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Special Edition The Japanese Workplace Today

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NEXT ISSUE (Autumn 2013)

The autumn 2013 issue of the Review will be a special edition devoted to **Japanese Labor Statistics by Subject**.

Introduction

The Japanese Workplace Today

In this issue of *Japan Labor Review*, the focus is on "the Japanese workplace today." For working people, it may be difficult to step back and take an analytical view of the place where they work every day; it is simply too close to them. But places where people work are also places where various work-related problems occur, including long working hours and harassment. The quality of the workplace must also be a matter of concern for management, as it affects productivity, among other things. For a wide range of people, then, it would be more than useful to keep abreast of quality research on the workplace.

To compound the issue, workplace-related problems are changing all the time, in tandem with economic, social and legal environments. Indeed, the circumstances of workplaces themselves have been going through some significant changes in recent years. For example, as highlighted by the papers in this Special Edition, these include trends in corporate strategies and the increasing emphasis on performance in personnel systems; expectations of a work-life balance; the creation of new criteria for certifying mental disorders; the emergence of a knowledge-based society and the advance of IT; and changes in teleworking practices after the 2011 earthquake and tsunami disaster. Amid these changes, workplaces face a number of challenges today. It is therefore important that we take another look at the workplace, based on new perspectives and empirical data, as well as the cumulative body of research. To achieve that goal, the aim of this Special Edition will be to consider the situation of Japanese workplaces in the modern day.

In *Organizational Citizenship Behavior in Contemporary Workplaces in Japan*, Ken'ichiro Tanaka highlights the concept of "organizational citizenship behavior" in connection with autonomous work behavior by employees in the workplace. After outlining the concept based on previous research, Tanaka discusses the positive effect of organizational citizenship behavior on an organization. Citing the introduction of performance-based pay systems in recent years as a change in the circumstances surrounding Japanese workplaces, Tanaka suggests that such systems could inhibit organizational citizenship behavior, as they tend to make employees focus too greatly on their own performance. This brings into question the very survival of organizational citizenship behavior, seen as traditionally established in Japanese workplaces. In light of this, Tanaka considers ways of promoting organizational citizenship behavior in the workplace, and asserts the importance of three key elements: firstly, optimizing work volumes and clarifying jobs and roles to avoid a sense of excessive workload and conflicts over job roles; secondly, ensuring fairness in systems of evaluation; and thirdly, fostering empowerment by delegating authority to employees. Of these, Tanaka concludes, it is particularly important to foster empowerment by establishing workplace environments that include supportive leadership by superiors.

In *The Impact of Prolonged Application of Short-Time Work Systems on the Careers*

of Regular Employees, Mitsuyo Matsubara turns the spotlight on types of work assigned to users of short working hour systems for regular employees, and considers how prolonged employment under such systems affects regular employees' careers. Using case analysis, Matsubara reveals that the work assigned to short working hour regular employees involves less urgency, rapidity and presence of new challenges than that of full-time regular employees, and that prolonged use of such systems could potentially delay career development. Meanwhile, cases of system users in management posts are also examined. These show that short working hour systems can be used for regular employees in management posts, through creative adjustments such as delegating authority and the use of telecommuting. Experience of management work from an early stage is an important means to this end. Various measures will be needed to balance the use of short working hour systems for regular employees with a company's need to secure human resources. These could include diversifying programs for training core personnel, correcting long working hours, or revising short working hour systems for regular employees. Matsubara shows that workplace managers play an important role in allocating work with a view to human resource development, as well as revising ways of performing work, motivating system users by discussing their career options, and so on.

Harassment has been identified as a serious problem arising from human relations in the workplace. In *Workplace Harassment, Mental Health, and the Law*, Ikuko Mizushima discusses the present status and challenges of mental health caused by human relations in the workplace from the standpoint of labor law studies, with reference to criteria for certifying mental disorders and previous litigation trends. Because human relations in the workplace are continuous, stress tends to persist and accumulate. Moreover, employees in a weaker position, based on the inevitable hierarchies of command and subordination or senior and junior, are more likely to accumulate stress. In legal terms, new criteria for occupational disease certification of work-related mental disorders were drawn up in December 2011. Now, workers may claim compensation for damages from employers and perpetrators if they suffer mental disorders due to harassment, etc., as well as being able to seek compensation for occupational disease. In reaction to this, Mizushima discusses the background to the creation of the new certification criteria, how they differ from the old Judgment Guidelines, and how harassment is treated under the new certification criteria. Among other issues also examined are trends in court cases related to occupational disease certification, and the range of compensation when the fact of harassment and the workers' psychological symptoms or mental disorders have been acknowledged.

Changes in the workplace, meanwhile, have an impact on people's working conditions. In *Teleworking and Changing Workplaces*, Akio Sato focuses on teleworking and categorizes its main types as telecommuting, mobile-work and *zaitaku* (stay-home) work, then studies trends in recent years, working conditions and other aspects of each working type. Based on his own research, Sato shows that the main purpose of companies and others introducing telecommuting has changed, since the Great East Japan Earthquake disaster,

from one of improving the work-life balance to one of continuing business and conserving energy; that mobile-work employees, introduced by companies mainly to reduce costs and extend time spent on customers, are working long hours at home under the de facto working hour system; and that, partly due to the emergence of "*zaitaku*-work agents" (work-at-home agents) who adopt a bidding system, remunerations for *zaitaku* work, including translation and other specialized occupations, are in a downward trend. Sato also outlines the legal protection currently available for various types of teleworking employee, and asserts the importance of research in gaining an accurate grasp of changes in teleworking without being influenced by expectation or judgmental pressure.

In *Diversification of "the Workplace" and Problems with Labor Law*, Hirokuni Ikezoe defines a workplace, based on the main existing legislation, as "a certain spatial location where the duty to perform labor based on a labor contract is discharged." Ikezoe then identifies work outside the workplace and working at home as prime examples of diversifying "workplaces," and considered issues of legal policy related to regulations on working hours and accident compensation. Work outside the workplace is attracting attention in connection with work (occupations); interest in working at home is more related to the work-life balance and managing risks such as major disasters. Based on these considerations, Ikezoe proposes that, even when applying the system of "conclusive presumption of hours worked" (the de facto working hour system), upper limit standards on work beyond statutory hours ought to be applied and health maintenance measures ought to be established by employers. On the other hand, the duty of employers to manage and keep track of hours worked should be distinct from whether or not de facto working hour systems can be applied; the aim should rather be to prevent long working hours and maintain health. There is no precedent for accident compensation in such cases, however. This is because working at home, in particular, is a working format not previously envisaged by the Industrial Accident Compensation Insurance Act. Ikezoe concludes that accidents unique to working at home should be anticipated and studied in practical detail.

As these descriptions reveal, the very breadth of themes covered in these papers suggests not only the extent of research being conducted on the workplace but also the diversity of issues surrounding the workplace. And there must be many more such issues. Indeed, several of the Special Edition papers have stressed the importance of making further progress in theoretical research on the themes dealt with here, as well as empirical research based on surveys, and legal and policy studies based on these. This Special Edition will hopefully provide an impetus for considering contemporary issues facing the workplace today.

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Organizational Citizenship Behavior in Contemporary Workplaces in Japan

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This paper first provides an overview of trends in recent research on organizational citizenship behavior (OCB), OCB classifications and similar concepts, and the influence that OCB has on workplaces, and then recognizes the positive effect that OCB has on employees and organizations as a whole. The number of academic articles concerning OCB is steadily increasing. This paper notes that contextual performance, service-oriented behaviors, and innovation-promotive behaviors are concepts similar to OCB. It confirms that the positive influences of OCB extend not only to the behaviors of individual employees but also to the overall performance of the organization. It then mentions the environment surrounding contemporary workplaces in Japan, and points out that the manifestation of OCB has been negatively influenced by the performance-based pay systems that many Japanese corporations have adopted since the 1990s. It further notes the possibility that OCB will not take place under performance-based pay systems because employees tend to focus on their own performance. Finally, it discusses HRM strategies for the future under which OCB will be promoted in Japanese workplaces. The author presents "security of justice" in the organization and heightening employees' empowerment as key measures.

I. Organizational Citizenship Behavior and Its Influence on Workplaces

One day, the author conducted a search of the keywords "inconsiderate employees" on Yahoo! JAPAN. This search produced approximately 4,420,000 hits. Among them were posts like this:

> I am a female permanent employee in my 40s.
>
> Partly due to the poor economic times, temporary agency workers are now handling reception and general affairs jobs instead of permanent employees at my workplace. These women arrive in the office just before work starts and leave as soon as it's finishing time.
>
> In this age, I don't think we should expect temporary agency workers to serve tea or clean floors. But these women don't care a bit if their desks or work areas are covered with dust. And they eat up all of the snacks that receptionists receive from customers, without sharing any with us. It drives me up the wall.
>
> When I try to say something to them, they respond with something irrelevant like "Tell the temporary agency" or "What is this, power harassment?"
>
> If they've got time to shoot the breeze in the staff kitchen or restroom, then I want

them to also spend time working hard.[1]

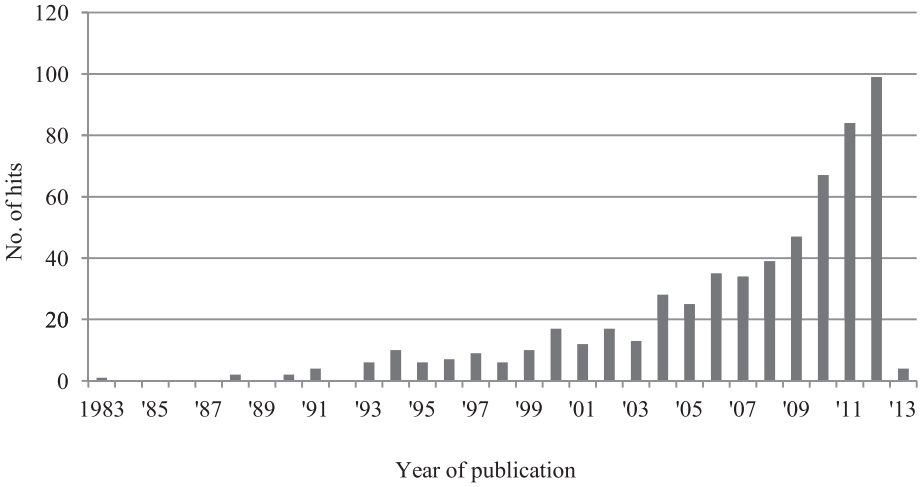
The author has not presented the above post simply as a humorous example of situations found in Japanese organizations. Instead, it is a paradoxical example of a topic that the author wishes to discuss here.

Generally speaking, in any organization or workplace, there are always some jobs that have not been assigned to any particular person. In the workplace, "unexpected events" happen all the time, and jobs that were unforeseen and roles that do not belong to any individual are constantly being generated. Indeed, it would be impossible to cover all activities necessary to execute the actual work of a workplace in a formal organizational chart or regulations on division of jobs (i.e., by allocating jobs to all employees in the manner of "this person will do this job, and that job will be handled by someone else"). Traditionally, it has been standard practice in Japanese workplaces for individual employees to take the initiative in handling unallocated jobs whenever they arise, even when such jobs are outside their own scope of responsibility. This was partly due to the understanding that "unallocated work" will increase before anyone realizes it and come to interfere with smooth operations, eventually causing everything to shut down like a machine running without lubricant. In the past, Japanese employees actively (and quite naturally) filled "gaps" in jobs to prevent such a situation from occurring. However, in the workplaces of contemporary Japan, employees no longer take on jobs that are outside their own responsibilities. This is because, even if they were to take on such a job, the fact that they did so will not be counted as part of their own work performance. So what happened to the employee-initiated extra-role behaviors that were once so commonplace in Japanese workplaces?

1. What Is Organizational Citizenship Behavior?

Katz and Kahn (1966) were the first to make note of autonomous work behavior by employees in an organization or workplace. However, it was Organ (1988) who arranged such behavior into a concrete form and viewed it as "organizational citizenship behavior (OCB)." Subsequently, Organ and his colleagues defined OCB as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (Organ, Podsakoff, and MacKenzie 2006). One requirement of OCB is that it not be covered by employees' work descriptions and regulations (Podsakoff, MacKenzie, and Hui 1993). Signifying so-called "extra-role behavior," this is behavior that has great significance for workplaces and organizations. It is precisely because of this significance that OCB has been the subject of considerable academic research in North America and other regions that has produced numerous academic results. The following takes a brief look at research trends here.

[1] Posted by "Mikarin" on Yomiuri Online's "Hatsugen Komachi" site, November 11, 2009, http://komachi.yomiuri.co.jp/t/2009/1111/275175.htm?o=0 [accessed January 21, 2013].



Note: Result of a search by ProQuest, January 21, 2013.

Figure 1. Number of Papers with "Organizational Citizenship Behavior" in the Title

(1) Trends in Academic Research on OCB

Using the academic data database ProQuest, the author conducted a search of academic papers containing the phrase "organizational citizenship behavior" in the title.[2] This search produced 588 hits when only papers falling under the category of "Scholarly Journals" were extracted (Figure 1).[3] Looking at the search results, it is apparent that the number of papers is showing a distinctive upward trend (particularly from around 2000). This suggests that OCB continues to be viewed with importance as a research topic in the realms of organizational psychology and organizational behavior.

A number of elements comprising OCB (i.e., behavioral patterns) have been proposed in much of the research concerning OCB conducted thus far. According to Organ, Podsakoff, and MacKenzie (2006), the classifications of OCB appearing in many OCB-related papers vary greatly; in fact, they find 40 types having different names in use.[4] Organ, Podsakoff, and MacKenzie (2006) summarized these classifications to define OCB's structural elements in terms of seven dimensions: namely, they are: "helping" (i.e., acting to help a specific individual, such as a colleague, boss, or client), "compliance" (contribution the work team, department, or organization), "sportsmanship" (choosing not to protest unfairness or show dissatisfaction to the organization or manager), "civic virtue" (readiness to participate responsibly and constructively in the political and governing processes of the

[2] Date of search: January 21, 2013.

[3] In addition, the author conducted a search of titles containing "organizational citizenship behavior" using another academic database called EBSCO host. This search produced 688 hits when limited to "academic journals" and "peer-reviewed papers." (Date of search: January 21, 2013).

[4] For more details, see the Appendix of Organ, Podsakoff, and MacKenzie (2006).

organization), "organizational loyalty" (showing pride in one's organization to people who are not members of that organization), "self-development" (taking autonomous steps to expand skills and knowledge pertaining to one's own work), and "individual initiative" (almost all behaviors that go beyond what is necessary to resolve or avoid problems). An OCB scale for Japanese workplaces was devised by Tanaka (2002, 2004). This scale is comprised of five subscales; namely "interpersonal help," "conscientiousness," "concentration on the job," "supporting the organization," and "cleanliness."

(2) Concepts Similar to OCB

As was mentioned above, while there are various classifications within OCB, there are also many concepts that are similar to OCB. Here, the author will examine a concept that, while covering roughly the same concrete behaviors as OCB, approaches these behaviors from a different standpoint, and concepts that maintain the basic foundation of OCB but with a more focused behavioral target.

(i) Contextual Performance

Of the structural concepts that resemble OCB, the most important is "contextual performance." Put forth by Borman and Motowidlo (1997), contextual performance serves as a counterpart to "task performance." In the case of task performance, the core focus is on jobs in the workplace. On the other hand, while contextual performance is similar to task performance in that it refers to job-related activity, its focus is on activity that supports a broader organizational, social, and psychological environment so that core jobs can function, rather than on activities that contribute to core jobs. Five categories are presented with regard to specific activities in contextual performance (Borman and Motowidlo 1997). These are: (a) persisting with extra enthusiasm or effort as necessary to complete own task performance successfully; (b) volunteering to carry out task performance that are not formally part of the job; (c) helping and cooperating with others; (d) following organizational rules and procedures even when personally inconvenient; and (e) endorsing, supporting, and defending organizational objectives. The differences between OCB and contextual performance lie in the quality of their definitions. Basic differences can be summed up as follows:

- While OCB is premised on extra-role behavior as well as behavior that is undertaken voluntarily by the employee, contextual performance does not require these conditions.
- While OCB refers to voluntary behavior for which the acting employee does not demand compensation, contextual performance's definition does not rule out compensation for behavior.

What the above means is that, in terms of their definitions, the assumption is made that no reward or compensation will be provided in the case of OCB. However, in the case of contextual performance, the possibility that monetary payment (or, if not monetary, a comparable form of compensation) will be provided for relevant work behavior exists, and

thus the possibility that said behavior will have an influence on human resources measurement and evaluation also exists.

(ii) Service-Oriented Behavior

This refers to the extra-role behaviors of employees who come into direct contact with clients or customers (Bettencourt, Gwinner, and Meuter 2001). Specifically, it points to behaviors that include responding to references concerning product services from other companies or providing industry-related information to customers. It is also called "customer-oriented behavior."

(iii) Innovation-Promotive Behavior

The voluntary taking of various helping behaviors within an organization is intended not only to maintain the status of the organization by supporting the organization's members but also to improve the organization. Morrison and Phelps (1999) were the first to focus on behaviors to reform an organization with a stronger intention to change than found in OCB. They called voluntary and constructive behaviors to bring about change in an organization's functions (i.e., in the form of efforts to improve work execution) "taking charge." Takaishi and Furukawa (2009) defined voluntary behavior by employees that contribute to organizational innovation in Japan as "innovation-promotive behavior." Specifically, they hypothesized that such behavior falls into four behavioral groups: (a) problem finding and solving: action to make improvements or reforms based on awareness of problems vis-à-vis an existing job or workplace; (b) gathering of important information: action to gather information necessary to instigate or promote innovation; (c) "customer first" behavior: action that places the highest priority on customer satisfaction; and (d) suggestion and recommendation: action of suggesting and recommending changes that should be made to organizational frameworks, regulations, and policies to people nearby.

2. Organizational Citizenship Behavior's Influence on Workplaces

(1) OCB's Influence on Employee Performance Evaluation

Looking at the results of past research, it is apparent that employees who are open to OCB are, in general, actively involved in their own work and almost always have little desire to resign and low unjustified absenteeism (Podsakoff et al. 2009). They also tend to score highly in performance evaluations. Podsakoff et al. (2000) point out that, based on past research, OCB raises the productivity of colleagues and managers and increases ability to adapt to organizational changes. Moreover, according to meta-analysis of OCB research by Organ, Podsakoff, and MacKenzie (2006), while objective performance accounted for just 9.5% of the variance in employees' performance evaluations, employees' OCB uniquely accounted for 42.9% of the variance. If the results of past research are considered, it is apparent that workplace managers place emphasis on the degree to which employees engaged in OCB (regardless of whether it was intentional or not) when evaluating their work per-

formance. Moreover, the results suggest that the degree to which employees engaged in OCB has a greater influence on performance evaluations by managers than employees' objective performance.[5]

(2) OCB's Influence on Organizational Performance

Does employees' OCB have a positive effect on the workplace or organization as a whole? Based on the results of past research, the answer is clearly "yes." Meta-analysis by Podsakoff *et al*. (2009) shows a rather high coefficient of correlation between OCB and overall organizational performance (r_c=.43). Moreover, according to meta-analysis by Organ, Podsakoff, and MacKenzie (2006), OCB accounted for about 20% of the variance in quantitative corporate performance indicators, more than 19% of the variance in qualitative corporate performance indicators, about 25% of the variance in financial efficiency indicators, and about 38% of the variance in customer satisfaction (customer dissatisfaction). Given these results, there is no question that various organization-wide performance indicators show a tendency to rise when their employees engage in more OCB.

II. Circumstances Surrounding Workplaces in Japan and Organizational Citizenship Behavior

As was mentioned earlier, research on OCB has been conducted in the United States and other countries from the end of the 1980s. However, it is thought that many of the ideas found in OCB were traditionally established in Japan's workplaces. Nonetheless, a considerable amount of time passed before OCB appeared in Japanese research on organizational psychology and organizational behavior theory. It is thought that Nishida (1997) was the first to study OCB in Japan; however, this study came some 10 years after Organ (1988). It can be postulated that a reason for this delay in Japanese study of OCB is that, in Japanese workplaces up until the 1990s, the fact that employees voluntarily did what was best for their organization was taken for granted. As a result, behavior of this kind escaped being made a topic of research, let alone being given a name such as "organizational citizenship behavior." However, as is mentioned in the foreword (*Nihon no dokusha no minasan he* [To readers in Japan]) of the Japanese version of Organ, Podsakoff, and MacKenzie (2006), it is unquestionable that the management policies of Japanese companies' (known as so-called "Japanese-style management") provided hints that led to the OCB concept's birth. The following is a somewhat lengthy quotation from the foreword of Organ, Podsakoff, and MacKenzie (2007):

> In fact, I must say something somewhat ironic about this. That is, when I first became interested in OCB, much of what I was thinking was strongly influenced by what I

[5] It should be noted, however, that a report that does not find any influence on employees' salaries also exists (Podsakoff et al. 2009).

> had heard and learned about Japanese-style management. (Omission) I believed that because Japan's traditional management style recognized the importance of OCB and avoided work practices that hinder OCB, Japanese companies were able to actualize work effectiveness to a degree that made them formidable competitors for American companies in the global business environment. In other words, I thought that Japanese managers already understood OCB, and so my interest was primarily oriented toward writing about the essential nature, antecedent factors, and results of OCB for American managers (Organ, Podsakoff, and MacKenzie 2007, i).

However, in actuality, it is apparent that those who had the least understanding of the essential nature of OCB were Japanese managers and researchers of organizational behavior in Japan. With the benefit of hindsight, this is truly ironic. So then, why did the OCB that was supposedly firmly established in Japan's workplaces evaporate (as in the manner described by the website post presented at the beginning of this paper)?

1. The Arrival of Performance-Based Pay Systems in Japan's Workplaces

A look at economic indicators from the 1990s to the present day—i.e., the so-called "lost decade" (or perhaps "lost two decades")—shows that Japan's economy has experienced repeated bad and good times. However, there can be no doubt that many employees in Japan's workplaces have, quite unfortunately, never felt the "good" times. The results of a survey conducted by the Japan Institute for Labour Policy and Training (2008) show that employees of Japan's workplaces do not feel that their treatment and compensation as employees have improved.[6] One symbol of the circumstances surrounding Japanese workplaces since the 1990s that is worth particular mention is the appearance of performance-based pay systems.

(1) What Are the Characteristics of the Performance-Based Approach?

According to Kamagata (2009), characteristics of the performance-based approach as it is applied in Japan can be summarized into following four points: It (a) looks at performance (or effort or action in the course of the process of performance) in terms of results; (b) looks at the results of individual employees; (c) expresses results in terms of wage differences; and (d) makes evaluations based on short-term results. Moreover, Morishima (2006) argues that performance-based personnel policies in Japan tend to emphasize manifested abilities vis-à-vis jobs and short-term performance more than ever before.

(2) How Do Employees View Performance Based-Pay Systems?

Many Japanese companies have introduced performance-based pay systems. It is

[6] For example, respondents answered that the situation was worse than before for "clarity of evaluation criteria," "reward for effort," and "acceptability of evaluations" (The Japan Institute for Labour Policy and Training 2008).

likely that one major reason they did so was to motivate employees with a more understandable and acceptable employee evaluation and reward system. This way of thinking almost certainly remains prevalent among Japanese managers even today.[7] However, performance-based pay systems do not always work for Japanese employees in the way that their managers intend. In fact, they can have results that are quite opposite to what was intended. For example, according an analysis by Ohtake and Karato (2003), simply introducing a performance-based pay system in Japan did not have an effect on employees' incentive to work. Furthermore, according to Tsuzaki, Kurata, and Arai (2008), employees in Japanese organizations experience a growing sense of unfairness and distrust when evaluation criteria or system changes are not clearly explained to them, or when results alone are demanded but employees are not given the freedom they need to improve their results.

