligations incrementally decrease. The reason for this may be because as time passes, employees gradually do not intentionally seek information and become less concerned about their relationship with their employers. A decrease in psychological contracts, however, could disrupt this process. Events such as promotion will bring reconfirmation of psychological contracts and increase the perceived obligation discontinuously.

Incremental change in Psychological Contracts

The primary contribution this study makes is that it theoretically and empirically examines the incremental decrease in psychological contracts. Many theoretical studies on psychological contracts mention that psychological contract can change over time (Rousseau, 1995; Schein, 1978; Shore and Tetrick, 1994); however, only a few empirical studies look at change over time. Moreover, virtually no attention has been devoted to understanding this long-term change.

This study identifies the first role of time as an incremental role. Studies within organizational theory and economics have discussed the commitment or attachment between exchange partners (Allen and Meyer, 1993; Blau, 1964; Hirschman, 1970; Macaulay, 1963; Williamson, 1975). Although their discipline and theoretical standpoints differ, they suggest that one or both of the parties make a substantial investment to facilitate and improve the effectiveness of the exchange relationship. A critical element of these discussions is that the relationship between the parties will become close over time. Our results, however, indicate that dyad relationships will weaken over time. Employees' perceptions of their employer's and their own obligations incrementally decrease over time. A simple explanation of this result is that

once a stable psychological contract is formed, employees gradually do not intentionally seek information and they become unconcerned about their relationship with their employers. Psychological contracts deteriorate over time because of the very nature of psychological contracts as schema and employees as discontinuous information processors.

Perceived obligations dramatically fall within the initial five years. This phenomenon may reflect recruits' tuning of their schema. As Louis (1980) suggested, recruits' expectations of their jobs and organizations are often inflated prior to their entering organizations. Recruits' excessive expectations are accommodated through active information processing⁴.

Discontinuous change in Psychological Contracts

This study also identifies psychological contracts change as a discontinuous change. As Hill (1992) suggested, the transition from individual contributors to managers forces employees to rethink their identity in an organization. They again ask themselves, "Who am I?" and "What can I do for my employer and subordinates?," which may result in reconfirmation of initial contracts. This result is also consistent with Hall's discussion about career "routine-busting" (Hall, 1988). Hall (1988) has presented a model of how a career routine in mid-career can be busted by various triggers. In this paper, Hall mentioned several factors, such as "job and career movement" and "job redesign," which can break the routine of careers. As such, a psychological contract can also deteriorate, and can be recovered through employees' intervention.

The fact that contract fulfillment is positively related to any obligations may also be interpreted easily. The fulfillment of perceived contracts might evoke a reassessment of the relationship with the employer, although it is not related to active information gathering. The perception of the fulfillment of contracts by an employer supports the belief that the existing contract matches the actual situation. In other words, for

⁴ This result is consistent with Schein (1978), which suggests that psychological contracts could be ratified within the initial few years.

employees, the fulfillment of contracts means a reconfirmation of existing contracts. Thus, it is likely to be a chance in order to consider the initial contracts again.

How can we interpret the result that there is no significant effect of job-change experience on psychological contracts? The result may be partially due to our procedures. With regard to job-change experience, we asked respondents to indicate whether they had changed their employer. The degree of obligations, however, may not be related to the experience of job-change but rather to the passage of time after the job-change experience. Our sample contains a wide range of passage of time after a job-change experience, which may offset the effect.

Managerial Implications

Since the essence of psychological contract change is the fact that it decreases over time, a critical issue for employers is what triggers an increase in perceived obligations. As indicated above, promotion increases perceived obligations. Another potential factor that increases the initial psychological contract is occupational or job change. For an individual employee, changing his/her occupation means entering a second career (Schein, 1978). In our viewpoint, the frequent use of occupational rotation in Japanese companies may imply a frequent reconfirmation of an employee's obligations.

Limitations

This paper of course has several limitations. Since the findings reported here are not based on panel-type data but rather cross sectional data, one cannot really be sure of what happens to employees as their tenure extends over a long period. Longitudinal studies are needed to verify this situation. In addition, because this study is conducted within a single organization, it has certain limitations related to site specificity. Because the firm is relatively mature, well established, and has high performance, the employees can take a relatively stable career path with good prospects. Moreover, as is often the case with Japanese companies, their employees' basic wages are partially based on their seniority. Consequently, they do not need to seek information at the start of their careers. Future research should examine whether the findings here can be replicated in other

organizations. Because different organizations probably establish different obligations and different types of change, it should also be noted that the obligations and their change elicited in this study are specific to that research firm. Finally, in this study, processes which tenure and promotion effect perceived obligation are not part of empirical design. Such approach can not rule out alternative explanations for the relationship between independent variables and dependent variables. In future, we should clarify several mediators in the relationship.

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