(3) A "Tendency toward Individualization" among Employees

The results of a survey by Tsuzaki, Kurata, and Arai (2008) show a "tendency toward individualization" as one characteristic of employee attitudes during Japan's Heisei recession from the 1990s. This tendency appears in two different forms. Specifically, one is a tendency toward individualization based on a confrontational stance vis-à-vis management that is accompanied by distrust of the company (for example, thinking "I have come to place myself ahead of the company"). And the other is a tendency toward individualization based on a desire to independently protect one's own employment through various means but which is not accompanied by distrust of the company (for example, thinking "I am going to ensure my employment by raising my skills to a point where I'll be employable anywhere"). An analysis by Tsuzaki, Kurata, and Arai (2008) suggests that the introduction of personnel rating systems to control personnel costs, greater mobility of human resources (i.e., the dismissal of people close to employees), and policies that emphasize individual performance in promotion or advancement are reinforcing the tendency toward individualization.

2. Organizational Citizenship Behavior in Japan under Performance-Based Pay Systems

Naturally, performance-based pay systems encourage employees to maximize their devotion to their official jobs. At the same time, however, it should not be surprising that employees working under a performance-based approach that emphasizes manifested ability, short-term performance, and individual performance will turn their focus to their own performance. If, as described above, Japanese employees' thinking with regard to their jobs is "tending toward individualism," then is it not natural that they will think only about doing their own jobs in their current circumstances, and not have time to consider the future of

[7] In a survey by the Japan Institute for Labour Policy and Training (2004), the most common reasons Japanese companies gave for introducing a performance-based reward system were "to motivate employees" (77.8%) and "to raise acceptance of the evaluation and reward system" (59.8%).

their company or good conditions of their colleagues or the workplace as a whole?

Furthermore, generally speaking, this kind of pay system often clearly establishes behaviors and results that receive rewards. Given this, as Deckop, Mangel, and Cirka (1999) point out, employees under a performance-based pay system can lose motivation to take on behaviors for which they will not receive clear rewards (i.e., OCB).

Considering the above, there can be no doubt that, under a performance-based payment system, the amount of effort employees devote to OCB ultimately declines. It is moreover certain that their interest in OCB naturally wanes as a result.

III. What Can Be Done to Promote Organizational Citizenship Behavior in Contemporary Workplaces in Japan?

1. What Promotes Organizational Citizenship Behavior?

Spitzmuller, Van Dyne, and Illies (2008) identify the following as factors that determine OCB: agreeableness and conscientiousness as dispositional aspects of personality, employees' job satisfaction, organizational justice, organizational commitment, and positive feeling. In other words, OCB is facilitated when employees have (a) strong agreeableness and conscientiousness as personality traits, (b) high job satisfaction, (c) view the organization's systems and procedures as fair, (d) a feeling of attachment with their organization, and (e) a positive feeling.

So conversely, are there any factors that hinder the manifestation of OCB? A meta-analysis of factors that regulate OCB by Eatough et al. (2011) indicated that OCB decreases significantly when employees feel that the jobs allocated to them are excessive or when role conflict in the execution of jobs (i.e., when an employee must handle different jobs at the same time) occurs. This suggests that the manifestation of OCB is hindered in the absence of efforts to clarify to some extend the jobs and roles allocated to employees in the workplace and avoid placing excessive workload on them. In other words, although OCB in itself is the "voluntary performance of work that is not allocated to any particular person," situations in which employees do not know what their jobs are (i.e., do not know what jobs they should handle or the extent of their responsibilities) cause them considerable stress that ultimately hinders OCB's manifestation.

2. What Can Be Done to Promote Organizational Citizenship Behavior?

If, indeed, there is a causal relationship between particular personality traits (for example, agreeableness or conscientiousness) and OCB, testing for such traits during recruitment exams may prove useful as a means by which Japanese organizations can promote OCB. However, because quite a few examinees falsely report their traits during personality tests, there are apprehensions concerning the post-hiring predictive validity of such tests.[8]

[8] For this reason, one approach could be to establish a "lie scale" and then conduct personality

Although it is possible to check examinees' personalities during job interviews, this method is largely dependent upon the interviewing skills and "discerning eye" of the interviewer. Research that attempted to incorporate questions on OCB into mock job interviews with university undergraduates (Podsakoff et al. 2011) found that the more interviewees spoke about OCB, the higher they scored in their evaluations. However, many problems must be resolved before such apprehensions can be put to practical use.

At the same time, if it is true that employees in contemporary workplaces in Japan are dissatisfied with performance-based pay systems because they view them as unfair, then improvements must be made. This is because, given that the results of previously mentioned past research on OCB showed that fairness in the organization promotes OCB, it can be concluded conversely that a spreading feeling of unfairness among employees will gradually erode the manifestation of OCB in the workplace. If Japanese managers wish to continue using performance-based pay systems that are centered on target management, they must first bring "security of justice" to their evaluation systems. Doing this will require securing fairness (so-called procedural justice) in the evaluation process. More specifically, as Morishima (2006) points out, it is likely that measures that (a) avoid generating a sense that personnel systems are being pushed onto employees by involving labor unions and management from the system restructuring phase, and (b) provide training for not only evaluators but also those undergoing evaluation will be required.

The following practical research in Japan provides suggestions for concrete measures. Research by Haneishi (2009) showed that, when a certain company in Japan's Tohoku region began clean-up activities in order to enliven its workplaces and contribute to the community, employees' OCB gradually increased as the community's appreciation of their activities grew, and as a result the entire company's performance improved. This demonstrated that engaging in company-wide clean-up activities resulted in improved OCB among employees. Most likely, what is important here is that the company's managers took the lead in the activities and set an example, rather than pushing the activities on their employees. Yaffe and Kark (2011) showed that the more workplace leaders practice OCB, the more OCB improves not only among individual employees but also throughout the entire organization. Thus, it can be concluded that OCB is not something that managers should order, but rather something for which they should set an example by practicing it themselves.

3. What Should Be Done in Terms of Human Resources Management?

It is the author's view that, even more than securing organizational justice in the workplace, it is a high degree of empowerment among individual employees that holds the key to the manifestation of OCB. Here, "empowerment" is defined as "the delegation of increased decision-making powers to individuals or groups in a society or organization" (VandenBos 2007, 328). In other words, empowerment can be understood as the degree to

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tests that detect false responses.

which an employee believes he can fulfill his jobs by utilizing his own abilities, and the degree to which he can actively reflect this belief on his behavior. According to Alge et al. (2006) and Choi (2007), employees with a higher degree of empowerment engaged in more OCB at both the individual and workplace levels.

However, employee empowerment can hardly be secured if employees suffer anxiety because their long-term employment is not guaranteed. As Choi (2007) argued, the influence employee empowerment has on OCB is limited to a mediating effect, and workplace environments that foster empowerment (e.g., supportive leadership by superiors, an atmosphere that encourages workplace innovation, a firmly shared "vision" for the organization, etc.) must be established.

IV. Epilogue

If Japan's workplaces become full of "inconsiderate employees," no one will take on the many "jobs that do not belong to any particular person" that exist in workplaces. If that were to happen, workplaces would begin creaking like a machine running without lubricant, and soon nothing would function like it is supposed to. Just the thought of such a situation is terrifying. However, in reality, things have yet to reach such a dreadful state in the contemporary workplaces of Japan. This is because there are still many members of Japanese organizations who voluntarily take on jobs that were not allocated to them to some extent.

As this paper has discussed, in considering the results of past research on OCB, it becomes clear that employees' OCB will have a positive ripple effect on Japanese workplaces and organizations, and that OCB will be an essential part of contemporary corporate activity. The author believes that even "inconsiderate employees" will voluntarily take an interest in OCB if they see some value in the jobs of their workplace. However, this may not be the case if, as this paper discussed, the situation surrounding Japanese workplaces continues to "individualize" employees.

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The Impact of Prolonged Application of Short-Time Work Systems on the Careers of Regular Employees

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This paper analyzes case-study examples to examine the impact on careers of prolonged application of shortened working-hour systems, while comparing full-time and part-time work in terms of both content and qualities. Part-time and full-time work differ qualitatively in terms of urgency and rapidity, presence or absence of new challenges, and ability to take business trips, and over the medium to long term these factors tend to create disparities in workers' knowledge and skill levels. To rectify the disparities in competence development that differing work formats create, it is necessary to adopt the following five measures: (i) Re-examine and reform one-size-fits-all career development programs for greater diversity; (ii) Allow for greater diversity in careers themselves; (iii) Re-examine and reform the work culture in workplaces where long working hours have become commonplace; (iv) Find consensus on career-development issues between management and users of short-time work systems, and encourage system users to consider their own career advancement while using these systems; and (v) Re-examine and reform short-time work systems, and various other systems governing work formats, so as to prevent them from hindering employees' careers.

I. Introduction

Work-life balance (WLB) has become a major national policy issue in Japan. This is due to a number of factors, including a declining birth rate, a low rate of female participation in the work force despite a decline in the overall working population, and major disparities in the treatment of regular and non-regular workers. Among women of childbearing and child-rearing age (late 20s and 30s), in particular, the rate of participation in the work force is one of the lowest among OECD member nations at 67%,[1] and it is common for women to abandon their careers due to pregnancy and childbirth. Figure 1 shows the change over time in the percentage of women who continue working after bearing children. This percentage stood at 40.4% in 1985–1989, and rose to 52.9% in 2005–2009, an increase of 12.5%. Though this can scarcely be called a major improvement over a 25-year period, the percentage is steadily rising. This is partly due to repeated amendments of the Act on the Welfare of Workers Who Take Care of Children or Other Family Members Including Child Care and Family Care Leave (enacted 1992, hereinafter referred to as the Child Care and Family Care Leave Act), with work formats diversified so as to accommodate workers engaged in child rearing. A 2009 amendment made it mandatory for employers to offer

[1] Based on figures in the 2011 Labour Force Survey (Basic Tabulation) by the Ministry of Internal Affairs and Communications. These figures represent results for all of Japan except Iwate, Miyagi and Fukushima prefectures.

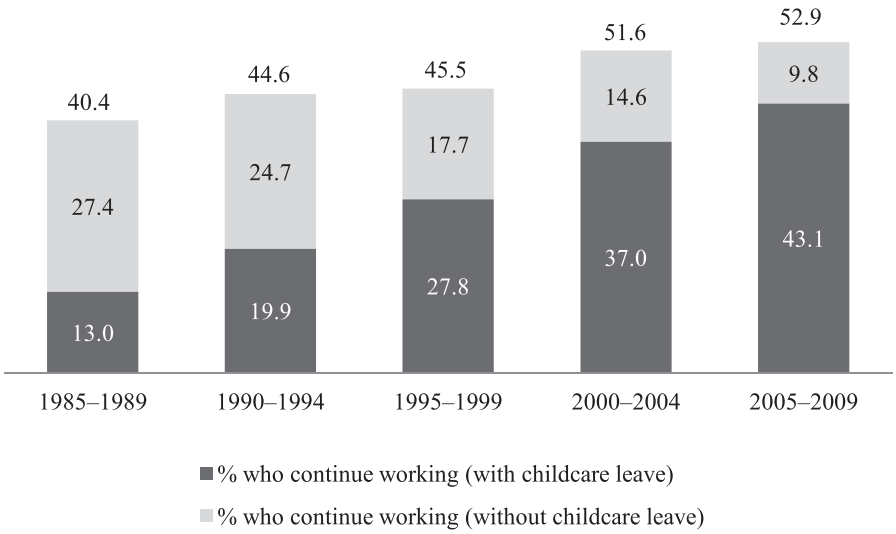

Figure 1. Percentage of Employed Women Who Continue Working after Birth of First Child (Regular Employees Only)

short-time work systems with a six-hour workday, and exemptions from work outside regular hours, to employees with children under the age of three, in addition to existing provisions for child care leave, nursing care leave and leave for care of sick or injured children.[2] Particularly at large corporations, active efforts are being made to enable employees (primarily regular employees) to balance work with child-care, including extension of the period of eligibility for short working-hour systems from six years to ten years for those engaged in child-rearing. There has been increasing support from both the government and the private sector for workers seeking to continue working while raising children.[3]

However, problems are emerging in that a growing number of regular employees are using short-time work systems for extended periods of time, obstructing competence building in some occupations. In Japan, responsibility for raising children is still generally con-

[2] The childcare leave period is until the child reaches the age of one, but under the 2004 amendment, this can be extended to 18 months if certain conditions were met (such as when waiting for admission to a day care center). Under the 2009 amendment, meanwhile, the leave could be extended by two months if the mother and father were taking childcare leave separately. The period of family care leave can be up to a total of 93 days per family member in need of nursing care. Leave for care of sick or injured children is a maximum of five days per year until the child enters elementary school (or up to 10 days when there are two or more children), and short-term family care leave is also a maximum of five days per year (or up to 10 days when there are two or more eligible family members).

[3] With regard to the application periods of shortened working-hours systems for employees responsible for childcare, the FY2008 Basic Survey on Equal Employment by the Ministry of Health, Labour and Welfare (MHLW) finds that 57.5% of businesses apply the system "until the child reaches the age of three," another 35.6% apply it for six years or more, and around 8% allow it to be applied for approximately ten years.

sidered to lie with women, and when women return to work after taking child care leave, they generally do so under short-time work systems. Female regular employees who follow a pattern of repeated child care leave and short-time work over the course of multiple childbirths may not work full-time for periods of ten years or so. Herein lies the problem, as a ten-year period away from full-time work may have an adverse impact on an employee's competence and career development.

In Japan, several studies have examined the job content, establishment of targets, and remuneration of short-time workers. Matsubara (2004) looked at the work performed by such employees in the electronics and department store industries, finding that they tend to be assigned low-pressure schedules or work that can be executed in teams, and that superiors allocate tasks that can be completed quickly or are tailored to the competence of those working shortened hours. Meanwhile, the Japan Institute of Workers' Evolution (2010) points out that tasks that can be completed in short periods of time, and targets that are easy to meet, do not necessarily lead to employee motivation or job satisfaction. It can be said that tasks assigned to short-time workers take both their competence levels and work formats into account, but long-term use of short-time work systems at times leads to job content that remains unchanged for extended periods of time.

It is obvious that a variety of workplace experiences (on-the-job training, or OJT) shape an employee's career. Koike (2005) identifies problem-solving abilities, and sophisticated, specialized skills for addressing uncertain situations, as the skills demanded of white-collar university graduates, and finds that corporations offer their employees numerous OJT opportunities so they can obtain these skills. However, if short-time workers perform the same tasks over long periods of time due to the constraints of their work format, not only do motivation and competence decline over the medium to long term, but organizations' internal labor markets may be diluted.

Japan is a rapidly aging society, and an increase in the number of workers balancing jobs with care of elderly family members is expected in the future. As part of its Research Project toward Realization of a Work-Life Balanced Society, the Institute of Social Science at the University of Tokyo conducted a Survey on Work-Eldercare Balance (2012) focused on employees aged 40 and over. The survey found that 13.9% of respondents (males: 12.3%, females: 16.7%) are currently caring for parents or others. However, one part of the survey targeting employees of large corporations found that 29.3% (males: 25.5%, females: 36.0%) considered the likelihood that they would be involved in caring for parents or others within the next five years "very high." The figure stood at 14.6% (males: 13.6%, females: 16.2%) for employees of small and medium-sized enterprises. Together with the percentage responding that there was "a small probability" they would be involved in nursing care, 82.7% of respondents at large corporations (males: 80.9%, females: 85.8%) and 66.6% at small and medium-sized enterprises (males: 65.8%, females: 67.9%)[4] recognized some

[4] This project included a survey of six large corporations taking part in the project (the Large Cor-

possibility they would be called on to provide care. Given that involvement in nursing care often lasts for long periods of time, and more than one person may be needed to care for parents or others, an increasing number of workers may choose to work short times for extended periods of time so as to care for family members, and workplaces may face a shortage of employees capable of working full time. Under these circumstances, Japanese corporations may struggle to cultivate human resources with the competence required of core personnel. In the future, re-examination of career development methods will be vital for corporations and other organizations seeking to maintain or expand their operations.[5]

In light of the above considerations, this paper will examine the impact of prolonged application of short-time work systems on employees' careers, through interviews with employees making use of such systems and their superiors. This examination will include a comparison of work content, and changes in that content, in comparison with those of full-time workers. The paper will discuss the following two issues:

(i) In Japanese workplaces, what kinds of career development plans are used to cultivate core human resources?

(ii) What jobs are performed by full-time workers and short-time workers in various workplaces, and how do they differ qualitatively? What is the impact of these differences on careers?

Section II below will examine the impact of work formats on career awareness. Then, Section III will analyze case studies, based on the results of interviews, concerning the qualitative differences and impact on careers of short-time work versus full-time work. Finally, Section IV will summarize the results of the analysis and explore their implications.

II. Relationship between Work Format Differences and Motivation

Sato (2008) and Wakisaka (2012) have examined the impact of work formats on motivation. The tasks assigned to a worker strongly affect his or her motivation and sense of whether a job is rewarding, and assuming that different work formats entail assignment of different tasks, these two previous studies are important resources for examination of the impact of differing work formats on careers. Both of the studies employ data from a survey

poration Survey) and another targeting businesses in Hyogo Prefecture (the Small and Medium-Sized Enterprise Survey). The former targeted employees aged 40 or over (though 2.6% of the respondents were 39 or below), while the latter covered all age groups. This difference in the target groups may account for a difference in the percentages expecting to be involved in nursing care within the next five years. Detailed results are published on the project's website (Japanese version only).

[5] Hisamoto (2003) points out the need to diversify the working formats of regular employees, but also asserts that unless they have the occupational competence expected of regular employees, their employment under this format would result in immediate failure, even if they have achieved the employment stability and wages above a certain level concomitant with status as regular employees. He proposes that a wide range of regular employees be provided with opportunities to build appropriate occupational competence.

Table 1. Work Motivation and WLB Satisfaction by Work Format

(%)

Work format	Work motivation	WLB satisfaction level
Standard full-time work	60.7	42.4
Flex-time	67.6	40.4
Short-time work	56.5	62.7
Discretionary labor system for professional work	69.6	30.4
Discretionary labor system for planned-type work	70.4	37.8

Source: Prepared by the author on the basis of the chart "Employment Formats, Job Motivation and Work-Life Balance [WLB] Satisfaction" (Sato 2008, 31) and "Outline of Employment Formats and Job Motivation, WLB Satisfaction and Working Hours" (Wakisaka 2012).

by the Japanese Electrical Electronic & Information Union (2007) to analyze work motivation and WLB satisfaction levels for different work formats. Sato (2008) analyzed work motivation and WLB satisfaction level for each of four work formats: standard full-time work system, flex-time system, discretionary labor system for professional work, and discretionary labor system for planned-type work. The results indicated that workers in flexible work formats had high work motivation but somewhat low WLB satisfaction levels, and the survey noted that responsibilities and authority were greater in jobs and workplaces with higher levels of work motivation.[6] Wakisaka (2012) added a short-time work system to the list of systems analyzed by Sato (2008), and found that conversely, workers in such systems have high WLB satisfaction levels but low levels of work motivation (Table 1).[7] It is possible that jobs held by shortened working-hours employees have qualities that set them apart from those of employees in other work formats, and these qualities may have an impact on system users' careers.

Meanwhile, Table 2 shows changes in female employees' attitudes toward their careers before and after having their first child.[8] It is not a direct illustration of the impact that differing work formats have on careers. However, the fact that many women with preschool children returned to work under short-time work systems after taking childcare leave may be correlated with a shift in attitudes from those characteristic of full-time workers before the birth of the first child, to different attitudes afterward.

[6] Sato (2008) also asserts that frequent handling of unexpected tasks, and ambitious quotas and targets, also enhance work motivation.

[7] Wakisaka (2012) does not examine the qualities of jobs or workplaces.

[8] The survey was aimed at male regular employees in their 20s to 40s with a youngest child below the age of three (2,248 cases), and female regular employees (1,131 cases) and non-regular employees (1,109 cases) in their 20s to 40s with a youngest child of preschool age. The survey was conducted online via an Internet monitoring service (in February-March 2012).

Table 2. Changes in Attitude toward Career before Having First

		1. I want to advance to a managerial position as soon as possible	2. I want to advance to a managerial position at my own pace	3. I want to boost my expertise as quickly as possible	4. I want to boost my expertise at my own pace
Entire sample (n＝1131)		3.7	6.7	6.1	23.6
Before having first child	1. I want to advance to a managerial position as soon as possible	36.6	23.7	4.3	15.1
	2. I want to advance to a managerial position at my own pace	3.7	48.1	2.5	12.3
	3. I want to boost my expertise as quickly as possible	0.6	5.0	24.8	31.7
	4. I want to boost my expertise at my own pace	0.0	0.4	4.3	55.2
	5. I am uninterested in being promoted or boosting my expertise, but I want to do my best at my current job	0.5	0.9	2.3	9.3
	6. I am uninterested in being promoted or boosting my expertise, but I want to experience a variety of jobs	0.0	1.5	1.5	10.8
	7. I am uninterested in being promoted or boosting my expertise, and I would prefer to focus on enriching my life outside work	2.2	2.2	1.5	5.9
	8. None of the above applies	0.0	0.0	2.9	3.8

Source: Mitsubishi UFJ Research and Consulting Co., Ltd., *Fact-Finding Survey on Childcare*
Note: The figures in each row should add up to 100, but there is a 0.1–0.2% margin of error in

Child and Now (Female Regular Employees) (n=1131)

Now				
5. I am uninterested in being promoted or boosting my expertise, but I want to do my best at my current job	6. I am uninterested in being promoted or boosting my expertise, but I want to experience a variety of jobs	7. I am uninterested in being promoted or boosting my expertise, and I would prefer to focus on enriching my life outside work	8. None of the above applies	Low degree of career motivation and ambition (5+6+7)
20.4	5.7	23.8	10.0	49.9
5.4	1.1	12.9	1.1	19.4
8.6	4.9	16.0	3.7	29.5
17.4	5.0	13.0	2.5	35.4
16.6	4.3	16.6	2.5	37.5
58.9	6.1	20.1	1.9	85.1
13.8	36.9	33.8	1.5	84.5
4.4	1.5	80.7	1.5	86.6
3.8	0.0	2.9	86.7	6.7

Leave System, etc. (Workers' Questionnaire Survey) (FY2011).
some rows. This is probably due to rounding off from the second decimal place or below.

Of seven options concerning attitudes toward career,[9] four are collectively seen as indicating a high degree of career motivation and ambition: 1. "I want to advance to a managerial position as soon as possible," 2. "I want to advance to a managerial position at my own pace," 3. "I want to boost my expertise as quickly as possible," and 4. "I want to boost my expertise at my own pace." Meanwhile, the other three are seen as indicative of a low degree of career motivation and ambition: 5. "I am uninterested in being promoted or boosting my expertise, but I want to do my best at my current job," 6. "I am uninterested in being promoted or boosting my expertise, but I want to experience a variety of jobs," and 7. "I am uninterested in being promoted or boosting my expertise, and I would prefer to focus on enriching my life outside work." An examination of the changes in female employees' attitudes toward their careers before having their first child and now (after having their first child) reveals that of those with a high degree of career motivation and ambition before having their first child, between 20% and slightly under 40% now had a low degree of career motivation and ambition. In the study, the same analysis was conducted with male employees, although the findings are not shown in this paper. Only about 10% of men showed a similar drop in career motivation and ambition after the birth of their first child. It seems likely that the smaller change in attitudes toward career stems from the fact that men's work formats less often depend on whether they have children.

Section III below will compare the tasks performed by short-time and full-time workers through case studies, analyze the qualities of the two, and examine the impact of short-time work systems on employees' careers.

III. Qualities of Short-Time and Full-Time Work and Impact on Careers

1. Survey Framework

This analysis employs case studies personally conducted by the author as part of a JEIU survey (Japanese Electrical Electronic & Information Union 2011). The survey targeted workers who had worked under a short-time work system for approximately five years (hereinafter referred to as "short-time workers") due to childcare or other responsibilities, and their superiors, in order to examine the impact on careers of prolonged periods away from full-time work. As many short-time workers go directly from childcare leave to work under a short-time work system, the survey also targeted those whose combined length of time away from full-time work including childcare leave and short-time work was approximately five years. Respondents included past and present users of short-time work systems. The period of five years was chosen because workers in overseas companies tend to work under short-time work systems for around five years, during which time they discuss their career paths with superiors. Also, it was hypothesized that five years was the

[9] Although there were eight options in the survey, option 8 ("None of the previous options applies") has been omitted from this paper, as it implies no specific career awareness.

maximum length of time employees could work short-time schedules and continue to be treated as regular employees. Survey respondents in both technical and administrative positions were selected so as to avoid bias toward a particular occupation (see Table 3). Each respondent was given about one hour to respond to questions primarily concerning the specific content of tasks performed as full-time workers and as short-time workers, and their attitudes toward their careers. Superiors were asked about the tasks assigned to short-time workers; the qualities and specific content of work performed in the workplace overall; the duties and skills expected of regular employees in the workplace; the career processes through which those skills were acquired; and the degree to which prolonged application of short-time work systems affects the development of skills expected of regular employees.

2. Short-Time Workers' Desired System Use Period and Attitude toward Career

First, let us examine the leave systems and short-time work systems for workers engaged in childcare at the companies where survey respondents are employed. In addition, let us take a look at the vision short-time workers responding to this survey have regarding their careers.

Two companies participated in this survey. Both are leading Japanese electrical equipment manufacturers, and their employees belong to the sector-specific trade union JEIU (Japanese Electrical Electronic & Information Union). With regard to childcare leave, Company A complies with legal requirements, while Company B goes further, not only allowing workers to take leave until their children reach the age of three, but also to take this leave in separate stages. In terms of short-time work systems for employees engaged in childcare, both companies offer this option to employees through their children's third year of elementary school. In practice, workers are permitted to switch back and forth between short-time and full-time work, though company rules do not clearly stipulate this option.

How long did the short-time workers intend to continue making use of the available systems? Of the six survey respondents, two persons have already returned to work full time. One of them had used the system for the maximum period allowable, while the other returned to full-time work while living together with parents, though she is exempt from overtime work.[10] Four were still working under the system, and all four said they intended to continue doing so for the maximum period allowable. This means that five out of six respondents had spent, or would spend, ten or more years away from full-time work, and if they were to have further children this period would grow even longer. The respondent who did not intend to work for the maximum period allowable under the system said she planned to continue for four years, until her youngest child entered elementary school, making her total period of short-time work approximately six years.

The respondents gave the following reasons for using the system as long as possible:

[10] At Ms. C's place of employment, employees are permitted to work under the short-time work system until their child completes the third grade of elementary school.

Table 3. Overview of Survey Respondents

Short-time worker	Company	Division	Workplace characteristics	Years on the job	Length of time using system[1]	Working hours	Superior
Case Study 1 Mr. A[2] (Male) Ordinary employee	A Co.	Design	22 employees. Roughly equal number of people in their 20s and in their 30s. Work hours often long.	8 years	3 years	7 hours combined with flextime (reduced by 1 hour)	Mr. B
Case Study 2 Ms. C (Female) Senior	A Co.	Development	32 employees. Many young workers. 15 to 25 hours of overtime per month.	17 years	4 years, 6 months (2 years, 5 months)	7 hours combined with flextime (reduced by 1 hour). *Currently working full-time	Mr. D
Case Study 3 Ms. E (Female) Ordinary employee	B Co.	General affairs	14 employees. Work includes management of labor and benefits as well as human resources, staff conditions, hiring and training duties.	20 years	9 years (1 year, 7 months)	6 hours, 45 minutes combined with flextime (reduced by 1 hour) *Currently working full-time	Mr. F
Case Study 4 Ms. G (Female) Chief	B Co.	Procurement	12 employees. Work includes support for parts procurement buyers, equipment procurement planning.	14 years	2 years (2 years, 6 months)	6 hours, 45 minutes (reduced by 1 hour)	Mr. H
Case Study 5 Ms. I (Female) Ordinary employee	B Co.	Publicity	7 employees. Work includes planning and support duties for personnel division.	20 years	3 years, 6 months (2 years, 6 months)	5 hours, 45 minutes (reduced by 2 hours)	Mr. K
Case Study 6 Ms. J (Female) Chief	B Co.	Publicity	As above	17 years	1 year, 6 months (3 years)	5 hours, 45 minutes (reduced by 2 hours)	Mr. K

Notes: [1]The periods of time in parentheses under "Length of time using system" are periods of leave (= maternity leave + childcare leave).

[2]In this case study, the period of system use differs from that specified for survey respondents. However, this case was included in the survey due to the wishes of the individual, and also because the worker was male, enabling comparison with female cases.

(i) It would be possible to return to work full-time, but there tends to be a lot of overtime work and it is difficult to leave the office on schedule. (ii) They would like to devote sufficient time to childcare and housework. These responses indicate that they do not make prolonged use of the system because they would be unable to work a normal schedule. Rather, they do so because extremely demanding work conditions in their workplaces make it difficult to resume full-time work.

How did the short-time workers view their own careers? Of the six people surveyed, five felt anxiety over their future careers, particularly due to major discrepancies in the rate of advancement and promotion between short-time and full-time workers, and due to the sense that they had ceased to be full-fledged members of the workplace because of their shortened work schedules.

It can be said that hesitation to resume full-time work, and extended use of the short-time work system, further widen disparities in career achievement and ambition, dampening short-time workers' motivation and causing them to give up on their careers.

3. Characteristics of Full-Time and Short-Time Work

Next, let us examine the characteristics of full-time and short-time work, taking the specific tasks performed in each workplace into account.

In Case Study 1, Mr. A (a short-time worker) belongs to the design division, which primarily handles (i) design of the housing of commercial car navigation systems and (ii) outsourcing of the design and manufacture of cables and optional accessories. The first entails planning projects in conjunction with factories and other third parties, and executing design work according to a schedule so as to meet the market release date. The department manager assigns projects to subordinates according to their skills and training. As it is important not to postpone the release date, employees work long hours of overtime as the project nears completion. Once manufacturing has begun, they must visit factories to ensure production is proceeding according to design and to handle any problems that arise, and this requires two or three one- to two-week business trips per project. These trips are sometimes extended, depending on the circumstances. Recent years have seen an increasing number of production sites transferred overseas, necessitating overseas business trips, while domestic business trips are still required when manufacture takes place in Japan. For obvious reasons, these duties are assigned to full-time workers.

Meanwhile, the second entails collecting and coordinating viewpoints from various divisions within the company and then outsourcing the work of product creation. These tasks are usually assigned to employees with the title of Group Leader or higher, as they require considerable coordination skills. The tasks feature less variability and urgency than those of design work, and tend to proceed in a systematic fashion. The supervisor, Mr. B, assigned these tasks to Mr. A for these reasons, and because they match Mr. A's capabilities.

In Case Study 2, Ms. C belongs to the development division, which develops car audio software. As in Case Study 1, overseas manufacturers form a growing percentage of the

customer base, leading to an increasing number of overseas business trips. Because projects must progress according to development schedules, any troubles that arise must be dealt with without delay. Employees in this division are expected to understand, from the perspective of product users, how each element and component works, as well as the functional principles of the product as a whole. The latter requires a higher level of specialized knowledge, necessitating a process of trial and error through OJT and often entailing long working hours. These tasks are therefore assigned to full-time workers, while short-time workers handle areas that can be managed with already accumulated knowledge and skills, and that do not involve rapidly shifting technological trends. Short-time work also involves few meetings or negotiations with other corporate divisions or third parties, and few business trips.

In Case Study 3, Ms. E belongs to the general affairs division, which handles personnel and labor issues (hiring, evaluation, training, union relations, benefits) for a business with about 3,000 employees. There are relatively few urgent tasks, although the division becomes busy when events such as personnel assessments, union negotiations, and training coincide. Some work, however, such as formulation of plans and proposals for employee training to address future business challenges and development strategies, requires a lengthy process of trial and error and is therefore assigned to full-time workers.

In Case Study 4, Ms. G's division is mainly engaged in determining parts prices and making purchases for products manufactured in the company's plant. Procurement buyers meet frequently with representatives of factories, design divisions, suppliers, and so forth, selecting suppliers, determining prices and ensuring a steady supply of parts. When problems with a supplier or distributor occur, procurement buyers must act swiftly to secure parts from other suppliers or find other distribution channels. Another important duty is to locate and build relationships with new suppliers in case of unforeseen emergencies. The role of procurement buyer is thus assigned to full-time workers. While Ms. G held this position when employed full-time, upon switching to short-time work she was transferred to the planning division, which handles general planning procurement and provides support for procurement buyers. This support entails management of performance data, reviewing and signing contracts, training division personnel, compiling and managing personnel costs and other expenses, green procurement (i.e. prioritized use of products not containing parts and materials detrimental to the environment and biodiversity), compiling rules, dealing with audits and other duties. While not requiring the same degree of expertise or versatility as that expected of procurement buyers, Ms. G's current position does require wide-ranging knowledge of and experience with all parts the procurement division handles.

In Case Study 6, Ms. J's division is responsible for planning PR for the entire company, formulating plans, organizational management of divisions, and procedures for administration of each division's website. As many division stakeholders are inside the company, there are relatively few urgent tasks. Ms. J is in charge of procedures for website administration, a position that fluctuates greatly in terms of number of tasks, urgency, and proce-

dural complexity, depending on whether the work concerns business-related divisions or staff-related divisions. The task execution process is the same for both, but when the work involves a business-related division, there are a greater number of tasks and more flexible and complex responses are required, meaning work sometimes lasts late into the night. For this reason full-time workers are assigned work concerning business divisions. Meanwhile, short-time workers are assigned work concerning personnel divisions, as it is less urgent and there are fewer tasks involved.

From the above findings, we can identify the following three characteristics of full-time work.

First, urgency and rapidity. This is due to two factors: serious responsibilities to customers and external stakeholders, and rigorous schedules. To build mutual trust with customers, who are external stakeholders, it is essential to adhere rigorously to the schedules customers demand. Success or failure in achieving this has a major impact on mutual trust-based relationships with customers and ultimately on business results over the medium to long term. Work outside regular business hours is sometimes required for success. Also, every case study found unscheduled overtime and sudden business trips necessary in order to observe sales procedures and manufacturing processes.

Second, the presence of new challenges. Taking on new challenges requires a process of trial and error so as to obtain knowledge and skills that will be needed in the future. In Case Studies 1 and 2, workers were expected to deal with unfamiliar products and projects, and to obtain diverse knowledge and skills through repeated trial and error. In Case Study 3, as well, full-time workers in the general affairs division were expected to employ trial and error and exercise their originality as they addressed issues of future concern to the company and formulated plans in areas such as employee training.

Third, the need to go on business trips. As described earlier, in this survey's case studies there was a strong correlation between business trips, urgency of tasks, and rigorousness adherence to schedules. In Case Study 4, procurement division employees had to take sudden business trips to resolve parts delivery problems, and technical division employees were sent on extended business trips (one to three weeks) to production sites to prevent delays in product sales schedules or resolve other problems. It was found that highly profitable business endeavors often involve business trips, and these trips call for an outstanding degree of knowledge and negotiation ability in order to resolve problems in limited periods of time.

Short-time work, on the other hand, generally lacks the above-described characteristics. The survey found that short-time workers are often allocated tasks that utilize their manifest abilities. This is understandable, as putting these workers' skills to effective use helps to maintain workplace productivity in the short term. In the long term, however, their competence building is delayed due to long periods of time without engaging in work requiring rapid action, new challenges and problem solving in limited periods of time. This state of affairs may detract from workplace productivity and dilute the internal labor market.

4. Professional Skills Required of Regular Employees and Career Processes for Acquiring Them

Certain skills are required of regular (full-fledged) employees, and certain career processes have been developed to help employees acquire them. It is important to understand what these skills and career processes are in order to judge whether the tasks assigned to short-time workers are compatible with the processes.

To briefly summarize this section's conclusions: the professional skills expected of regular employees are the same as those required at the managerial level, namely problem analysis, problem solving, negotiation and judgment. As soon as employees are hired, they begin a career process aimed at developing these professional skills, and all the workplaces surveyed employed the same career development model aimed at cultivating managerial-level personnel. Taken to its logical conclusion, this model aims to advance all the employees in a given workplace (or sector) to the managerial level. The specific career development processes pursued in each workplace are outlined below.

Case Study 1 found that newly hired employees in the design division assist senior co-workers for their first two or three years on the job, while mastering the basics of design and being given progressively greater responsibility. Thereafter, they are assigned increasingly difficult tasks while acquiring experience with design of diverse products and more specialized knowledge and skills. After about six years, employees become group leaders and formulate design plans themselves, with the goal of implementing these plans while training and assigning tasks to junior co-workers. While the pace of professional development differs from person to person, in general a worker is considered a full-fledged employee after 10 years or so, and is then eligible for promotion to a managerial position. This is the basic career process. In recent years, an increasing volume of design work involves products for export, and the company must keep track of product safety standards for each country. For this reason, an important step in career development is to be placed in charge of a particular overseas manufacturer and acquire wide-ranging design knowledge and expertise. We may assume that a similar process applies in Case Study 2, where employees in the development division are expected to assume the responsibilities of project leaders after around 10 years on the job, to manage any risks and expenses that arise during the development process, and to ensure that development plans are being implemented effectively (Figure 2).

Business trips constitute an important form of OJT in this career development process. Business trips are seen not only as opportunities to demonstrate knowledge, problem solving abilities, negotiation skills and judgment, but also as litmus tests indicating whether employees are suitable for leadership roles. In administrative divisions as well, employees go through a 10- to 20-year process of repeated transfers to various divisions and attendant changes in work content, aimed at fostering problem identification, problem solving and negotiation skills. This process is intended to cultivate personnel suitable for managerial positions (Figure 3).

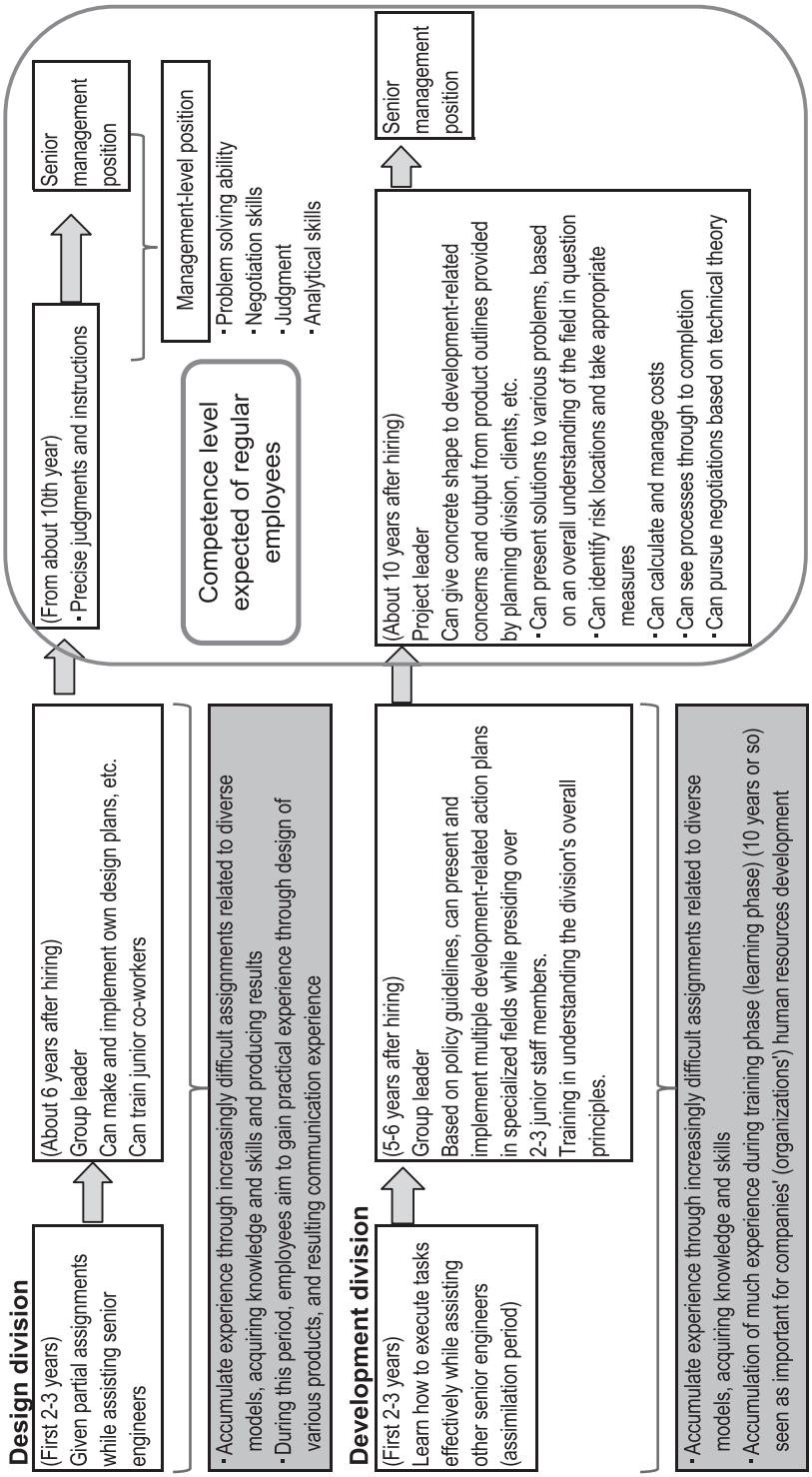

Figure 2. Career Steps for Regular Technical Employees

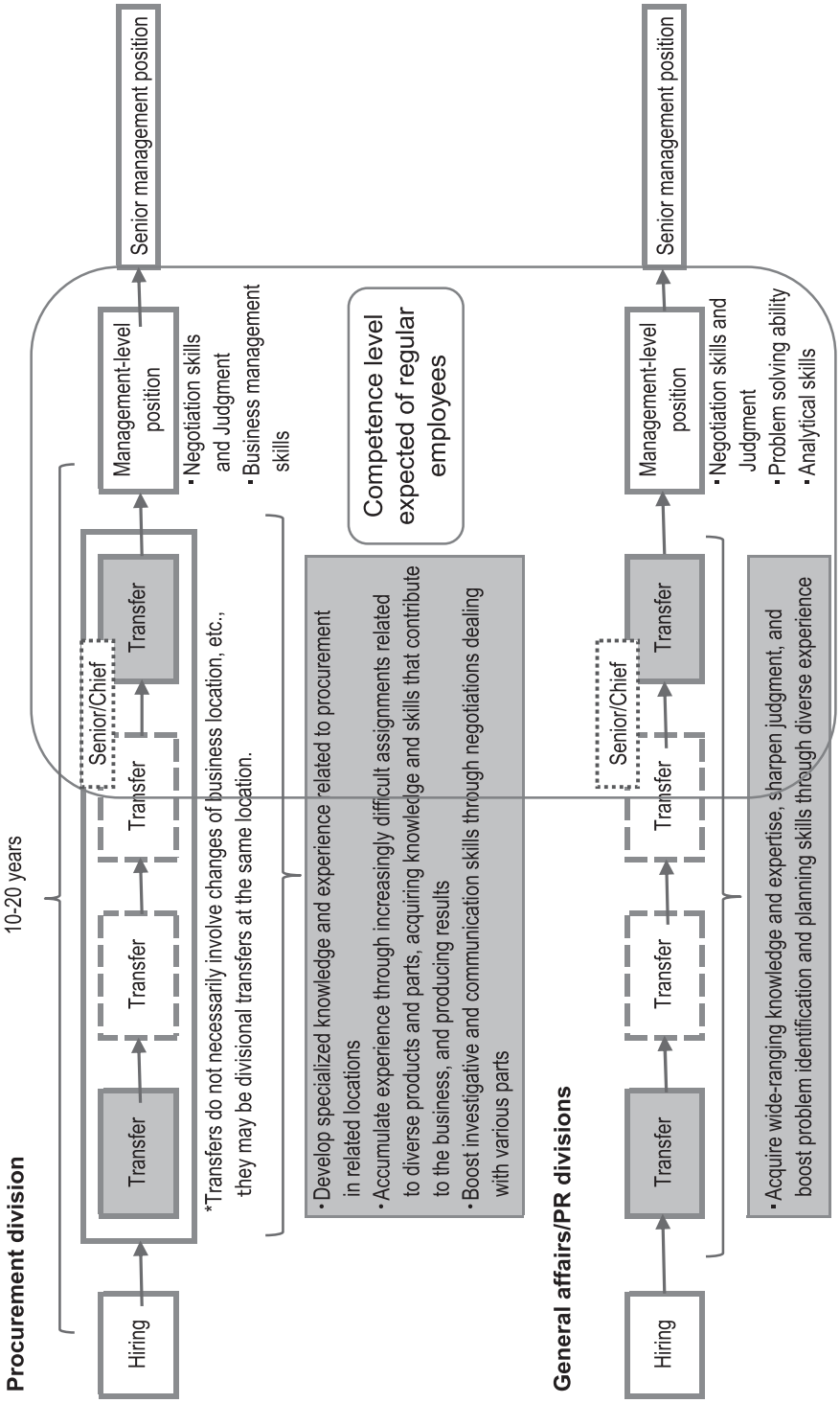

Figure 3. Career Steps for Regular Administrative Employees

Table 4. Change in Short-Time Workers' Work Content

	Has work content changed?	Rapidity	Business trips	New challenges
Case Study 1 (Design division)	Yes	No	No	No
Case Study 2 (Development division)	No	—	—	—
Case Study 3 (General affairs division)	No	—	—	—
Case Study 4 (Procurement division)	Yes	No	No	A little
Case Study 5 (Publicity division)	No	—	—	—
Case Study 6 (Publicity division)	Yes	No	No	No

5. Change, or Lack Thereof, in Short-Time Workers' Tasks

Boosting the sophistication of work content is important for regular employees' professional development. Does the content of short-time work evolve over time as well?

Table 4 shows changes in the tasks performed by short-time workers.

Mr. A (Case Study 1) had been a short-time worker for three years. Though assigned design work, the primary focus of his division, for the first year, this work fell to only 50% of his total work content during the second year. The other 50% consisted of ordering optional parts, a task which primarily entailed in-house coordination. This work could be called more difficult in that the group leader had previously handled it, but the degree of urgency and rapidity was low, as it basically consisted of internal company negotiations. It also involved fewer new challenges than negotiations outside the company. Mr. A's superior, Mr. B, points out that short-time workers can only handle a limited range of tasks, that these tasks tend to stay unchanged, and that employees who perform only these limited tasks for five years or more will fall far behind their full-time coworkers in terms of professional abilities and this disparity will become insurmountable. Mr. D, Ms. C's superior in Case Study 2, expressed similar opinions. There have been no major technological paradigm shifts in Ms. C's field, and she is currently able to handle her tasks with the skills she has amassed over many years, but if she continues to handle only these tasks over the long term, she may fall short of the proficiency level expected of regular employees.

The situation is similar for administrative short-time workers. With the exception of Ms. G (Case Study 4), none of them have changed workplaces since starting short-time work. Naturally, there have been minor changes in all of their job contents, but neither they nor their superiors perceived the difficulty level as having increased.

As we have seen, prolonged short-time work not only strips workers of opportunities to grow professionally by performing tasks requiring urgency, rapidity, and acceptance of new challenges, it also runs the risk of robbing them of the competence expected of employees.

IV. Conclusion

This paper has aimed to clarify differences in the content (qualities) of full-time and short-time work, and to examine impact on the careers of short-time workers with a focus on changes (increasing sophistication) in their tasks. The following three points have become clear.

First, there are three discrepancies between full-time and short-time work. One is the degree of urgency and rapidity. This quality has three notable aspects: (a) on-the-job interaction with those outside the company, (b) building long-term mutual trust-based relationships with external parties (usually customers) by adhering to the schedules these customers demand, and (c) work that is strongly reflected in business results. As a result, these tasks are usually assigned to full-time workers with flexibility in their working hours. Meanwhile, short-time work is characterized by (i) interaction with others within the company, (ii) highly flexible schedules, and (iii) little responsibility for business results.

The second discrepancy is the presence or absence of new challenges. Work entailing challenges requires strong powers of concentration and major time commitments. At the same time, these experiences are expected to impart a high degree of expertise. With short-time work, however, the emphasis is on ability to complete tasks within designated working hours. This means that short-time workers may go for long periods without taking on challenges and, in the future, fall behind their full-time counterparts in terms of competence.

The third discrepancy involves business trips. The issue here is not merely one of schedule flexibility. Business trips are also seen as opportunities to put negotiation skills, knowledge and judgment into practice, and as a means of cultivating leadership qualities. Short-time workers are rarely assigned to go on business trips, and thus miss out on opportunities to cultivate judgment and negotiation skills. For these reasons, it is difficult for short-time workers to plan their future career paths and easy for them to lose motivation.

The second point clarified by this paper is that in all kinds of workplaces and fields, career development models are solely focused on employees who can take on increasingly sophisticated tasks over 10 to 20 years, cultivating their judgment, negotiation and problem solving skills until they are eligible for managerial positions. In all cases, these career development models assume all employees will be full-time, and workers who spend lengthy periods away from full-time work find it difficult to stay on this career path.

The third point is that the content of short-time work tends to remain virtually unchanged over time. As described earlier, taking on increasingly sophisticated tasks is essential for professional development, and performing the same tasks year after year stands in the way of competence building for short-time workers. The longer they work under a short-time work system, the greater the risk of delay in their professional development. It is noteworthy that the degree of risk does not depend on gender.

The number of short-time workers is expected to rise in the future, and it must be said

that habitual use of short-time work systems will pose challenges in terms of career development. What measures should businesses take in order to administer these systems effectively and at the same time secure enough sufficiently qualified personnel?

One is to diversify career development processes aimed at cultivating core personnel. The current process assumes that employees will work full-time throughout their careers. In the future, there is a need for diverse career processes that take the possibility of short-time work into account. This will require managers to assign work from the standpoint of human resources development. The role of management is both to meet immediate targets so as to boost the organization's performance in the short term, and to cultivate human resources to boost its performance in the long term. For the latter, day-to-day allocation of tasks is key, and superiors should assign short-time workers tasks that change and grow increasingly sophisticated, as they do with full-time workers. The tendency of tasks to stay unchanged over long periods of time is particularly problematic. This should be addressed by considering, in discussions with subordinates, workplace transfers that do not require upheavals such as change of residence.

Another measure is diversification of careers themselves. This paper has found that workplaces consistently adopt a one-size-fits-all career development model in which every employee is expected to advance to a managerial position. Moving forward, career models ought to be diversified so that the final goal is not necessarily a managerial position, but for instance a highly specialized non-managerial position. There is also room for variation in the speed with which careers advance. Workers have diverse values and family situations. Some may be willing and able to stay on "the fast track," while others may prefer "the slow track," pursuing career advancement at their own pace. Each employee is entitled to career support, and a more flexible approach will ultimately lead to the cultivation of more ambitious and motivated human resources.

A third desirable measure is a change in working styles. Japanese workplaces have long been known for lengthy working hours, and this seems to be a root cause of prolonged application of short-time work systems. Full-time workers are expected to work overtime, and those who seek to go home on time are not considered full-fledged team members. Under these circumstances, short-time workers lose the motivation to return to work full-time, and reluctantly settle for reduced wages and curtailed careers. In addition to allocating tasks with an eye to building all employees' competence, as described above, management ought to move away from the culture of habitual overtime work to allow short-time workers to return earlier to full-time work.

A fourth measure is for management (superiors) and short-time workers to meet and discuss career options. This survey revealed that while superiors take such workers' work-life balance into account, they do not discuss career development with the workers or consider the impact of long-term short-time work on their careers. Of course it is important to consider the balance between work and home. However, as stated above, the duties of management include advancing the careers of subordinates and building competence

throughout the workplace. This paper has shown that short-time work has three characteristics not found in full-time work, making it difficult for them to pursue career prospects and thus to maintain motivation. Managers should learn about subordinates' visions for their careers, advise them on work formats conducive to achieving these visions, and help maintain motivation while letting them know clearly what is expected of them.

Meanwhile, short-time workers must have a strong awareness of career development, and discuss careers cooperatively with their partners (spouses). Rather than one partner remaining in a short-time work system year after year, couples should be flexible, understanding and cooperative, for example by having one partner do short-time work at critical junctures in the other's career.

The fifth and final measure is an overhaul of short-time work systems themselves. This paper has noted that long periods of time away from full-time work can be a stumbling block to workers' careers. Both short-time workers and managers need to consider temporary returns to full-time work when necessary for career development. To this end, the system must be made more flexible so that workers can switch freely between short- and full-time work.

As an increase in the number of short-time workers is growing into a virtual certainty, examination of how both employers and employees can derive maximum benefit from short-time work systems is urgently needed.

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Workplace Harassment, Mental Health, and the Law

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Human relations are important in the workplace. Many workers spend the majority of their time at work interacting with superiors and co-workers, and are sometimes expected to engage in teamwork as part of their duties. However, human relations in the workplace do not always go well, and poor human relations are a cause of stress. These problems of poor human relations sometimes take the form of harassment. When harassment and friction in human relations are severe or continuous, they can impair the mental health of workers. If a worker develops a mental disorder resulting from his or her work, it could be certified as an occupational disease. New Certification Criteria established in 2011 provide progressive treatment for cases of harassment. Now, if a worker develops a mental disorder as a result of harassment, he or she can claim damages against the employer or perpetrator. A claim for damages is upheld if harassment is proved and a causative relationship with the mental disorder is affirmed. It remains to be seen, however, how far claims for medical costs, damages due to absence from work, and loss of earnings will be admitted.

I. Introduction

Human relations work both positively and negatively. When they are going well, the activity in question also tends to go well. However, doing things with people we don't get along with, or in a relationship that is already complicated, can be a cause of stress.

This also applies to human relations in the workplace. There, human relations are continuous, and are therefore not so simple to resolve. This produces the characteristic that stress tends to persist and accumulate. Besides, human relations in the workplace are inevitably relationships between strong and weak, as in hierarchies of command and subordination or senior and junior. Here, it is the weak who are more likely to accumulate stress. This itself becomes a cause of harassment in the workplace.

According to a 2007 survey on workers' health by the Ministry of Health, Labour and Welfare (MHLW), "Problems of human relations in the workplace" is the biggest contributor (38.4%) to intense anxiety, worries and stress over work and occupational lifestyles. When a worker's health is affected by this kind of stress, it takes the form of mental health problems.

If a worker's mental health problem deteriorates into a mental disorder, the worker will probably receive treatment from a medical practitioner. In some cases, he or she may then be absent from work for long periods. The cost of this treatment and the compensation for loss of earnings during lengthy absences are covered by social insurance. When a worker's mental disorder is not due to his or her work, it is treated as a non-work-related injury and the worker receives medical insurance benefits based on the Health Insurance Act. However, if the mental disorder is deemed to have been caused by work, benefits are paid

from occupational injury insurance based on the Industrial Accident Compensation Insurance Act. In Japan, grounds for receiving occupational injury insurance include cases where a worker suffers severe shock and develops a mental disorder due to some abnormal experience (a robbery at the workplace, or being involved in a fatal accident while driving a vehicle in connection with work, etc.). As well as these, however, insurance can also be paid for mental disorders caused by accumulated fatigue due to working long hours, unduly demanding performance quotas, and harassment in the workplace.

In the case of occupational injury insurance, the insurer is the government, and Labour Standards Inspection Offices are responsible for certifying whether a worker's illness is caused by his or her work (certification of occupational disease). In 1999, the Ministry of Labour (as it was then, ML) established Judgment Guidelines[1] to cope with the increase in suicides due to overwork and the number of occupational injury compensation claims. The Guidelines provided judgment criteria for certifying occupational diseases related to mental illness. Table 1 of the Guidelines, "Workplace Psychological Stress Evaluation Table," showed the degrees of psychological stress that could be received in the workplace. One of the types specified there was "Problems in relations with others." The Guidelines were revised in 2011, when they were renamed "Certification Criteria for Mental Disorders Caused by Psychological Stress."[2] These are the current criteria for judgment. In the Certification Criteria, sections concerning human relations in Table 1 were also revised.

Mental health problems caused by human relations in the workplace also appear in the form of compensation claims made against employers and perpetrators. Court cases are gradually accumulating, but there are not many cases in which a worker's claim is upheld in its entirety.

In the following, the present status and challenges of workers' mental health problems caused by human relations in the workplace will be discussed from the standpoint of labour law studies. Criteria for certifying mental disorders will be examined in section II, and litigation trends in sections III and IV. Human relations that cause stress culminating in mental health disorders are diverse in both content and degree. Harassment is a typical form of poor human relations under intense psychological stress, to a degree that could cause mental disorders among workers in working relationships. In this paper, therefore, the main focus will be on cases of harassment in the workplace.

II. Certification Criteria for Mental Disorders

1. Background to the Establishment of the 2011 Certification Criteria

Occupational disease certification of mental disorders caused by psychological stress

[1] "Judgment Guidelines on Work-Related and Non-Work-Related Mental Disorders. Caused by Psychological Stress," ML Labour Standards Bureau Chief's Notification on September 14, 1999 (No. 544).

[2] MHLW Labour Standards Bureau Chief's Notification on December 12, 2011 (No. 1226–1).

was originally based on the 1999 Judgment Guidelines. However, new problems emerged in cases rarely encountered when the Judgment Guidelines were first drawn up. Examples of these were cases where workers were deemed to have suffered intense psychological stress due to remarks and reprimands by a superior (power harassment). After 1999, moreover, significant changes started to appear in workplace environments, partly due to the stagnation of the Japanese economy. These included corporate reorganization, personnel cuts, and the introduction of rewards based on performance or results. However, these very changes also subjected workers to intense stress. In view of this, the Judgment Guidelines were partially revised in 2009.[3]

The 2009 revision added 12 items related specific events listed in the Psychological Stress Evaluation Table. One of these was "Was subjected to severe harassment, bullying, or violence," similar to the previous item "Had problems with my superior." Before the revision, Labour Standards Inspection Offices used to evaluate psychological stress in "harassment" cases based on this item. After the 2009 revision, problems with superiors were evaluated under separate items if their content or degree exceeded the scope of work supervision and the superior denigrated the worker's personality or human dignity in word or deed.[4] Besides this, seven items were amended in the 2009 revision. One of these, "Had problems with a subordinate," was upgraded to a stronger intensity of average psychological stress (from level "I" to "II"). This anticipated cases that had not occurred very much until then, in which a superior might be isolated owing to a dispute with a subordinate. Under "Points when amending the intensity of psychological stress," the fact that the same psychological stress as in senior-junior relationships may also arise between co-workers (depending on their jobs, the roles of their departments, etc.) was added to the key indicators for events related to "Had problems with a co-worker." In this way, the 2009 revision contained necessary amendments to deal with newly emerging cases and problems affecting human relations.

While there was a gap of ten years between the initial establishment of the Judgment Guidelines and the 2009 revision, the Guidelines were changed to Certification Criteria only two years later. The purpose of the change was different in these two cases. The aim of the 2009 revision was to amend the criteria in response to changes in the environment surrounding workers. By contrast, the 2011 change to Certification Criteria was designed to deal with the longer screening times needed for certification, due to a vast increase in compensation claims arising from mental disorders. To this end, the Psychological Stress Evaluation Table was revised to make it easier to understand and use.

[3] MHLW Labour Standards Bureau Chief's Notification on April 6, 2009 (No. 0406001). On the amendment, Ikuko Mizushima, "Shokuba ni okeru Shiniriteki Fukahyo no Kaisei to Sono Eikyo [The Amendment of the Workplace Psychological Stress Evaluation Table and its Impact]" *Quarterly Labor Law*, no. 227 (2009): 36–48.

[4] So-called power harassment, although the term power harassment is not used.

2. Changes from the Judgment Guidelines

MHLW emphasizes three key points in the Certification Criteria. Of these, two are related to increasing the speed and efficiency of certification screening, the purported reason for the change. The first is that Table 1 in the Judgment Guidelines (Workplace Psychological Stress Evaluation Table) has been reorganized as Table 1 of the Certification Criteria (Work-Related Psychological Stress Evaluation Table). The second is that appraisal based on consultation with a psychiatrist, which had previously been necessary in all cases, is now limited to cases where it is difficult to make a judgment.

A particularly noteworthy change in the Psychological Stress Evaluation Table is that it expressly states "Special events" at the outset. When an event falls under the description of a "Special event," the overall evaluation of psychological stress automatically becomes "Strong," without any need to consider the various circumstances of the case. "Special events, etc." were included in the Psychological Stress Evaluation Table of the former Judgment Guidelines, but the treatment was different. That is, under the Judgment Guidelines, an overall evaluation was made on the basis of the Psychological Stress Evaluation Table, and a "Special event, etc." "could" make the overall evaluation "Strong" when exceptionally corresponding to this. In contrast, under the 2011 Certification Criteria, it is first judged whether an event corresponds to a "Special event," enabling Labour Standards Inspection Offices to make a quick judgment. "Special events" in the 2011 Psychological Stress Evaluation Table are classified into those of "intense psychological stress" and "extremely long working hours."[5] A difference compared to the Judgment Guidelines is that severe sexual harassment was cited and long overtime hours. In both cases, the criteria for judgment have been made easier to understand.

In cases not falling under "Special events," evaluation was previously based on related items after first appraising the average intensity of psychological stress ("I," "II" or "III"). This has been revised to a method of making a single overall evaluation of the "event" and "the degree to which the situation has continued after the event." Besides this, specific cases in which the overall evaluation would be "Strong," "Medium" and "Weak" are illustrated with a commentary. This makes it easier to match events with the criteria.

The third point in the Certification Criteria is that, for repeated events like bullying and sexual harassment, psychological stress is evaluated with reference to all acts since they first started.

Another interesting point of change is that specific methods of evaluation are stated

[5] "Intense psychological stress" includes cases of work-related illness or injury that are potentially fatal, are accompanied by extreme pain, or leave residual disability causing permanent incapacity to work; cases of causing the death of, or a potentially fatal severe injury to, a third party in connection with work; and cases of being subjected to rape, obscene acts against the will of the victim, or other forms of sexual harassment. "Extremely long working hours" are cases where more than around 160 overtime hours are worked in the month immediately prior to the onset of the disorder, or the comparable amount of hours within a shorter period.

for overall evaluation when there is more than one event (see III 2 below).

3. Power Harassment under the Certification Criteria

Power harassment is not a legal term. The 2012 "Report of the Working Group for the Roundtable Conference Regarding Workplace Bullying and Harassment" defines power harassment as follows. "Workplace power harassment is any kind of behavior in which a person abuses his or her position* in the workplace (e.g. his or her job position, personal relationships, etc.) to inflict physical pain or emotional distress on a co-worker, or cause the deterioration of the working environment beyond the appropriate scope of business. [*In addition to the actions of a superior toward a subordinate, workplace power harassment includes any interactions between seniors and juniors, between colleagues of equal standing, or from a subordinate toward a superior, based on the various backgrounds of superiority.]"
The term "power harassment" does not appear in the Certification Criteria. However, through comparison with definitions in the aforementioned Working Group Report, item 29 in the Evaluation Table ("Was subjected to (severe) harassment, bullying or violence") is thought to correspond to power harassment. In the Certification Criteria, the average intensity of psychological stress is "III." In the overall evaluation, attention is paid to the content and degree (among other aspects) of harassment, bullying and violence, as well as the extent of continuation. Seen in specific terms, the overall evaluation is "Strong" when a worker is subjected to severe harassment, bullying or violence. The following are given as examples of this.

(a) The behavior of a superior toward a subordinate deviates from the scope of work supervision, includes behavior that denigrates the personality and human dignity of the subordinate, and is carried out persistently;
(b) Behavior by several co-workers and others in collusion that denigrates the personality and human dignity of a worker is carried out persistently; and
(c) A worker is subjected to a degree of violence requiring medical treatment.

Cases not reaching this level are evaluated as "Medium" or "Weak." Examples of "Medium" cases are as follows.

(d) Remarks that deviate from the scope of work supervision are made in the process of a reprimand by a superior, but this is not continued; and
(e) Co-workers and others collude to engage in harassment, but this is not continued.

Finally, the following is given as an example of a "Weak" evaluation.

(f) A worker feels emotional distress due to remarks by a plural number of co-workers and others. (including cases that could not objectively be called harassment or bullying).

A worker's mental disorder is certified as work-related when the overall evaluation is "Strong" and the mental disorder is deemed not to have developed as a result of non-work-related psychological stress or factors inherent in the individual. On the other hand, when the overall evaluation is "Medium" or "Weak," the worker's mental disorder is

judged to be non-work-related and is not certified as an occupational disease. Based on these facts, a mental disorder thought to result from power harassment may only be certified as an occupational disease when satisfying three conditions: (1) Behavior that denigrates the personality and human dignity of the worker has been persistently carried out (as in cases [a] and [b] above; except when it is not continued, as in cases [d] and [e] above), or (2) The worker has been subjected to physical violence to a degree requiring medical treatment (as in [c] above; except when the distress is emotional, as in [f] above), and finally (3) The mental disorder has not been caused by non-work-related psychological stress or factors inherent in the individual.

Of these, in cases under condition (1) above where the behavior in question is from a superior to a subordinate, the behavior would need to deviate from the scope of work supervision. Guidance and reprimands within the scope of work supervision are necessary adjuncts to work and do not represent power harassment. Of course, even guidance within the scope of work supervision could still lead to intense psychological stress for the worker, depending on the content and degree, and this could cause a mental disorder to develop. In that case, it would fall under item 30 in the Evaluation Table, "Had problems with a superior." Case (g), in which intense guidance or reprimand within the scope of work supervision is received from a superior, is cited as an example in which the average intensity of psychological stress for item 30 in the Evaluation Table is "II" and the overall evaluation is "Medium." Judging from this, even if the guidance or reprimand from the superior were intense, it would still be evaluated as "Medium" and the mental disorder would not be certified as work-related. An example of "Strong" evaluation in item 30 is (h), a case in which major friction concerning work-related principles, etc., arises with a superior and is even recognized objectively by others nearby, causing major impediment to subsequent work. Since no examples of guidance or reprimand are cited, this is taken to mean that, if intense guidance or reprimand from a superior is within the scope of work supervision, there is no chance of the mental disorder being certified as work-related. This might appear unfair at first, but can be understood as follows. That is, even if it was originally guidance or reprimand necessary for work, or if there was a reason on the worker's part why the guidance or reprimand should be received, the superior is still not entitled to give unconstrained guidance or reprimand; the superior's guidance or reprimand is limited to the necessary and reasonable scope related to the work. For example, if the superior refers to a mistake previously made by a worker under his or her supervision, and repeatedly issues intense reprimands or criticism even though the mistake has been corrected, or repeatedly issues reprimands or abuse that denigrate the personality and human dignity of the worker, this would of course deviate from the scope of work supervision. This kind of case would be judged using item 29 rather than item 30; if satisfying conditions (1) to (3) above, it would be deemed an occupational disease. Items 29 and 30 in the Evaluation Table could be said to accurately distinguish power harassment from guidance or reprimands necessary for work.

4. Sexual Harassment under the Certification Criteria

Sexual harassment is not a legal term, either. A description of sexual harassment is given in Guidelines based on Article 11 of the Equal Employment Opportunity Act.[6] According to these Guidelines, sexual harassment in the workplace is defined as harassment causing a worker to suffer a disadvantage in his or her working conditions as a result of his or her response to sexual behavior in the workplace ("quid pro quo sexual harassment"), on the one hand, and harassment in which such sexual behavior impairs the worker's work environment ("hostile work environment sexual harassment"). The Guidelines mention the victim's working conditions, improvement of relations and privacy, but not the victim's physical or mental health. As such, the problem of sexual harassment and mental health appears not so much in the field of sexual harassment as in that of mental health.

Sexual harassment was already cited as one of the events classified under "Problems with interpersonal relations" in the old Judgment Guidelines. In this context, it was clearly open to compensation claims for occupational injury, but in reality this fact was not generally known.[7] Sexual harassment also involves circumstances unique to the case in question. For example, whether consciously or not, victims are sometimes reluctant to talk about the sexual harassment they have suffered, or the details of it; they may try to hide it. In some cases, they may have sought advice in connection with sexual harassment but omit to mention their mental health disorder. Circumstances like this can be one factor making it difficult for sexual harassment counselors or mental health practitioners to suggest the possibility of claiming damages for occupational injury to the victim. They also make it hard to investigate the factual relationships after a claim. Based on these realities of sexual harassment cases, the Certification Criteria have not only made the criteria in the Psychological Stress Evaluation Table easier to understand, but also include important notes.

In the Psychological Stress Evaluation Table attached to the Certification Criteria, sexual harassment appears among both "Special events" and "Non-special events." Rape, obscene acts committed against the will of the victim and other types of sexual harassment fall under "Special events"; these events alone cause the psychological stress evaluated as "Strong." Even under the old Judgment Guidelines, this kind of sexual harassment was basically evaluated as "Strong," and occupational injury was certified. To facilitate this, however, the average intensity of psychological stress arising from sexual harassment had to be revised to "II" and then judged as "Strong." The 2011 Psychological Stress Evaluation Table clearly prescribes that this kind of sexual harassment should correspond to a "Special

[6] "Guidelines on Measures to Be Taken by Employers for Employment Management Concerning Problems Caused by Sexual Harassment in the Workplace," MHLW Notification on October 11, 2006 (No. 615).

[7] In the past, sexual harassment was often seen as resulting from "personal friction with superiors, etc., temperament, and other problems of the individual," or "not caused by work." Hideo Mizutani, *Shokuba no Ijime: Pawahara to Ho* [Bullying in the workplace: power harassment and the law] (Tokyo: Shinzansha, 2006), 197 onwards.

event," enabling Labour Standards Inspection Offices to make quick and easy judgments.

Under the Judgment Guidelines, sexual harassment was included among problems with interpersonal relations. In the 2011 Psychological Stress Evaluation Table, however, "sexual harassment" has been established as a category independent from that of "interpersonal relations." The only case belonging to the category of "sexual harassment" is "Was subjected to sexual harassment" in item 36 of the Evaluation Table. The average intensity of psychological stress for item 36 of the Evaluation Table is "II." In the overall evaluation, attention is paid to the content and degree, of the sexual harassment, as well as the extent of continuation, whether or not the company has taken action and the content thereof, the degree of improvement, and human relations in the workplace, among other aspects. Comparing this to power harassment (see item 29 of the Evaluation Table and section 3 above), they differ in two aspects. The first is that while the intensity of power harassment is "III," that of sexual harassment is "II." This is no doubt because severe sexual harassment is evaluated as a "Special event," and, as such, is not included under item 36 of the Evaluation Table. The other is that, in cases of sexual harassment, attention is also paid to the company's response, the degree of improvement, etc. This is based on the fact that, although the direct cause of the mental disorder is sexual harassment, an inappropriate response by the company after the sexual harassment could have caused or aggravated the mental disorder.

Cases for which the overall evaluation in item 36 of the Evaluation Table is "Strong" are as follows:

(a) Sexual harassment including physical contact to the chest, waist, etc., when it is carried out continuously;
(b) Sexual harassment including physical contact to the chest, waist, etc., when it is not carried out continuously, but is not dealt with appropriately or improved even after the company has been consulted, or when human relations in the workplace deteriorate after the company has been consulted;
(c) Sexual harassment with no physical contact but consisting only of sexual remarks, when it includes remarks that denigrate the victim's personality and are made continuously; and
(d) Sexual harassment with no physical contact but consisting only of sexual remarks, when sexual remarks are made continuously, and the company fails to respond appropriately even after ascertaining that there has been sexual harassment, and no improvement is made.

To summarize these, (1) cases where severe sexual harassment (including physical contact or remarks that denigrate the victim's personality) is continuous (as in [a] and [c] above), and (2) cases where sexual harassment not meeting condition (1) above (non-continuous harassment including physical contact, or continuous harassment with remarks that denigrate the victim's personality) is not appropriately dealt with by the company (as in [b] and [d] above) are classified as "Strong." Both (1) and (2) illustrate cases where the continuation of a problematic situation results in intense psychological stress for

the victim. By contrast, cases where sexual harassment is not continuous or the company has responded appropriately and swiftly to resolve the problem before a mental disorder develops are evaluated as "Medium."[8]

The 2011 Certification Criteria also include important notes to bear in mind when considering cases of sexual harassment. These state that the victim may have unintentionally sent the perpetrator compliant emails, or accepted an invitation from the perpetrator, but that these do not provide grounds for simply denying that the victim was subjected to sexual harassment; again, the victim may sometimes not immediately seek advice after suffering harassment, but this does not provide grounds for simply judging the psychological stress to be weak. In judgments certifying cases of sexual harassment, similarly, the Criteria reaffirm the importance of making accurate judgments on the degree of psychological stress, rather than searching out reasons to deny that the mental disorder is work-related.

III. Trends in Court Cases concerning Certification of Occupational Disease

1. Compensation for Occupational Injury in Harassment and Mental Health Cases

MHLW publishes data on compensation for occupational mental diseases every year. These include the number of decisions and the number of payment decisions (certifications of occupational disease) for each event in the Psychological Stress Evaluation Table. Data on compensation paid when the victim "Was subjected to severe harassment, bullying or violence" (power harassment) and "Was subjected to sexual harassment" over the last three years are shown in the Table.

Power harassment cases are in an increasing trend, both in the number of decisions and in the number of payment decisions; the ratio of occupational disease certifications is also on the high side compared to other cases in general. By contrast, there have been fewer cases of sexual harassment, and the ratio of occupational disease certifications is also lower.

2. Power Harassment Cases and the Judgment Guidelines/the Certification Criteria

When a decision not to pay occupational injury compensation is made, appeals are sometimes brought to the court in an attempt to overturn the decision. In cases of pure

[8] "Medium" examples are (e) cases where, although there has been sexual harassment including physical contact to the chest, waist, etc., the behavior was not continued, the company responded appropriately and swiftly and the case was resolved before the onset of any disorder, (f) cases where sexual harassment consisted only of sexual remarks with no physical contact, and the remarks were not continued, and (g) cases where sexual harassment consisted only of sexual remarks with no physical contact, which was committed on more than one occasion, but the company responded appropriately and swiftly and the harassment was terminated before the onset of any disorder. "Weak" examples are (h) cases where remarks such as the use of inappropriate nicknames equivalent to sexual harassment have been made, and (i) cases in which posters and other pictures of women in swimwear have been put up in the workplace.

Number of Decisions (D) and Payment Decisions (PD)
on Occupational Mental Disease Compensation

	FY2009		FY2010		FY2011	
	D	PD	D	PD	D	PD
Power harassment cases	42	16	58	39	69	40
Sexual harassment cases	16	4	27	8	17	6
Total	852	234	1,061	308	1,074	324

power harassment,[9] courts have been empowered to overturn non-payment decisions since 2007; this triggered the 2009 amendment to the Judgment Guidelines (see section II 1 above).

In the Government/Chief of Shizuoka Labour Standards Inspection Office (Nikken Chemicals) case,[10] a worker committed suicide after relations with his superior (a chief clerk) deteriorated to the point of frequent verbal abuse from the superior. In this case, an excessive workload caused by long working hours was not recognized. It was a case of "pure power harassment." The characteristics of this judgment and its significance as a precedent lie in the fact that it showed that a significant causal relationship between work (power harassment) and the onset of a mental disorder can be affirmed, and that it is possible to judge a disorder to be work-related in this kind of case. In this judgment, psychological stress was evaluated to be "arguably of a level of intensity that is rarely experienced in a person's lifetime, and was so excessive that, seen objectively in terms of social norms, it would have caused a mental disorder to develop in any ordinary person." This evaluation was supported by the fact that (1) the actual remarks made by the superior to the worker were excessively harsh (including remarks that denigrated the worker's career and his value to the company, and others that denigrated the worker's personality and very existence), (2) the superior's attitude to the worker included feelings of loathing toward the worker, (3) the superior used an extremely blunt way of talking to the worker, and (4) the employment format in the workplace created an environment in which it was difficult for problems with superiors to be resolved smoothly.

Another court case from around the same time was that of the Chief of the Nagoya-Minami Labour Standards Inspection Office (Chubu Electric Power).[11] In this case, a worker who had been promoted to assistant manager committed suicide after becoming depressed because of the increase in workload resulting long overtime hours, the behavior of his superior (a section manager), and other factors. In the judgment, it was recognized that

[9] Most power harassment cases come combined with other problems, such as long working hours or unfair persuasion to take redundancy. There are not so many cases where power harassment alone is the problem.

[10] Tokyo District Court, October 15, 2007, 950 Rodo Hanrei 5.

[11] Nagoya High Court, October 31, 2007, 954 Rodo Hanrei 31.

the relationship with the superior had placed considerable psychological stress on the worker before the onset of depression and just before his death. Of course, in this case, a major factor in the onset of depression and its progression is taken to lie in the fact that, even though the work allotted to the worker had changed considerably (i.e. had increased) in both volume and content, the system of support and cooperation from the superior and others was inadequate, and the worker was forced to work long overtime hours. Therefore, power harassment was not recognized to have been the sole or direct cause of this worker's mental disorder. Nevertheless, the significance of this judgment lies in the statement that, in view of the superior's excessively emotional reprimands and personal point of view, the fact that the superior repeatedly ordered the worker to remove his wedding ring "is judged to be so-called power harassment that has no rational reason whatever, goes beyond the scope of mere harsh guidance, and should generally be evaluated as an event of considerably intense psychological stress." It is also significant in that it indicates a judgment on the kinds of reprimands or orders corresponding to power harassment, and the intensity of psychological stress they exert. In the process, another point to bear in mind is that this judgment states that "ways of coping with events differ from person to person, and it goes without saying that, just because a worker subjected to such an event does not explicitly express his or her discomfort, it does not mean that the psychological stress can be judged to be minor."

These judgments lead to a view that excessive reprimands and behavior by a superior place undue psychological stress on a worker, and that this has the effect of developing or aggravating mental disorders. Moreover, cases of this sort should be handled as problems distinct from ordinary problems with superiors, and this had an impact on the 2009 amendment of the Judgment Guidelines.

In judgments by Labour Standards Inspection Offices when certifying occupational disease, the technique adopted is to focus on separate events and judge the intensity of psychological stress in each. The courts, by contrast, tend to judge various events within the relevant period as a whole. For example, in the Government/Chief of Nara Labour Standards Inspection Office (Nihon Hels Industry Corporation) case,[12] it was recognized that a worker who committed suicide while on a business trip had been suffering from undue work-related psychological stress to a degree that caused a mental disorder to develop or be significantly aggravated, judging from the worker's age, experience, work content, working hours, size of responsibility, powers of discretion, etc. In addition to this, however, certain remarks concerning the worker made by a director of the company who had also acted as the worker's go-between (statements which, albeit prompted by drink, exposed matters of a private nature in the presence of the president and other company officers, to the effect that the worker was incompetent) were also taken into account. These were evaluated as "remarks that could be seen as distinct from workplace stress normally found in the workplace, and from the viewpoint of the person about whom they are said, could not be easily forgot-

[12] Osaka District Court, November 12, 2007, 958 Rodo Hanrei 54.

ten, are a clear cause of stress, and, in terms of social norms, cause undue psychological stress to the degree that could cause a mental disorder to develop or be aggravated." The remarks made by the company director in this case were inappropriate, but did not denigrate the worker's personality or existence, and were only made once. Although the court recognized that there had been undue psychological stress in the victim's work content, etc., this was a case where it was difficult to recognize undue psychological stress in single events. Nevertheless, consideration was also given to the fact that the various events occurred in close temporal proximity to each other, and that "the burden caused by circumstances had a cumulative effect and became enlarged." A similar method of judgment was clearly shown by the Government/Chief of Isahaya Labour Standards Inspection Office (Daihatsu Nagasaki Sales) case.[13] The court in this case stated that "the intensity of stress in cases where several events that have probably contributed to mental disorder are recognized cumulatively should be evaluated collectively." In other words, it took a comprehensive view of the harsh performance targets imposed on the worker and the worker's failure to meet them, as well as harsh reprimands by the superior (department manager) that exceeded the scope of guidance, and thus recognized the work-related nature of the worker's mental disorder.

Although there are some forms of power harassment in which the superior simply abuses his or her position, many cases are in fact related to job. A lack of leeway or available capacity in the workplace is also a factor that causes power harassment and friction in the workplace. Judging from this, it is also considered appropriate to make judgments in which several events are linked in cases of power harassment, as the courts have shown in the cases mentioned above. On this point, the 2011 Certification Criteria adopt the method of making an overall evaluation of psychological stress when there are several events, namely, judging the work-related psychological stress to be "Strong" if the event is "Strong"; when connected events occur, they refer the first-occurring event to the Psychological Stress Evaluation Table, then make overall evaluation of other connected events, regarding them as the situation pertaining after the events (e.g. when single events are "Medium" and "Medium," evaluating them overall as "Strong" or "Medium"). This may be seen as incorporating the comprehensive evaluation practiced by the courts, as long as the consistency and clarity of criteria used in occupational disease certification judgments are not compromised.

3. Sexual Harassment Cases and the Impact of the Certification Criteria

In sexual harassment cases, decisions not to pay occupational injury compensation are not uncommon (see the Table shown in page 49). So far, however, no judgments have been found to involve a revocation of a non-payment decision in a pure sexual harassment case.[14]

[13] Nagasaki District Court, October 26, 2010, 1022 Rodo Hanrei 46.

[14] There have been cases combined with other problems, i.e. cases where the existence of more than one psychological stress is claimed and one of these is sexual harassment.

A suit seeking revocation of a non-payment decision[15] was brought to the Tokyo District Court in 2010; this is said to be the first case where an attempt was made to overturn a non-payment decision in a sexual harassment case.

The 2011 Certification Criteria cite examples in which the overall evaluation of psychological stress in sexual harassment cases is "Strong" in the Psychological Stress Evaluation Table. This will probably lead to a trend for workers who are not satisfied with non-payment decisions to seek revocation.

IV. Trends in Compensation Cases

1. Harassment and Liability for Damages

Workers who have suffered harassment may claim compensation for damages from the employer or the perpetrator. If the existence of harassment is recognized and the employer or perpetrator is deemed to have tort liability, or the employer to have liability for debt default, the next problem is how and on what scale compensation will be awarded. The courts recognize solatium payments, but a cautious stance tends to be taken, particularly in sexual harassment cases, on claims for medical costs and damages due to absence from work associated with the worker's psychological symptoms or mental disorder. The following are cases in which the fact of harassment as well as the worker's psychological symptoms and mental disorder were recognized. These will be studied with attention to the scale of compensation.

2. Power Harassment Cases

Power harassment is sometimes carried out in connection with job, and sometimes in connection with the worker's treatment (e.g. job transfers or redundancy). If the worker were to develop a mental disorder in this kind of case, it would be difficult to know whether the disorder resulted from power harassment, or from long working hours or unfair persuasion to take redundancy. Although cases of pure power harassment cases are not so common, two cases in which the relationship between power harassment and mental disorder is relatively clear will be cited below.

In the Nihon Fund case,[16] three workers claimed compensation from their superior (a department manager) and their employer (the company) on grounds that the superior had subjected them to violence and verbal abuse when he directed the air flow of an electric fan toward them. The superior's violence and verbal abuse were taken to fall under tort. One of the workers had attended a psychiatric clinic and a general clinic as an outpatient, and had been prevented from working for one month due to depression. The court recognized a significant causative relationship, in that the outpatient hospital visits and absence from work

[15] Terminated when the state withdrew its case.
[16] Tokyo District Court, July 27, 2010, 1016 Rodo Hanrei 35.

were due to the superior directing the fan at the workers, upholding the claim for medical costs (circa 5,000 yen) and damages due to absence from work (around 350,000 yen). A separate solatium payment (600,000 yen) was also awarded.

In the Fast Retailing et al. (Uniqlo Stores) case,[17] a worker was subjected to physical violence by a superior (store manager), was subsequently subjected to unfair remarks and others, and developed a delusional disorder. The court affirmed a significant causative relationship between the violence and remarks and the disorder. Damages were awarded for nine years' absence from work, together with a solatium payment. However, this was subject to a primary cause reduction of 60%. The worker cited the Dentsu case,[18] asserting that the primary cause should not be considered since no impediment had arisen in social life. However, the court upheld the primary cause reduction in that, although a point shared with the Dentsu case was the fact that the worker's character tendency had contributed to the occurrence or expansion of damages, it had not been caused by continuous acts by the employer et al. (such as an unduly large work load on the worker), but that one-off acts of violence and statements had caused the occurrence and expansion, and that the action in receiving medical treatment had been left to the judgment of the worker.

In these two cases, the court awarded damages due to absence from work, as distinct from solatium payments. The length of absence from work that would be judged to have a significant causative relationship with a mental disorder is difficult to define in reality. In the Nihon Fund case, it was a short period of one month; here, it is reasonable that the claim for damages due to absence from work was upheld for the whole period of absence from work. However, a careful judgment is required when temporary leave or absence from work becomes protracted. In the Fast Retailing et al. (Uniqlo Stores) case, damages due to nine years' absence from work were awarded, but a significant primary cause reduction was made because the absence occurred due to one-off acts, and was subsequently thought to have expanded due to the worker's character tendencies. One could say that the primary cause reduction essentially resulted in a balance. Although difficulties are expected in judging this kind of case, judgments should take account of the nature and continuousness of the act of harassment and the subsequent response of the perpetrator and employer, as well as the worker's treatment attitude (which is not a problem if the worker has received reasonable and appropriate treatment).

3. Sexual Harassment Cases

The following are examples of court cases that deny a relationship between harassment and the worker's psychological symptoms or mental disorder, in cases where there has been sexual harassment and the worker is thought to have suffered psychological symptoms or mental disorders.

[17] Nagoya High Court, January 29, 2008, 967 Rodo Hanrei 62.
[18] Second Petty Bench of the Supreme Court, March 24, 2000, 54 Minshu 3, 1155.

In the Hiroshima Sexual Harassment (life assurance company) case,[19] seven workers claimed compensation for acts of sexual harassment by their superiors at an end-of-year party. Of the compensation claimed, a causative relationship between harassment and mental disorder was denied in relation to counseling fees and medical costs paid by the workers, in that the acts of sexual harassment in this case were one-off events. However, the court deduced that the workers' psychological symptoms (such as irascibility and fear of men) had been caused by the harassment to a certain extent, and made allowance for this with solatium payments.[20] As is symbolized in this case, there are some sexual harassment cases where, even if a significant causative relationship between the harassment and the worker's mental disorder, etc., is not affirmed, a balance is achieved by allowing for the worker's mental disorder, etc., with solatium payments. In fact, there have also been several cases where the workers themselves have only claimed inclusive solatium payments.

In the claim for medical costs by one of the workers in the Hiroshima Sexual Harassment (life assurance company), the court did not recognize a significant causative relationship between the harassment and the damages. This appears to have been significantly impacted by the fact that the worker first received diagnosis from a psychiatrist more than two years after the end-of-year party in question. Of course, it would be too simplistic to say that psychological symptoms will immediately become apparent, and that the victim will become aware of them and receive treatment. Nevertheless, the longer the time until the first diagnosis, the more it would appear that the need for diagnosis was not pressing. This would work toward a denial of the significant causative relationship. In this case, moreover, sexual harassment took place at an end-of-year party and the worker in question was not the only victim. In cases of sexual harassment cases behind closed doors, the victim could be expected to be hesitant in accepting diagnosis, as he or she would be reluctant to talk about or acknowledge the fact of the sexual harassment. As such, another consideration would be necessary.

The following are some examples of sexual harassment cases where a significant causative relationship between the harassment and a mental disorder, has been affirmed. In each of these cases, the claims have been partially upheld.

In the Saitama Sexual Harassment (pharmaceutical company) case,[21] a worker who was subjected to sexual harassment by a co-worker suffered mental and physical disorders, leading to absence from work and eventually quitting the company. Here, the court stated

[19] Hiroshima District Court, March 13, 2007, 943 Rodo Hanrei 52.

[20] In a case of sexual harassment at a university, the court did not recognize that a student subjected to harassment had suffered from PTSD and thus denied the claim for medical costs. When calculating the solatium payment, however, it stated that "Although aggravation as far as PTSD is not recognized, it is clear that immense psychological distress has been suffered," thereby making allowance for the mental state of the student in question. Tokyo District Court, April 27, 2005, 1181 Hanrei Times 244. The method of allowing for solatium payments is the same as in the Hiroshima Sexual Harassment (life assurance company) case.

[21] Saitama District Court, December 21, 2007, LEX/DB28140445.

that it was foreseeable that the harassment would cause a mental disorder that could not be disregarded as temporary, and thus recognized the perpetrator's liability for damages. The scope of these damages was assumed to be the physical and mental impact that would normally have been exerted by the psychological shock on the worker in question. Assuming the circumstances and aspects leading to the harassment and the general sensitivity toward harassment, damages were only to be awarded if there was a significant causative relationship with the harassment, to the extent of its psychological impact. Meanwhile, in view of certain circumstances (such as that, in recent years, opportunities to receive medical advice on mental problems have been increasing, thanks partly to the spread of psychiatric clinics, and that the period of time needed for recovery is often fixed), the court awarded medical costs for one year's treatment at a psychiatric clinic as damages. Besides this, it also upheld a separate claim for a solatium payment. Loss of earnings, however, was denied, in that it was not foreseeable that the worker would quit.

In the Saitama Sexual Harassment (school meal catering company) case,[22] a part-time worker was forced to quit after being subjected to sexual harassment by a superior. The onset and aggravation of the worker's depression were recognized as having been caused by acts of harassment, and the worker's claims for medical costs, loss of earnings and solatium payment were partially upheld. However, the compensation claim was only awarded up to a limit of 60%, in that the worker's temperamental disposition and stress factors in the home also contributed to the degree of mental disorder and prolongation of treatment.

Compared to other illnesses, with mental disorders it is difficult to define a range of damage in which there is a significant causative relationship. Although it would be logical to decide compensation amounts from damages that can be calculated, i.e. medical costs and loss of earnings, it is extremely difficult to decide to what degree, within what scope and within what period of time a significant causative relationship between harassment and mental disorder can be confirmed. Allowing for this with solatium payments, albeit somewhat vague, may be one reasonable method.

[22] Saitama District Court, August 31, 2009, LEX/DB25441387.

Teleworking and Changing Workplaces

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There has been much expectation for teleworking, which has many potential uses as "the flexible labor form without restriction of time and place." However, the relationships between the three labor forms of teleworking (telecommuting, mobile-working, at-home working) and workplaces are changing rapidly in late years. The main inducement for firms to adopt telecommuting was the attainment of work-life balance. But, after the Tohoku Earthquake, it has been replaced with the Business Continuity Plan (BCP) and saving electricity. It has been assumed that the mobile-workers work outside their offices, but in many cases, they work in their own homes after working hours to cope with their increased workload, because the mobile-work has led to abolition of offices and clerical workers who dealt with the paperwork. The at-home workers who take on specialist jobs were paid a relatively good reward in the past. But the fees for at-home works mediated through the agents based on a bid system have been declining drastically. Recent teleworking is apparently becoming a way to achieve higher labor efficiency by allowing labor space to encroach on personal space. Further detailed studies are urgently needed to capture such changes in teleworking.

I. Types of Teleworking

This paper tries to clarify the recent changes in the relations between labor and workplace in Japan by examining the changing nature of teleworking. Teleworking in this article refers to "a form of labor that consists of all or a part of production, processing or sale of the information at non-conventional workspace assuming the practical use of the information and telecommunication equipment" (Sato 2008, 4). Among labor forms that are categorized as "teleworking" according to this definition, three types should be examined due to their considerable spread in Japanese society: telecommuting, mobile-work and *zaitaku* (stay-home) work.

II. Changing Purposes of Telecommuting

The teleworkers belonging to the telecommuter type have an office in the place of employment, although they perform all or part of their duties at their own home.

Telecommuters are further classified into "Full-time telecommuter" who perform all of their duties at their own home, and "Part-time telecommuter" who only do some part of duties at home. There is no available official data on the adoption rate of telecommuting system. But it is speculated that only a small number of companies have officially introduced telecommuting systems. Even in the cases of such exceptional companies, only a small number of employees work in their own home a few days a week at most. Further-

more, most of them do not telecommute regularly (Sato 2006, 86).

The introduction of telecommuting systems would seem very advantageous in Japan where commuting time is generally long and the infrastructures of telecommunications are well established. However, diffusion of telecommuting has been hindered mainly by two factors.

The first factor is the ambiguity in the range of job duties each employee is supposed to perform. Very often, Japanese corporations organize employees into small groups and set group objectives to achieve without strictly assigning concrete tasks to individual employees. This kind of work style has been brought by "Japanese collectivism," a wide-spread tendency among Japanese corporations that forces the group members to cooperate with each other, and going beyond individual duties in order to secure their welfare at the group level (Hamaguchi 1982, 17). Under this tendency, not only does the range of individual job duties become ambiguous, but it has also become a natural expectation in Japanese workplaces for employees to cover co-worker's duty when necessary. In the case of telecommuting, the range of job duties for each employee has to be clearly defined since telecommuters work alone in their own home. Therefore, most Japanese companies have been reluctant to introduce a telecommuting system.

The second factor is concerning the performance evaluation system. The majority of Japanese companies adopt a merit-based evaluation system. However the evaluation system evaluates much more than concrete job performance of employees. Kumazawa Makoto states that employee evaluation system in Japanese corporations assesses not only "achievement" and "capability" but also "*joi* (morale and attitude)." The achievement appraisal evaluates employees' concrete job performance in a certain period of time. The capability appraisal is aimed at assessing each employee's potential ability. In *joi* appraisal, however, factors under evaluation include disciplined attitude, sense of responsibility, positive attitude toward one's job, and sense of cooperation. In other words it is the evaluation of employee's whole attitude to duties (Kumazawa 1989, 43–44).

Whoever tries to obtain a high evaluation in the *joi* appraisal must keep showing enthusiastic and cooperative attitude to his/her superior continuously. There is little possibility to receive high *joi* evaluation for telecommuters who cannot demonstrate their work attitudes in front of their superiors. Thus the telecommuting system is not compatible with the evaluation system of Japanese corporations. In that context, neither employers nor employees seriously want to telecommute.

Despite these factors, however, a small number of exceptional Japanese companies have introduced telecommuting system. In these cases, the most common purpose is the realization of proper work-life balance (Shimozaki and Kano 2007, 34–35). By introducing telecommuting system, it is expected that the employees' priorities that have been much inclined to "work," can be moved toward "life" to some extent. Abe Masako states that Johnson & Johnson K.K. in Japan adopted telecommuting system as part of their "Diversity Program." The original purpose of the program was to promote the diversity of employees.

But practically it has become a child care support measure for female employees. Typical usages of the system include working at home one day when an employee needs to attend to her child who suffers a sudden fever (Abe 2006, 22).

Among companies we have researched, several of them have introduced telecommuting system for supporting female employees in their child and elderly care, although this system later became utilized by male employees as well (Sato 2008, 43–45).

The telecommuting system brought advantages to corporations such as reducing the turnover of female employees for the reason of child bearing and rearing, and achieving more effective utilization of human resources. The companies that introduced the telecommuting system often say that they actually benefit from the system. From the employees' perspective, on the other hand, the telecommuting system appears to be part of corporate welfare program.[1]

Therefore, the main reason for Japanese companies to introduce a telecommuting system is, until recently, to support female employees in childcare and induce them to stay in the company. However, after the Great East Japan Earthquake of 11th March 2011, the perceived merits of telecommuting system have largely changed. One of the important causes of the change is the government's electricity conservation policy that imposes power saving measures on companies during day time in summer.

For example, Sompo Japan Insurance Inc., one of the leading insurance companies in Japan, introduced a telecommuting system in "full scale" since April 2012. The aims of the introduction are "to re-examine the way work is carried out daily and to improve the quality of job performance, productivity and efficiency by working at home, the environment in which one's concentration on the work can be heightened" and "to enable our employees to engage in their duties when it is impossible to come to the office due to a large scale disaster" (Sompo Japan Insurance Inc. 2012). In this case, the telecommuting is understood as a means to improve productivity and to continue business at a time of disaster. Promotion of work-life balance and the welfare of female employees are not part of the stated purposes of the telecommuting system.

Some other companies try to utilize telecommunication for saving electricity. The case of KDDI Corporation, one of the leading telecommunication carriers in Japan, is typical among them. According to the official statement of KDDI, in order to reduce their electricity consumption during the peak of electricity demand, 40% of their employees will work at their home during the afternoon from July to September (Asahi Shinbun 2011a). Pfizer Japan Inc., a major ethical pharmaceuticals maker, and some other companies have introduced telecommuting systems with the purpose of saving electricity (Asahi Shinbun 2011b). Such a trend is continuing after 2011 (Asahi Shinbun 2012).[2]

[1] Obviously, the real problem is a disproportionate burden of housework imposed on female workers in Japan. The telecommuting system is at best a supportive measure to deal with the problem, and at worst it may rather promote the gender-based division of labor.

[2] Executions of this type of telecommuting would not result in saving electricity in Japanese as a

According to the Japan Telework Association, after the earthquake, many companies were interested in learning how to introduce telecommuting system for "continuing business even when electricity conservation is required by the government or at the time of other emergencies" (Aera 2012). The Terewaku Jinko Jittai Chosa [Population Survey on Teleworker] conducted by Ministry of Land, Infrastructure, Transport and Tourism (MLIT) reports that the proportion of companies that have introduced a telecommuting system have increased 6.6% right after the Earthquake and further increased 3.8% by the summer of 2011 (MLIT 2012).[3]

Utilizing telecommuting systems for maintaining business activities at the time of a large-scale disaster is not a new idea that has been proposed after the Earthquake. A considerable number of researchers have already emphasized expected benefits of telecommuting if bird flu becomes a pandemic (Maruyama 2010, 15; Yoshizawa 2010, 17–18). Even before that, the potential effectiveness of telecommuting was eagerly suggested in 2003 when SARS spread (Masaki 2011, 12–13).[4] The Earthquake added a new urgency to this kind of already proposed suggestions.

Before the earthquake, a small numbers of employees spontaneously used the telecommuting system, and the majority of employees have not used the system even where the system is available to use. However, telecommuting systems adopted after the Earthquake are, whether they are for business continuity or electricity saving, very often imposed on employees irrespective of their preferences. The idea that employees should work at home when offices are not usable is based on a premise that employers can freely confiscate employees' private spaces.

III. Mobile-Work with Unpaid Work at Home

Mobile-workers are employees who spend most of their working time at their customers' sites, such as sales staffs and field engineers. They usually go directly to customers' sites from their own home instead of commuting to their office every morning, and they go straight home without going back to their office at the end of working day. Many Japanese companies have been accepting the work style of "go directly and return home directly" for a long time. But this work style has been considered acceptable only in exceptional circumstances, and the normal routine has been to report for work at the beginning and at the end

whole because the employees consume electricity at their own home, which is likely to be more inefficient than the collective consumption at their offices.

[3] The MLIT research reports the increase of companies introducing "teleworking" system without specifying the type of teleworking. Among the three types of teleworking, only the telecommuting system can help corporations to continue business at a time of a disaster. Therefore, it can be speculated that the most companies that introduced teleworking system after the Earthquake have actually adopted telecommuting system.

[4] These authors also use the term "teleworking." But it is obvious that mobile-work and *zaitaku*-work do not have any positive effect at a time of pandemic of disease.

of each working day.

The distinguishing feature of mobile-workers is that they rarely go to their office. Typical mobile-workers go to their office "once a week for meeting at most." The communication between them and their office is kept by a mobile phone or a note PC connected to the internet. Most of their daily reports are written in an allocated space at the customer's site, company vehicle while parked in a parking lot, restaurant or coffee shop near the customer's office, and are sent through the internet (Sato 2009, 16).

The most beneficial merits of adopting the mobile-work system for companies are reduction of the cost for office space, and extension of time mobile workers spend on their customers. By increasing the proportion of mobile-workers among employees, the number of employees who work in the office can be reduced. As a result, the office space can be reduced, and so are utility costs. Companies that adopt mobile-work system must distribute mobile phones and note PCs to their mobile-workers, and also bear their maintenance cost. However, such companies can reduce the cost for fixed-line phones and labor cost for handling telephone calls. Thus, the mobile-work system can reduce total cost for office maintenance (Nakazato and Oishi 2003, 71).

Once the mobile-work system is adopted, mobile workers can go directly to their customers' site from their home without spending time by commuting to their office or moving from the office to customers' site. Because the saved time is spent on their customers, it is expected that the quality of their service is enhanced and customer satisfaction is raised (Sato 2008, 71–72).

While the office cost reduction is clearly measurable, the elevation of customer satisfaction is not. In any case, the mobile-work system aims to improve business efficiency by allowing mobile workers to utilize the time and space while they are on the move. Nevertheless, research on Medical Representative (MR) of pharmaceutical companies reveals that most mobile-workers spend a considerable time on paperwork at their home (Sato 2009, 18–32).

MRs can write a simple email or daily bulletin anywhere during recesses. But they must prepare more complicated documents such as presentation materials and proposals. Especially after the Personal Information Protection Act was enforced, many MRs rarely write any documents outside the home, according to the research. The majority of them do paperwork at their home after work on weekdays and on holidays. A respondent to the research spent "two hours on average on every weekday and a half-day during weekends" on paperwork at home, and such a case is not unusual.

Furthermore, the adoption of mobile-work system has increased the burden of paperwork in some cases. Some companies abolished their branches and sales offices after introducing a mobile-work system and are maintaining only the head office. In such cases, mobile-workers work under the perfect "office-less" condition. These companies have judged that they do not need to keep branch offices only for meeting once a week, for which renting a meeting room at a nearby hotel would be suffice.

An important point is that those companies often abolished the jobs of sales assistant clerk along with the abolishment of the branch offices. As the result of the abolishment of the assistant clerk jobs, some of their duties have been taken over by the head office. But the rest of the duties have been imposed on the mobile workers and the amount of paperwork they have to deal with has remarkably increased.

Consequently, mobile-workers have no choice but to engage in time-consuming paperwork at their own home. Most of their employers have adopted the "Assumed Work Hours system" to ignore how long their mobile-workers are working. The Japanese Labor Standards Act stipulates that employers must pay overtime allowances for time worked more than official working hours and on holidays, even with the Assumed Work Hours contract. However, whether or not the labor carried out at their home should be legally defined as paid work is not unambiguous. It is because such labor is supposed to be "spontaneously" carried out and, in some cases, employers supposedly prohibit work at home.

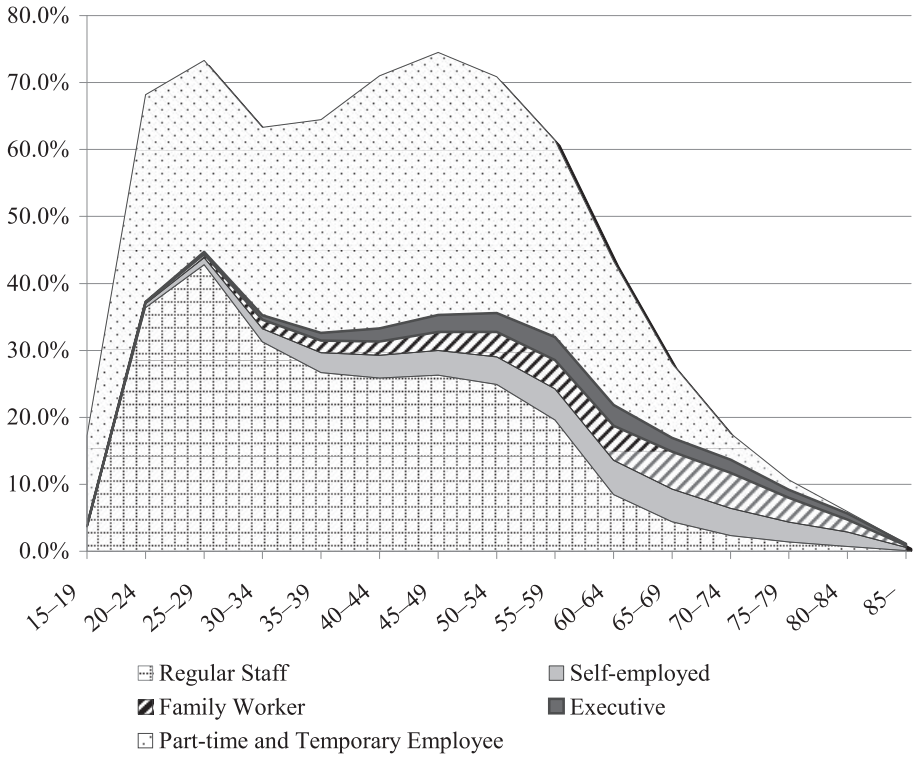
The respondents to the research unanimously said that regardless of the amount of work, the wage is fixed because a sales allowance is paid. Although the sales allowance is reward for their long hours of extra work, in reality it can rarely compensate for the actual overtime worked.

Abolishment of their offices forces the employees to work at home. As in the case with telecommuting workers, the private spaces of mobile-workers are being confiscated by their employers. Furthermore, unlimited hours of work at home are imposed on mobile-workers through the Assumed Work Hour system.

IV. Declining Reward of *Zaitaku*-Work

Zaitaku (stay home)-workers are not employees of any company, but work at home as freelancers through contracts. Many Japanese researchers call owners of small business who work on information utilizing information technology "SOHO-workers." They have also asserted the SOHO-work is one type of teleworking with the assumption that SOHO-workers often utilize their home as office. But our research has found that most Japanese SOHO owners seek to establish an office in a business district as far as their financial condition allows. They commute to their office every day, rather than working at their home (Sato 2006, 155). This work style is not different from that of self-employed workers in general; therefore SOHO-workers are excluded from the discussions in this section.

Among the three types of teleworking, researches on *zaitaku*-work have the longest history, and the accumulation of research results is abundant. For example, the Women's Bureau of the Ministry of Labor (WBML) conducted Zaitaku Shugyo Homon Chosa [A home-visit interview survey for *zaitaku* (stay-home) workers], which is a home-visit survey on *zaitaku*-workers in 1988 (WBML 1989). According to result of this survey, 97.6% of 207 informants are women and the majority of them were age 30–39.



Source: From *the 2007 Employment Status Survey* and *Current Population Estimates* as of October 1, 2007.

Figure 1. Labor-Force Participation Rates of Women

What follows is the reason that most *zaitaku*-workers are women in their thirties. Figure 1 shows the labor-force participation rate and employment status of Japanese women by age. The labor-force participation rate of women falls at the age 30–44 and age 35–39; the graph shows a typical "M-shape curve." The main reasons for them to be out of the labor market are "to concentrate on housework and childcare" and "difficulty of juggling work and childcare." Most of them thought that if "day-care center," "childcare leave system" and "cooperation of the husband" had been available, they would not have left their job. They did not necessarily wish to become a full-time housewife (Japan Institute of Labour 2003, 33–34).

But the majority of women who left a job wish to re-enter the job market for earning supplementary household income or for social participation. Yet it is very difficult for mothers with small children to work outside the home in Japan, where wives are heavily

Table 1. Time Spent on Housework a Day and Wife's Employment Status

	Wife's Employment Status		
	Unemployed	Employed Part-time	Employed Full-time
Time spent on housework by wife	7h 23min	4h 21min	3h 18min
Time spent on housework by husband	11 min	3 min	30 min

Source: Amano et al. (1996, 742).

burdened with housework and childcare. As Table 1 shows, Japanese husbands hardly do housework whether their wife has a job or not. The two major reasons for this situation are extremely long working hours of male regular employees and still prevailing social norm, "housework is women's work." In this situation, the *zaitaku*-work, which allows housewives with small children to work at home, is one of the very few choices for them.

The 1988 research also indicates that 98.4% of the informants were not employed but working under a piece-work contract. More than 90% of them engaged in kinds of "input jobs" such as word processing and data entry, and only a small percentage of them were involved in software programming and tracing of drawing.

The merits of *zaitaku*-work that attracted the informants most are that the work style allows them to "work while being at home" (70.5%) and to "decide on working hours freely"(51.2%). The discretion over their own working hours is a necessary condition for them to maintain good childcare. On the other side, their most frequently perceived disadvantages of *zaitaku*-work is "unstable amount of work" (58.0%), and as a result, "unstable income" (43.8%) (WBML 1989, 5–23).

The WBML conducted a similar kind of survey in 1991 on *zaitaku*-workers engaged in information processing jobs, and the results are similar to the 1988 research. Among 1,000 respondents, 94.6% were women, the majority of whom were 30–39 years old, and most of them were engaged in "input jobs" under a piecework contract. The remarkable point of the survey is that it collected income data of *zaitaku*-workers. Their average monthly income was 93,200 yen, the number of working days in a month was 16.2 days, and the working hours in a day was 4.4 hours. Their hourly wage on average was more than 1,300 yen (WBML 1992, 11–13).

Even in 1991 when the research was conducted, respondents' dissatisfaction with their wage was quite high, but their income level was much higher than the present income level of *zaitaku*-workers. In the beginning of the 1990s, word processing ability was a scarce skill in Japan, and the operators were well-rewarded. The fact that many *zaitaku*-workers often obtained their contracts from their former employers probably prevented their prices of labor from falling.

However, as computer skills spread through school education, the scarcity value of the skill declined rapidly. According to the results of a survey in 1997, 71.9% of informants who engaged in "word processing and tape transcription" earned less than one million yen a year. Furthermore, the annual income of 36.8% of these informants did not even reach half a million yen (Japan Institute of Labour 1998, 63).

In the latter half of the 1990s, most *zaitaku*-workers were not able to obtain contracts from their former employers anymore because most young female clerks employed there had rudimentary computer skills in this period. Thus, it became very difficult to find new customers for *zaitaku*-workers, most of who were housewives with small children and could not or did not want to leave their home. In the middle of the 1990s, there appeared "*zaitaku*-work agents" (work-at-home agent), brokers who intermediate between customers and *zaitaku*-workers. Their intermediations work in the following manner.

Agents maintain their own web site and invite *zaitaku*-workers to register for membership all the time. When an agent receives a contract from their customer, pieces of information such as the details of the job, reward and the due date are sent to registered members by e-mail. *Zaitaku*-workers who have received the e-mail, after considering their own skills, rewards and the due date, decide if they want to apply for the job, and let the agent know their decision by e-mail. The agent chooses suitable members for the job from the applicants by taking their past performances into consideration.

With the appearance of the *zaitaku*-work agents, *zaitaku*-works have become jobs that "anyone can do," and the price of "input job" labor has further declined. According to the results of research in 2002 on *zaitaku*-workers who were members of an agent, the average prepayment for an hour was 5,714 yen for "system design or analysis" and 5,000 yen for "translation." In contrast to these highly paid works, the average payment for an hour was 496 yen for "data entry," 239 yen for "data proofreading" and 629 yen for "tape transcription." The price of "input job" labor had declined to a very low level (Sato 2006, 110).

Research on a *zaitaku*-work agent in May 2012 shows the information on the latest situation of *zaitaku*-workers. The number of registered members of the agent was about 6,000 and the size is moderate for a recent *zaitaku*-work agent. But this agent has adopted a new and very different method of receiving contracts and allocating jobs to *zaitaku*-workers. In the past, the amount of payment *zaitaku*-workers received was decided by agents. In the case of the researched agent, the reward has been determined by a bidding system.

The agent posts the details of the received jobs from customers on their own web site. Registered members examine the posted information to find a job that they think they can handle with their own skills, and submit a bid price for the job they are willing to do. Then the customer, not the agent, chooses the winning bidder. The records of the past performances of the registers were openly shown on the agent's site for the customers to take into consideration, so the job not always goes to the lowest bidder. However, the bidding system has undoubtedly lowered the overall price of *zaitaku*-workers' labor.

According to the research, 5,900 registrants had never received any job from this

agent, and only 111 informants had received at least one job through the agent by winning in the bidding system. Further research on the 111 informants shows that the period of time these *zaitaku*-workers had been registrants of the agent varies. The jobs they had obtained also range widely from programming or technical translation to simple "input job." Each of these 111 registrants had received 7.8 jobs on average (the median was 5.0 jobs) and their average monthly income was 34,832 yen (the median was 13,770 yen). Their average compensation for a job received was only 4,470 yen (the median was 2,736 yen). The reason for the large difference between the average and the median is that only a small number of registrants tended to frequently receive jobs with relatively high pay, while the rest of them had only been able to receive jobs with low pay once in a long time.

About 70% of jobs sent out for bid by the agent were so-called "input jobs." The low compensation level of input jobs is again confirmed by the research. For example, the piece rate for inputting information on a business card containing information such as name, department, job title, company name, telephone number and e-mail address was 20–30 yen. The rate for inputting information contained on a survey questionnaire, even when it includes not only numerical data but also answers to open-ended questions, similarly remained at a low compensation level.

The job of writing articles for corporate blogs or homepages involves not only data input, but also creating the content itself. However, the piece rate for an article that consists of 200–600 letters was usually only 100 yen.

One of the most important results of the research is that even the pay level for jobs that have been well-compensated due to the requirements of highly specialized skills are now rapidly declining. For instance, the pay level for translating 15 pages of English document into Japanese was only 10,000 yen (667 yen a page). It was not unusual that translating two pages of Japanese document into English paid only 1,000 yen (500 yen a page).

As indicated above, the scarcity value of word processing and other data entry skills has been declining gradually with the spread of elementary computer education, and so has been the pay level for these jobs. Recently, jobs that require highly specialized skills such as translation have similarly suffered a decline in pay level.

But the decline in pay level of "input jobs" and that of translation have been caused by different factors. Surely the population who has basic computer skills has remarkably increased recently, but the population who has received advanced English education has not. Therefore, the decline in the pay level of translation job cannot be attributed to its loss of scarcity value. The decline is likely to be caused mainly by the extreme imbalance between supply and demand of that kind of labor and the introduction of the bidding system.

Considering the low proportion of the registrants who have received at least one job in the whole registrants and the low level of earnings of those who have ever received a job, it is reasonable to speculate that the number of jobs the agent has obtained was too small compared to the large number of registrants. Furthermore, registrants have been intensely competing among themselves over jobs in the bidding system. In this situation, it is difficult

to avoid the decline of the reward for their labor.

Another reason why *zaitaku*-workers have to put up with such low pay is that they work at home as freelancers. If they go out to work as employees, minimum wage would be guaranteed by the law that protects workers. But the registrants were confined to their home due to their unavoidable undertaking of housework and childcare labor, and therefore had almost no choice but to work through contract as freelancers. As a result, they have been placed outside the protection of the rule of labor law no matter how low the payments they receive are. Moreover, "*naishoku*" (industrial homework), a form of contract work that is carried out at home and involves producing and processing of materials, is regulated by the Industrial Homework Act and the minimum industrial wage system. But this law is not applied to *zaitaku*-workers who produce and process information.

The fact that *zaitaku*-workers cannot choose a place to work other than their home is one of the main sources of their difficulty.

V. Changing Nature of Workplaces

As indicated above, not only in the cases of telecommuting and *zaitaku*-work, which are working-at-home styles of work, but also in the mobile-work, working hours at home have become considerably longer. However, Japan's labor related laws do not presuppose any labor carried out at employees' own home (Kojima 2007, 46–50). The situation in which employees are forced to work even in their private sphere has been regarded as something that should never happen, and therefore the legal regulation left such situation out of its consideration (Yoshida 2002, 769–72). On the other hand, the Japanese laws also fail to protect *zaitaku*-workers who are legally not employed workers. The workers protected by the Industrial Homework Act are limited to those who produce or process materials at home, not workers who deal with information.

Until the late 20th century, the main social trend had been the transformation of agricultural and self-employed population into employed population. Along with this change, separation of workplace and home had been proceeding because the independence of the life sphere of work from the life sphere of living was considered to increase labor productivity.

But the present spread of teleworking is again changing home into the place of labor. Aiming at more efficient labor and further labor cost reduction, a momentum that confiscates the private sphere of home and turns it to the sphere of work is aborning. What medium and long term effects the momentum will have on the society is yet to be seen. However, the telecommuting system is becoming a means to let employees in the middle of a devastating disaster continue working. The mobile-work which was expected to realize an "office-less" work style actually changed home into an office for unpaid work. The *zaitaku*-work has recently become a style of work that "anyone can do," but the other side of the coin is that its pay level is endlessly declining.

Not all aspects of teleworking system should be seen negatively. The *zaitaku*-workers used to obtain a moderate income till the first half of the 1990's and telecommuting system has a positive effect as a means to support employees in childcare even now. For better or worse, teleworking is no more than a work style. What is required on researchers is to continuously alert society to possible abuse of teleworking as a way to evade the law and exploit working people. Therefore, continuation and accumulation of careful multi-disciplinary research on teleworking are important.

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Diversification of "the Workplace" and Problems with Labor Law*

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This paper examines working hour regulations and accident compensation with particular focus on work outside the workplace (WOW) and working at home, as increasingly relevant workplace formats. In terms of working hour regulations, systems of de facto working hours for WOW under the Labor Standards Act can be applied to both of these formats. However, since these are working formats that dilute the authority of the employer, there is the reality (or fear) of a trend towards longer working hours, as well as the problems associated with this. Thus, the author states that standards for upper limits should be applied to and established for work beyond statutory hours even when applying de facto working hour systems, and that health maintenance measures by employers should be prescribed. On the other hand, the author also states that the duty of employers to manage and keep track of hours worked should be distinct from whether or not de facto working hour systems can be applied, and should be aimed at preventing long working hours and maintaining health. On the subject of accident compensation, meanwhile, working at home, in particular, is a working format not envisaged by the Industrial Accident Compensation Insurance Act, and therefore has no precedent. Accidents unique to working at home should be anticipated and studied in practical detail.

I. Issues Examined in This Paper

A workplace is a spatial location where people work. Relevant passages in the main existing legislation refer to "establishments" and "workplaces" as places where people work. Therefore, for specific matters in existing legislation, those places provide a basis for regulation under labor law. In legal terms, working means the duty to perform labor based on a labor contract; the workplace could then be seen as a certain spatial location where the duty to perform labor based on a labor contract is discharged.

The issue central to this paper is the diversification of the workplace as the natural extension of this. If we accept that workplaces are diversifying, it means that employees are discharging the duty to perform labor in locations other than the workplaces where they usually work. As such, the topics for examination by this paper are as follows.

The first will be the question of whether systems of Work outside the Workplace (WOW), or more specifically Conclusive Presumption of Hours Worked (CPHW) for WOW (Labor Standards Act: LSA Art. 38-2), can be applied as formats for discharging the duty to provide labor. Unlike traditional office work, CPHW actually has the effect of di-

* The opinions expressed in this paper are the personal views of the author, and do not represent the position of any organization to which he belongs. Due to lack of space, general discussions on civil law have been omitted and the footnotes have also been kept to a minimum.

luting the relationship of direction and command between employer and employee. As a result, the employer can no longer control employees' dereliction of their contractual duty to perform labor. If we focus on the employer's inability to control, other problems then emerge; namely, how to manage working hours as a matter related to labor conditions, the processes of work performance, and whether there would be liability for accident compensation if these were neglected. The same problems also pertain when the format for discharging the duty to perform labor consists of working at home by the employee.

Therefore, the working formats to be examined in this paper will be WOW and working at home; matters related to labor conditions will be working hour regulations and accident compensation pertaining to each format. In the following, issues of legal policy will be examined, while referring to actual situations regarding these problems as well as case research.

II. An Overview of Actual Situations of WOW and Working at Home

1. CPHW Schemes for WOW

The ratio of companies introducing CPHW schemes is higher than that of the Discretionary Work Scheme (DWS), which is similar to CPHW, but is still only around 10% (Table 1). These CPHW schemes apply to 7.1% of employees. Therefore, even if companies are adopting schemes, the employees covered by them are limited in number (Table 2).

In CPHW schemes, "when an employee is engaged in work outside the place of business and it is difficult to calculate the hours worked," "the employee is deemed to have worked the normal working hours" or "the hours normally considered necessary in order to perform the work in question." Thus, by its very nature, CPHW only applies to limited types of work (occupations). Using data from JILPT surveys, this point can be tabulated as follows (Table 3).

Comparing the data for 2003 with those for 2012, the ratio of introduction has changed little in the "Marketing, sales and services divisions." However, while the "Administrative and management divisions" and "Engineering and R&D divisions" were both 0% in 2003, the former had risen to 4.8% and the latter to 12.9% in 2012.

2. Working at Home

According to MLITT, City Bureau, City Policy Div. (2013), the ratio of teleworkers (in the narrow sense) in the population of workers aged 15 and over was 21.3% in 2012. Of these, the number of home-based teleworkers is estimated to have been around 9.3 million. However, the definition of teleworkers used in this survey was very broad.[1] The same goes

[1] Teleworkers in the narrow sense, in short, are paid employees who use ICT (info-communication technology) to work at least 8 hours per week in an environment where ICT can be used in a location other than the department to which they belong.

Table 1. Ratios of Companies, by Introduction of CPHW and Type of Scheme (%)

Year	Total	Companies introducing CPHW schemes	Type of CPHW (multiple answer)			Companies not introducing CPHW schemes
			CPHW for WOW	DWS (professional work type)	DWS (management planning type)	
2012	100	11.9	10.4	2.3	0.7	88.1
2011	100	11.2	9.3	2.2	0.7	88.8
2010	100	11.2	9.1	2.5	0.8	88.8
2009	100	8.9	7.5	2.1	1.0	91.1
2008	100	10.5	8.8	2.2	0.9	89.5

Source: Excerpt from MHLW, Statistics Div., Employment, Wage, and Welfare Stat. Sec. (2012, table 11).

Table 2. Ratios of Employees, by Application of CPHW and Type of Scheme (%)

Year	Total	Employees covered by CPHW schemes				Employees not covered by CPHW schemes
			CPHW for WOW	DWS (professional work type)	DWS (management planning type)	
2012	100	8.5	7.1	1.1	0.3	91.5
2011	100	7.3	5.6	1.2	0.4	92.7
2010	100	6.9	5.3	1.3	0.3	93.1
2009	100	6.3	4.8	1.1	0.4	93.7
2008	100	7.9	6.2	1.3	0.5	92.1

Source: Excerpt from MHLW, Statistics Div., Employment, Wage, and Welfare Stat. Sec. (2012, table 12).

Table 3. Introduction of CPHW Schemes outside the Place of Business, by Division (%)

	2003 (Sample Size)	2012 (Sample Size)
Administrative and management divisions	0.0 (42)	4.8 (42)
Marketing, sales and services divisions	30.0 (40)	29.7 (37)
Engineering and R&D divisions	0.0 (31)	12.9 (31)

Source: Prepared by the author from Watanabe (2012, 54, table 1).

for home-based teleworkers.[2] Considering the rapid diffusion of various ICT equipment, many people could be classed as home-based teleworkers in reality. Given that "working at home" is the object of examination by this paper, the number of employed teleworkers would need to be calculated by subtracting self-employed teleworkers from home-based teleworkers. According to MLITT, City Bureau, City Policy Div. (2013), they are estimated to number around 7.1 million. This figure is also thought to reflect the broadness of the definition.

In this paper, therefore, "working at home" as the object of examination will be based on the assumption that the employer permits the employee to provide labor at home as the employee's private space, outside the workplace as the location where labor is normally provided, based on a labor contract relationship. The employee is assumed to actually provide this labor at home on all or some of the days (in all or some of the hours) when there is a duty to provide labor within a calendar week or calendar month. On this basis, the issue will be discussed in terms of "full working at home" (working at home for at least three days per week) and "partial working at home" (working at home for up to two days per week), as surveyed by JILPT (2008).[3]

Full working at home was permitted by 5.3% of the responding companies. These consisted of companies that "Operate working at home as a company scheme, e.g. as stipulated in rules of employment" (scheme operation) with 2.4% and "Operate working at home not as a company scheme, but at the discretion of the supervisor or as a custom" (discretionary or customary operation) with 2.9%. For partial working at home, the corresponding figures are 2.2% for scheme operation and 3.4% for discretionary or customary operation, totaling 5.6% of the responding companies. According to this survey, a total of 10.9% of responding companies operated schemes for working at home, including both full and partial working at home. In terms of numbers, around 45–46 companies operated such schemes. As such, the diffusion level of working at home would not appear particularly significant.[4]

Nevertheless, considering the nature of work (occupations), it is hard to imagine the number of WOW employees decreasing in future. The same could be said for working at home. In some cases, companies accept it as a way of maintaining the employees' work life balance,[5] among other reasons; as such, the problems facing legal policy on these working formats need to be presented.

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[2] Home-based teleworkers are teleworkers (in the narrow sense) who engage in telework at home for at least 1 minute per week.

[3] This survey was based on 414 responses received from 3,995 companies to which questionnaires were distributed (response rate 10.36%).

[4] According to MLITT, City Bureau, City Policy Division (2012), of 65% of people who work on weekdays, 11% work at home. This breaks down further into 2% fully working at home (working at home only) and 9% partially working at home (head office + working at home: 3%, working at home + satellite office environment, mobile environment, etc.: 6%). As these figures show, the diffusion of working at home cannot be described as particularly widespread.

[5] See JILPT (2009, 128–72).

III. Work outside the Workplace (WOW)

1. Regulations on Working Hours

(1) Actual Situation of Hours Worked under CPHW

JILPT (2009) classifies working formats into those based on the "Regular working hour system," the "Flexible working hour system," the "Irregular working hour system," the "Shift work system," the "Discretionary work system / De facto working hour system" and "No control of working hours," respectively, and compares the total hours worked per month by employees in each system. As a result, 21.2% of employees in the "Discretionary work system / De facto working hour system" were found to have worked "241–280 hours" per month, a higher proportion than in any other system. Moreover, 17.7% of employees in the "Discretionary work system / De facto working hour system" had worked "Longer than 281 hours" per month. This was a very high percentage, second only to "No control of working hours" with 21.1%.[6] The upshot of this is that the "Discretionary work system / De facto working hour system" format shows a striking tendency towards long working hours, i.e. a total of 241 hours or more worked per month (with a combined total of 38.9%).[7] It could therefore be said that employees under the de facto system (i.e. CPHW) work longer hours than employees under other working hour systems.

(2) The Feasibility of Applying CPHW and Perspectives of Legal Policy

CPHW schemes provide regulations for "calculating working hours in cases of work outside the workplace, where it is difficult to calculate working hours." These regulations were established because this kind of work is "beyond the reach of concrete direction and supervision by the employer." Specifically, the system envisages work such as sales outside the workplace by employees in sales and marketing occupations, information gathering by journalists, etc.[8] CPHW schemes are therefore considered not to apply in cases where it is not difficult to calculate working hours—that is, when "even if engaging in work outside the workplace, working hours can be calculated because the work is within the reach of concrete direction and supervision by the employer."[9]

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[6] See JILPT (2009, 29, Chart 2-8-7).

[7] However, of the CPHW suggested in the Labor Standards Act, CPHW for WOW and two types of DWS are researched together in this survey. This makes it impossible to ascertain the precise working hours of employees under the CPHW scheme for WOW, as the object of examination by this paper.

[8] See MHLW, LSB (2011, 533).

[9] See MHLW, LSB (2011, 535). According to the official interpretation, CPHW schemes are deemed not to apply (i) when groups of several people engage in WOW and one of them manages the working hours, (ii) when engaged in work outside the place of business, but in a position to receive instructions from the employer at any time by radio, pager, etc., and (iii) when engaged in work outside the place of business in accordance with specific instructions on where to go, when to return, and other details of the work on the day, received in the place of business, and subsequently returning to the place of business (Notification of LSB, Ministry of Labour (MOL), No.1, January 1, 1988).

Turning next to court decisions, it would be fair to say that there have been virtually no cases where the application of CPHW has been recognized.[10] For example, it has been deemed not to apply in cases where the employer instructs work to begin and end at times prescribed by rules of employment.[11] The bottom line is that the provisions of CPHW do not apply if the work is within the reach of some form of direction and supervision by the employer, with respect to ways of performing the work as well as managing and ascertaining working hours, and when no difficulty is deemed to be found in calculating working hours. Consequently, cases where CPHW meets these conditions and is lawfully applied have been interpreted in an extremely limited manner.[12] Moreover, given the very advanced level of various ICT equipment today, it is only to be expected that there will be increasingly narrow scope for recognizing the application of CPHW on grounds that the work is beyond the reach of direction and supervision by the employer.

Even so, if it were still considered worth applying CPHW depending on the work (occupation), then the nature of such application would need to be studied hereafter. The author's personal thoughts on this are as follows.

Firstly, regardless of the work (occupation) an employee is engaged in, the employer is obliged to ascertain the hours actually worked.[13] On the other hand, if the principles of CPHW were rigorously applied, it might seem inappropriate to mandate that employers ascertain hours worked. A way around this might be to rethink the system as CPHW based on the discretionary nature of work performance, as the basic form of the discretionary work system.[14] Viewed in this way, it would appear consistent with DWS for professional or management planning work, as variant forms of CPHW.[15]

Secondly, as long as the conditions for applying CPHW are satisfied, the employee would be deemed to have worked the normal working hours or the hours usually required to perform the work concerned. The difficulty would lie in managing working hours (ascer-

[10] The only exception to this is the Japan Insurance Service (Holiday Work Allowance No.1) case, Tokyo District Court, February 16, 2009, 983 Rodo Hanrei 51. However, doubts over the significance of this judgment as a precedent are indicated by Takeuchi (Okuno) (2010).

[11] Examples of recent negative judgments are the Hankyu Travel Support (Temporary Tour Conductors No.1) case, Tokyo High Court, September 14, 2011, 1036 Rodo Hanrei 14, Hankyu Travel Support (Temporary Tour Conductors No.2) case, Tokyo High Court March 7, 2012, 1048 Rodo Hanrei 6, and the Hankyu Travel Support (Temporary Tour Conductors No.3) case, Tokyo High Court March 7, 2012, 1048 Rodo Hanrei 26.

[12] See Suzuki (2011, 66).

[13] LSA Art.108, Enforcement Regulation of LAS Art.54, Standards for Employers' Duty to Properly Ascertain Hours Worked (Notification of LSB, MHLW, No.339, April 6, 2001). These standards are supposed to apply to "everyone except management supervisors and employees under a CPHW scheme." However, they state that "the employer also has responsibility for properly managing working hours for employees removed from the application of these standards, due to the need to protect health." Effectively, this means that all employees come under the application of these standards.

[14] See Ishitobi (1997, 133), Suzuki (2011, 67).

[15] See Abe (2012, 131).

taining hours worked). As CPHW is a system that deems hours to have been worked, it runs counter to the concept of managing working hours. What has caused this difficulty to arise is the reality of long working hours and the resulting health problems for employees.

According to the Standards for Employers' Duty to Properly Ascertain Hours Worked, self-reporting systems are allowed on condition that the employees subject to application are made thoroughly aware in advance that they are to correctly record actual hours worked and properly self-report, etc., in addition to objectively confirming and recording hours via on-the-spot confirmation, time cards or IC cards. While some opinions oppose the self-reporting system in that it casts doubt on the worth of CPHW in theory,[16] this author sees no other way but to depend on a self-reporting system.[17] Judging from the Standards for Employers' Duty to Properly Ascertain Hours Worked, the duty to ascertain hours worked under CPHW should be grasped solely as a means of preventing long working hours and enabling the employer to take measures to ensure the health of employees. This is based on a significance quite separate from the feasibility of applying CPHW. It should not be grasped as ascertaining hours worked in line with regulations on working hours and increased wages under the Labor Standards Act, even if increased wages need to be paid for hours worked beyond statutory hours, on holidays and at night (hours worked beyond LSA regulations, etc.).[18]

2. Accident Compensation

(1) Situation of Employment Injury amongst Employees under CPHW

According to MHLW, LSB, OAI Div, OI Sec. (2012), in FY2011 there were 898 claims for industrial accident compensation related to cerebrovascular disease, ischemic heart disease and others (including '*karoshi*,' death caused by overwork). Of these, 113 claims were related to "sales employees," an occupation quite apt to come under CPHW. This was in fact the third largest source of claims. However, only 30 of these claims resulted in a payment award, a figure not larger than those for other occupations. Meanwhile, there were 1,272 claims for industrial accident compensation related to mental disorders (including suicide). Here again, "sales employees" accounted for the third largest number of claims (167). And once again, the number of payout awards was relatively low at 40. Although nothing can be said with certainty from these statistical data alone, a noteworthy fact is that the number of cases resulting in payment is higher when the claimant has worked more than 80 hours beyond statutory hours on average per month (brain and heart disease: "60–79 hours" [20 cases] → "80–99 hours" [105 cases]; mental disorders: "60–79 hours" [15 cases] → "80–99 hours" [29 cases]).

[16] See Labour Law Study Group of University of Tokyo (1990, 547).

[17] Doko and Wada (2011, 13) (remarks by Wada), though differing in intention from this author, also state that working hours can be managed to a certain extent by a self-reporting system.

[18] See note 13.

(2) Issues in Employment Injury Affecting CPHW Employees, and Perspectives of Legal Policy

As shown above, claims for industrial accident compensation in occupations prone to come under CPHW are quite numerous, but actual payment awards are not so common. Also, cases involving employees who could come under CPHW are occasionally found in the list of principal rulings by the Occupational Accident Compensation Insurance Review Commission (OACIRC) from FY2001 to FY2010.[19] In these cases, however, it is not that the application of CPHW itself had a direct impact on the ruling. Rather, the point of contention was whether long working hours or an excessive workload could be said to have rapidly aggravated an underlying disorder. This very point should be regarded as a major problem lying behind the (potential) application of CPHW. To the knowledge of the author, moreover, there have been no court decisions on employees coming under CPHW.

When viewed in terms of long working hours and excessive workload, mental disorders do not invite generalization, as they involve personality problems inherent in the individual. Based on the fact that employees under CPHW tend to work longer hours, however, legal systems on working hours (including CPHW) should no longer focus only on the question of working hours or time bands plus overtime pay. Instead, the perspective of maintaining employees' health and preventing life-threatening hazards[20] should be rigorously incorporated in policies.

The first requirement, then, is that provisions on measures for maintaining health in the case of CPHW (regardless of whether presumed hours are specified in an agreement) should be established under the Labor Standards Act.

Secondly, although overtime pay has to be paid if presumed hours extend beyond statutory hours, the limit standards on working hours corresponding to overtime and holiday work[21] do not apply. Considering that the hours actually worked by employees under CPHW are quite long, it would be more in keeping with the basic principles of working hour regulations if overtime pay were combined with the application of limit standards. Therefore, although the problem with CPHW lies not in regulating long hours but in calculating hours, limit standards on work beyond statutory hours ought to be established for CPHW. This should be in addition to normal limit standards (Limit Standards Art.3) and limit standards applied to irregular working hour systems based on a unit of one year (Limit Standards Art.4). Even with CPHW (or DWS), these would have significance as minimum standards for working conditions as specified under the Labor Standards Act (LSA Art.1, Sec.2). Furthermore, these minimum standards would also be consistent with Japanese Constitution Art.25, Sec.1, which guarantees "minimum standards of wholesome and cul-

[19] See http://www.mhlw.go.jp/topics/bukyoku/shinsa/roudou/04.html.

[20] See Wada (2011, 27).

[21] Standards for limits on extension of working hours specified by agreement under Labor Standards Act Art. 36 Sec.1 (Notification of MOL, No.154, December 28, 1998, Notification of MHLW, No.316, May 29, 2009).

tured living." In this case, if existing CPHW schemes were taken as the premise, an upper limit standard would probably have to be set for work beyond statutory hours on a daily basis. On the other hand, if existing limit standards were taken as the premise, the upper limit standard would be set at one week as the minimum period. As this would probably be too inconvenient in practice if the upper limit standard were set on a daily basis, it may be conceivable to introduce regulation on rest periods in units of calendar days, as an indirect regulation. Again, if the upper limit standard were set on a weekly basis, one would need to adopt the interpretation that presumed hours could be set not in daily units but in weekly units as the minimum period.[22]

IV. Working at Home

1. Regulations on Working Hours

(1) Actual Situation of Hours Worked at Home

According to JILPT (2009), the total hours worked per month by employees who work at home are 223.2 hours on average. This is longer than the total hours worked anywhere other than the usual workplace.[23] Therefore, when employees engaged in full working at home ("Almost every day" plus "About 3–4 days a week") and partial working at home ("About 1–2 days a week" plus "About 1–3 days a month") were asked their preferences for working hours, the response "Wish to make them shorter" accounted for a relatively high proportion of around 70%.[24] Some caution is required here, however, as the simple description "working at home" may be deceptive; the length of time worked at home is affected by whether the company has a system of "working at home" that is being used, or whether there is no system and work is being done at home based on the supervisor's or the employee's own discretion, or as a custom.

In the same survey, employees who work at home and say that they "Often" work beyond normal working hours account for 31.8% of those who work at home because a "System is available," 61.5% of those who "Work at home at the supervisor's discretion or as a custom," and 69.1% of those who "Work at home at own discretion." In other words, the frequency of working beyond normal working hours is higher when a system of working at home is not available than when it is available.[25] This explains why the average total hours worked per month by employees who work at home is 203.4 hours when a "System is available," 215.8 hours for those who "Work at home at the supervisor's discretion or as a custom," and 224.3 hours for those who "Work at home at own discretion."[26] Again, as for future intentions on working at home, the response "Wish to reduce it" was given by 31.8%

[22] Ishitobi (1997, 138) states that CPHW may also be permitted in monthly units.
[23] See JILPT (2009, 77, table 3-3-6).
[24] See JILPT (2009, 94, table 3-3-38).
[25] See JILPT (2009, 95, chart 3-3-40).
[26] See JILPT (2009, 96, chart 3-3-42).

of those who work at home because a "System is available," but 56.0% of those who "Work at home at the supervisor's discretion or as a custom" and 61.4% of those who "Work at home at own discretion," showing relatively high response rates for the latter two.[27]

When a system for working at home is available, the employee's personal circumstances and awareness probably help to put a brake on the length of time worked. By contrast, working at home when no system is available is the equivalent of taking home overtime work. In that case, an aspect of the employee's sense of responsibility or motivation towards the work cannot be discounted. Nevertheless, the reality appears to be that management of working hours is looser, both on the employee's part and on that of the employer.

(2) Systems of Working Hours Applied to Employees Who Work at Home

According to JILPT (2009), systems of working hours applied to employees who sometimes work at home are, in descending order of response rates, the "Discretionary work system / De facto working hour system" with 51.8%, "No control of working hours" with 45.7%, the "Flexible working hour system" with 36.5%, the "Shift work system" with 35.1%, the "Regular working hour system" with 34.8%, and the "Irregular working hour system" with 34.1%.[28] In other words, DWS and CPHW schemes account for higher response rates. Meanwhile, the relatively high response rate ascribed to "No control of working hours" suggests that working hour management tends to be loose in many cases.

An earlier survey by JILPT (2008) listed types of working hour management for employees engaged in full working at home and partial working at home (multiple answer). For those in full working at home, "Usual working hour management" and "De facto work outside the place of business" had the same high response rate of 31.8%. For those in partial working at home, "De facto work outside the place of business" had the highest response rate of 34.8%, followed by "Usual working hour management" with 30.4%.[29]

The survey also provided data by type of working hour management for employees currently working at home. In descending order of response rates (multiple answer), the most common responses by employees in full working at home were "Report by submitting a work report or similar after a set number of hours" with 54.5%, "Notify manager of start and finish times by telephone, email, etc." with 40.9%, and "Always in a position to communicate using ICT equipment" with 27.3%. For those in partial working at home, the most common responses were "Notify manager of start and finish times by telephone, email, etc." with 52.2%, "Always in a position to communicate using ICT equipment" with 43.5%, and "Report by submitting a work report or similar after a set number of hours" with 27.3%.[30]

[27] See JILPT (2009, 97, table 3-3-43).
[28] See JILPT (2009, 78, table 3-3-7).
[29] See JILPT (2008, 11, chart 2-10).
[30] See JILPT (2008, 12, chart 2-11).

(3) Problems with Managing Working Hours When Working at Home

If usual methods of working hour management could be used to manage working hours when working at home, the daily start and finish times would be reported, or the employee would be always be in a position to communicate, and thus major problems would rarely arise. However, working hour management is thought to be looser when using CPHW, or when hours are managed by submitting work reports after a set number of hours. This in turn could invite long working hours. The same concern is evident in the surveys mentioned above.

In JILPT (2008), the response "Difficult to manage working hours" (multiple answer) was most frequently cited both for full working at home and for partial working at home, the response rate registering 50.0% in the former and 52.2% in the latter.[31] In JILPT (2009), similarly, the most commonly cited disadvantages of working at home (multiple answer) were "Difficult to separate work from private time" with 59.1% and "Working hours tend to be longer" with 55.9%. As this shows, problems with working hours received higher response rates than any other option (place of work other than the usual workplace).[32,33] In that case, how to manage working hours or prevent long working hours when providing labor at home, and how to separate work from private time, seem to be problems not only for business administration but also for the employees themselves.

(4) Problems with Applying CPHW to Employees Who Work at Home

CPHW is thought to be applicable to working at home (Guideline[34]). An interpretation on the application of CPHW to employees who work at home in the Guideline has been issued in response to the following inquiry from the Director-General of the Labour Bureau:

"Is it permissible, in principle, to interpret de facto working hour schemes related to working at home, as provided in LSA Art.38-2, as applying to working at home in a format that satisfies all of the conditions set forth below (meaning a working format whereby an employee uses ICT equipment to work at home)?

(i) That the work in question is carried out at home, where the employee also engages in aspects of private daily life such as eating and sleeping.

(ii) That the ICT equipment in question has not been instructed by the employer to be in a state whereby communication is possible at all times.

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[31] See JILPT (2008, 19, chart 2-19).

[32] See JILPT (2009, 90, table 3-3-29).

[33] MLITT, City Bureau, City Policy Division (2012) also indicates, as disadvantages and concern over working hours when carrying out telework employment in the narrow sense, "Difficult to separate work from private time" with 47.3%, "Even when overworked or working long hours, they are not recognized" with 44.0%, and "Tend to be overworked or work long hours" with 40.8%, showing relatively high response rates.

[34] Application of Art. 38-2 of LSA on working at home of employee using ICT (Notification of LSB, MHLW, No.0305001, March 5, 2004, revised by Notification of LSB, MHLW, No.0728002, July 28, 2008). See MHLW, LSB (2011, 534–35).

(iii) That the work in question is not carried out under specific instructions from the employer from time to time."

Ministry of Health, Labour, and Welfare (MHLW) and the Labour Standards Bureau (LSB) responded to this with the following statement on the feasibility of applying CPHW to employees who work at home.

"'ICT equipment' is generally taken to mean a personal computer, but could sometimes include mobile telephone terminals or others in the personal possession of the employee, and is to be judged in accordance with the actual circumstances of the work.

'Instructed by the employer … at all times' signifies a state in which the employer does not permit the employee, of his or her own accord, to discontinue a state whereby communication is possible.

'A state whereby communication is possible' signifies a state in which the employer can issue specific instructions to the employee from time to time via electronic mail, electronic message boards and others using ICT equipment, and in which, whenever the employer issues a specific instruction, the employee must promptly comply with it (in other words, must be waiting on standby in readiness for specific instructions, or actually carrying out work while standing by). States other than this (such as a state in which lines are merely connected and the employee can freely disengage from ICT equipment, for example) do not correspond to 'A state whereby communication is possible.'

'Carried out under specific instructions' does not include, for example, instructing basic matters such as the purpose, target and deadline of the work in question, or instructing necessary changes to these basic matters.

Moreover, if the work satisfies the conditions for applying a CPHW scheme, said scheme shall be applied whether or not a special room devoted to the work has been set up in the home."

This official interpretation pivots on whether or not working at home can be said to be within the reach of concrete direction and supervision by the employer.

Incidentally, no court decisions in which the feasibility of applying CPHW to working at home was a point of contention have been found to date. Therefore, ways of applying CPHW to working at home will be examined in accordance with the nature of CPHW previously discussed.

Not only does working at home dilute the employer's authority over the employee, but it is also not easy to manage and ascertain the hours actually worked. For this reason, it has significant potential to cause problems of long working hours. However, judging from the results of an interview survey with companies that have introduced (systems of) working at home,[35] while each company expressed concerns over long working hours and other issues, the reality is that they have designed their systems on the premise of existing law. Considering these corporate initiatives, the conclusion is that introducing working at home

[35] See JILPT (2009, 128–72).

on the premise of existing law is feasible. Therefore, questions have been raised over the need to establish specific new working hour regulations aimed only at working at home.[36]

When considering long working hours and health problems, however, there are also question marks over the non-application of working hour regulations to working at home and the rationale of unconditionally accepting the application of CPHW.[37] Therefore, an upper limit should be placed on work beyond statutory hours, measures for maintaining health should be devised and measures to prevent long working hours[38] should be established in CPHW.

As a method of ascertaining hours actually worked, it should suffice for the employee to carry out self-reporting through communication via PCs and other ICT equipment. By way of discharging the duty to ascertain hours actually worked, the employer need only obligate employees who work at home to carry out proper self-reporting (or familiarize them with the need to do so) in labor contracts. Using this method to ascertain working hours when employees work at home would not be considered particularly troublesome. It would be even less burdensome for the company if hours actually worked were ascertained by means of logging into and logging out of an internal network. This should be possible, technically. Meanwhile, measures to ascertain hours actually worked should mainly be used to prevent long working hours and maintain the health of employees who work at home; they should not be taken as grounds for deciding the feasibility of applying CPHW.

2. Accident Compensation[39]

The Guideline makes the following statement regarding accident compensation. "In employees' accident compensation insurance, accidents caused by work are subject to insurance benefits as employment-related accidents. Therefore, those caused by private acts in the home are not employment-related accidents." It is impossible to know, by looking at the Guideline alone, what exactly would qualify as accident compensation for employees who work at home. Also, to the knowledge of this author, no cases (court decisions, rulings) of accident compensation concerning employees who work at home can be found either. As such, there is no alternative but to assume the kind of accidents that could occur when working at home, and to proceed with the examination on this basis.

[36] See JILPT (2009, 164). If new working hour regulations are to be studied, the scope should be extended to cover the working styles and working hour regulations of white-collar employees. See Takeuchi (Okuno) (2009, 89).

[37] See Kojima (2007, 56).

[38] See Takeuchi (Okuno) (2009, 89).

[39] The following description is basically taken from Ikezoe (2008, 23–28). There is room for further discussion of studies based on the assumptions that follow.

(1) Application of Employment Accident Compensation to Accidents Occurring While Working at Home as a Private Space

The Industrial Accident Compensation Insurance Act defines the grounds for paying insurance benefits as "employment injury," in the form of "injury, disease, disability or death of employees resulting from an employment-related cause" (Art.7, Sec.1, Subsec.1). "Employment-related" means that there is a "work cause factor," and the primary requirement for judging this is interpreted as a "work performance factor." Specifically, "employment-related" means that "it is recognized, based on empirical evidence, that "while an employee was under the control or management of the employer" (a work performance factor), "a hazard associated with "the employee being under the control of the employer based on a labor contract," including employment or acts of employment, has been realized" (a work cause factor).[40]

Applying this to working at home, a work performance factor is recognized even though the place where labor is provided is the private space of the home (not under facility management by the employer). This is because, while working at home, employees who work at home are under the direction and command (under the control) of the employer. Focusing on the home as the place of labor provision, certain cases would probably be recognized as being caused by work if it could be recognized, based on empirical evidence, that a hazard associated with working at home had been realized. These might include cases such as injury due to a fire in the home or a neighboring property, or even injury due to natural phenomena such as major earthquakes or external forces (for example, if a tree falls down and destroys the employee's home) that are not in principle recognized as being caused by work. On the other hand, certain accidents while working at home would probably be judged as lacking a work cause factor; for example, accidents occurring when the employee actively leaves his or her work duties for private reasons such as housework, childcare or nursing. These would be distinct from circumstances that would even be recognized as being caused by work in the usual workplace, when the employee leaves his or her work duties for reasons of physiological needs, etc.

(2) Distinguishing between Employment Injury and Personal Injury

What, then, is the rationale on personal injury? Could employees who work at home receive insurance benefits, for example, if they suffered a fall when on their way to answer the front doorbell while going down the stairs for private reasons, and an item related to working at home supplied by the company was delivered as a result?

If an act such as going down the stairs for private reasons (e.g. housework, childcare or nursing) is a positive act of leaving work duties, even if an item related to working at home is received as a result, it could not have been objectively judged that, at the point of occurrence of the accident, an item related to working at home would be received. There-

[40] See MHLW, LSB, OAI Div, OI Sec. (2001, 156–57).

fore, the initial reaction might be that there is no work cause factor (in this case, there would probably not be any work performance factor either, as the employee has left his or her work duties for private reasons). On the other hand, if the intention from the beginning had been to receive the item related to working at home in conjunction with private reasons, the act in question would not be one of leaving work duties (i.e., in this case there would probably be a work performance factor), and the accident could be considered to have been caused by work.

Next, what about cases where an employee suffers an injury or similar while resting in a residential part of the home as a private space? In this case, the employee is taking a rest period and is therefore not under the control of the employer. Moreover, the employee is inside a residential part of the home as a private space, and is therefore not under the management of the employer, either. As such, there is thought to be no work cause factor. If, on the other hand, the injury or similar is caused by a PC loaned by the employer to an employee who works at home, or by an item related to the performance of the work (under the management of the employer), there is thought to be a work cause factor.

Finally, how should we interpret cases where an employee who works at home wishes to procure an item related to the performance of work, etc., as a reimbursable expense, goes out of the home as the place of labor provision during or outside working hours (including during rest periods), then after going out, has the idea of purchasing some daily requisites on the way, and is involved in an accident, for example, while in the process of doing so? In this case, irrespective of whether during or outside working hours, if there is an agreement with the employer that items necessary for performing the work are to be treated as reimbursable expenses by employees who work at home, it is naturally expected that those items will be procured by employees who work at home. Therefore, the procurement of items or others as a reimbursable expense is thought to be recognized as being caused by work, as an act necessary for or ancillary to the work. However, when purchasing items necessary for performing the work as incidental to (or secondary to) purchasing daily requisites, or when both acts of purchasing daily requisites and purchasing items necessary for performing the work are carried out together with no clear distinction between them, it is suddenly more difficult to make a judgment. This issue would probably be judged once a specific case had been filed with the relevant authority. Nevertheless, such cases pertaining to working at home will need to be anticipated, and studied from the viewpoint of legal practice.[41]

As shown above, compensation for employment injury sustained while working at home could raise problems not conventionally envisaged under the Industrial Accident Compensation Insurance Act. In future, these will need to be discussed from the viewpoint of policy practice, based on the realities of working at home. Moreover, in terms of corpo-

[41] Morito (1999, 49) and Nagasaka (2000, 178) state that this should be judged case by case in line with individual circumstances. However, considering the guidance on corporate practice and raising attention over employees who work at home, studies anticipating specific cases ought to be carried out first of all.

rate practice, it will be necessary to anticipate situations unique to working at home, whereby labor is performed in the home as a private space, and to study and establish remedial measures before and after the event.

V. Future Challenges

In recent years, hardly any study has been devoted to legal policy on WOW and working at home, excluding research on court decisions.[42] The same is true of detailed factual surveys, as a major prerequisite for this. Looking ahead, it is to be hoped that factual situations will be ascertained through detailed and large-scale surveys as far as possible.[43]

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[42] To the author's knowledge, only Kojima (2007), Ikezoe (2008) and Takeuchi (Okuno) (2009) on working at home.

[43] On CPHW, Ishitobi (1997, 135) states that precise surveys will have to be conducted to find how many of the applicable types of work have actually been made subject to the system, and how many different de facto systems not based on legally-defined CPHW (hidden CPHW schemes) exist.

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A Study on Multidimensional Quantification of Occupations: Development of Numerical Criteria for a Broad Range of Occupations

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Following the Second World War, occupational information in Japan was systematically gathered and consolidated by the Ministry of Labour (currently the Ministry of Health, Labour and Welfare) and a research institute that was the predecessor of the Japan Institute for Labour Policy and Training (JILPT). However, until now, this occupational information has been qualitative and descriptive, as no method for the quantifiable expression of the relationships among occupations existed. Moreover, nobody has been able to indicate how occupations correspond with the results of vocational aptitude tests, etc., based on objective numerical data. Against this background, the authors gathered rated scores for the occupations of 24,000 people who are actually employed in those occupations from over three million web survey panels, using a method of web-based job analysis. We implemented this survey using the United States Department of Labor's O*NET project as a reference. We then developed numerical criteria for 601 occupations covering 30 aspects concerning the knowledge and skills needed to perform each occupation, the work environments of each occupation, occupational interests, and occupational values. These numerical criteria show a broad range of occupations in quantitative terms. We can quantitatively indicate relationships among occupations in Japan, and can show how occupations correspond with the results of vocational aptitude tests based on numerical data. We are expected to form the foundation for various quantitative studies of occupations.

I. Introduction

Occupational information is considered fundamental in finding employment, changing occupations, skills development, and other such activities, and thus they are gathered, analyzed, consolidated, and provided by the governments of developed countries. For example, in the United States, the Department of Labor provides an Occupational Outlook Handbook that describes detailed information on approximately 600 occupations. The Department of Labor has also developed O*NET, which quantifies occupations from various aspects, in order to provide data via the Internet as a replacement for its previous Dictionary of Occupational Titles. In the United Kingdom, the National Career Service provides Job Profiles. And France's Pôle Emploi and Germany's Bundesagentur für Arbeit develop and provide ROME and BerufeNet, respectively.

The activities of seeking employment or changing occupations require information on the person's own aptitudes, interests, experience, and education and training as well as information on occupations. Many occupations exist in society, and thus occupational infor-

mation can be likened to a roadmap or modern vehicle's navigation system. Occupational information helps people negotiate society in the sense that they help people get a full picture of available occupations as well as, when they find employment, identify the career path that the job leads to. At the same time, all developed countries grapple with the problems of scarcity of employment for young people and high unemployment rates. Occupational information serves as a "window" for young people in the sense that it allows them to see society as a whole, and as a "door" in the sense that they allow young people to choose an occupation and use it as a portal to society. Thus, in today's tough employment environment, occupational information plays an important role as both "windows" and "doors" for young people.

However, despite the fact that occupational information fulfills such important roles, their collection and provision are becoming increasingly difficult. One reason for this is the speed at which technologies and society are changing. Because technical and social changes are occurring at a faster pace, occupations are also undergoing faster changes. Consequently, efforts to gather, analyze, consolidate, and provide information cannot keep pace. Furthermore, as the next section will discuss, there is a need to quantify occupations in a multidimensional manner. Thus, in this paper, the authors report the results of an undertaking to gather and study quantified data on occupations using an unprecedented method. Specifically, the authors conducted a survey of approximately 3.31 million web survey panels affiliated with three research companies. Then, from the survey panels, we collected data from approximately 24,000 people who are actually employed in 725 occupations. This represented the world's first effort to use such a large number of web survey panels to systematically gather numerical data on a broad range of occupations.

It is thought that the society of each nation is reflected in the occupations available within it. Accordingly, the content of this paper applies solely to the quantification of occupations in Japan. However, at the same, it is also likely that some commonalities do exist among countries in terms of their occupations. The authors hope that the reader will find this paper of interest as an overview of Japanese society from the standpoint of "occupation" and as a discussion of occupation-related commonalities and differences among countries.

II. The Necessity of Occupational Information and Numerical Criteria for Occupations in Japan

Although occupational information was prepared and made available in prewar Japan, the systematic collection and broad provision of it began in the postwar era. Thus, this paper will first examine developments in the collection and provision of occupational information in postwar Japan.

The Ministry of Labour (currently the Ministry of Health, Labour and Welfare) began job analyses in 1947. Beginning in 1951, the ministry charged Public Employment Security

Offices throughout Japan with the collection of it, which they continued until 1962. This activity led to the analysis of 14,500 jobs in 12,000 establishments. The results were sequentially released for each job category as *Shokumu Kaisetsu* (explanation of occupations). The 172nd version of *Shokumu Kaisetsu* was published in 1961. The total number of jobs explained through this publication was 8,500. Explanations covered job content; required worker qualifications; methods needed to perform jobs (responsibility, knowledge, mental agility, dexterity, accuracy); physical requirements of workers; worker characteristics (physicality, perception, intelligence, temperament, inter-personal skills, etc.); work environment; and devices, materials, equipment, and consumables. *Shokugyo Jiten* (occupational dictionary) and *Sangyo Shokugyo Zukan* (illustrated encyclopedia of industries and occupations) were published based on this research and utilized in employment consultations and guidance at Public Employment Security Offices and schools. In 1974, the National Institute for Vocational Research, which was JILPT's predecessor, was launched to inherit the Ministry of Labour's occupational research functions. In 1974, *Shinjidai no Shokugyo* (occupations of the new era) was published. This publication explained trends in seven fields: computers, metal processing, apparatus industries, marketing and sales, business services, leisure industry, and social services. It also explained 65 occupations found in these fields in terms of work content, necessary education, training, experience, abilities, requirements, work environment, etc. The institute subsequently published *Shokugyo Handobukku* (occupational information handbook), which was sequentially released in separate volumes from 1981 to 1983. Ultimately, the handbook covered 241 occupations, providing details on each occupation, the characteristics of employees in that occupation, working conditions, and the history and outlook of that occupation. A second edition of *Shokugyo Handobukku* was published with 254 occupations in 1986, and followed by a third edition with 300 occupations in 1997. A CD-ROM version was developed for the third edition in 1998. In 2001, "OHBY" (Occupation Handbook for Youth, an occupational handbook for junior and high school students for use on personal computers) was made available to the public. And in 2006 the "Career Matrix," which provided comprehensive occupational information and related career tools, was set up as an Internet website. The New Career Matrix with enhanced functions and content was released in 2008. This website was unfortunately closed in March 2011; it contained information of 512 occupations at that time.

One condition necessary to develop the Career Matrix was the quantification of occupations. The Career Matrix sought to display occupations based on its web-based occupational interest assessment and corresponding mastered skills and knowledge. Achieving this required quantifying occupations from various aspects, and then tying assessments and acquired experience to occupations. Given that the US Department of Labor's O*NET project was already making progress in the multidimensional quantification of occupations, JILPT used it as a reference as it engaged in its own quantification and data collection based on quantification. The resulting statistical data obtained for each occupation can be considered

numerical criteria for occupations in Japan. We are expected to be put to broad practical use when people seek employment, change occupations, develop their careers, or engage in other such activities. Additionally, the ability to quantify a broad range of occupations makes it possible to study occupations quantifiably, something that had been impossible heretofore. This opens up possibilities for various kinds of research. For example, given that the appropriate movement of personnel from declining industries to growing industries is an important national issue, research can quantitatively show unexpected similarities and differences on occupations among industries in terms of ability and orientation. Additionally, although wage differences that occur after changes in occupation are already a topic of study, researchers will also be able to use the numerical criteria to quantitatively identify any changes that occur in terms of knowledge or skills.

III. Data-Gathering and Analysis: Multidimensional Quantification for a Broad Range of Occupations

1. Purpose and Method

As can be seen from the discussion above, although descriptive occupational information have been prepared for individual occupations in Japan, no systematic studies have been undertaken based on the establishment of multidimensional occupational measures and subsequent objective data-gathering. This study was executed to gather data from approximately 24,000 people through a “web-based job analysis system” that was developed specifically for the study, examine the various dimensions that comprise occupations, quantify occupations in accordance with these dimensions, and develop multidimensional numerical criteria for a broad range of occupations.

The study collected numerical data on occupations using an Internet survey that targeted a total of 3.31 million web survey panels registered with three Internet research companies. The numerical data covered a total of 94 categories that concerned knowledge, skills, work environment, occupational interests, and occupational values. Moreover, the study presented specific tasks that were assumed to be included in each occupation and then collected data on whether or not those tasks were actually performed. Data collection took place from 2003 until 2006. The study collected survey responses, making an effort to receive responses from 30 people in each of the 725 occupations. Responses from at least 30 people were received in many cases. In the end, data were obtained from a total of 24,041 respondents. For the 601 occupations for which data were obtained for at least 30 people, the study prepared a matrix (601 occupations × 94 items) and then conducted the numerical analysis described below based on the statistical mean of each occupation.

Actual data collection was made using a “web-based job analysis system” that was developed for the study. The system’s first page provided an overall explanation of the response method. The survey began on the following page. First was a page for selection of occupation. The respondent selected his or her occupation field and then selected a specific

Table 1. Collected Data (Sex × Age Group)

(%)

	Less than 20	20–29	30–39	40–49	50–59	60 or older	No response	Total
Men	35 (0.2)	2,850 (18.0)	7,202 (45.4)	4,299 (27.1)	1,271 (8.0)	208 (1.3)	0 (0.0)	15,865 (100.0)
Women	17 (0.3)	2,069 (31.8)	2,947 (45.3)	1,200 (18.5)	238 (3.7)	30 (0.5)	0 (0.0)	6,501 (100.0)
No response	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1,675 (100.0)	1,675 (100.0)
Total	52 (0.2)	4,919 (20.5)	10,149 (42.2)	5,499 (22.9)	1,509 (6.3)	238 (1.0)	1,675 (7.0)	24,041 (100.0)

occupation within that field. The respondent then entered his or her length of employment in that occupation, and his or her personal attributes on successive pages before a task response page appeared. Various tasks that were prepared for the selected occupation thenappeared; the respondent selected those that he or she actually performed. If the respondent performed a task that was not displayed, he or she was permitted to describe it freely on the page. Subsequent pages were response pages for numerical evaluation. Here, rating pages covering a total of 94 categories concerning knowledge, skills, work environment, occupational interests, and occupational values were displayed. Respondents were asked to provide responses based on each five-point scale.

2. Results and Discussion

The study used the "web-based job analysis system" in the way described above to collect data from a total of 24,041 people. In terms of sex, more men responded to the survey than women. And in terms of age group, the 30 to 39 age group was the largest for both men and women. For men, the next largest group following 30 to 39 was 40 to 49, while for women, the next largest was 20 to 29 (Table 1).

A table showing the number of persons that supplied data per occupation would be very large and is thus not provided here. The survey aimed to collect data from 30 people in each occupation, and this condition was met in many of the surveyed occupations. The number of occupations surveyed with at least 30 respondents was 601. The total number of respondents was 21,033. Accordingly, the following analysis of these 21,033 respondents was conducted based on aggregated results for each occupation.

(1) Knowledge and Skills: The Structures of Abilities Needed for Job Execution

Knowledge and skills play important roles when seeking employment, changing occupations, or engaging in career development. Individuals thinking about taking on a job or

changing to a new job must consider the knowledge and skills that the job requires. Similarly, companies must recognize the knowledge and skills they require when recruiting or implementing skill development.

When it comes to the structures of knowledge and skills needed to perform jobs, it has traditionally been the case in Japan that each industry collects and arranges relevant information with the cooperation of trade associations, etc.

In the case of knowledge, one structure is the "Life-long Career Development System (LCDS)" implemented by the Japan Organization for Employment of the Elderly, and the Persons with Disabilities and Job Seekers (JEED), which studied job-related abilities based on a major survey. This survey is positioned as a "clarification of the vocational abilities (knowledge, skills, and technologies) needed to perform jobs and a phased and systematic arrangement of contents for promoting education and training for the purpose of developing and improving those abilities." The Japan Vocational Ability Development Association (JAVADA) similarly provides detailed lists of abilities needed for each industry and job category as "vocational ability evaluation standards."

As for occupation-related skills, the Ministry of Economy, Trade and Industry prepared "Fundamental Competencies for Working Persons." These competencies are skills needed to apply in real society what one has learned in schools or other institutions. It is comprised of three competencies and 12 elements. The three competencies are (i) ability to step forward (identity, ability to work with others, and ability to take actual actions), (ii) ability to think well (ability to find problems, ability to plan, and ability to create), and (iii) ability to work in a team (ability to communicate, ability to listen carefully, flexibility, ability to understand situations, submission to discipline, and ability to control stress). One structure concerning job-related skills was the Ministry of Health, Labour and Welfare's "YES Program." "YES Program" stands for Youth Employability Support Program. It was an undertaking designed to help young people acquire the basic employment skills that companies demand. Basic employment skills are classified into seven fields; these are (i) communication skills, (ii) professional attitude, (iii) basic scholastic ability (reading and writing), (iv) basic scholastic ability (calculation, counting, and ability to think mathematically), (v) basic scholastic ability (social etiquette), (vi) business etiquette, and (vii) acquiring licenses or qualifications for employment. Although the Fundamental Competencies for Working Persons and YES Program contain well prepared contents that are thought to be valid, neither is based on empirical data.

This kind of arrangement and systematization of knowledge structures for individual industries will be useful in specific vocational training and skill development. Such structures provide useful information on the types of knowledge and skills needed to perform particular jobs for both individuals and enterprises.

At the same time, however, the study of knowledge and skill structures that are shared broadly among industries and occupations is also required. For example, if a person who has acquired knowledge and skills in a particular occupation wishes to change occupations,

he will most likely consider new occupations in which he can utilize said knowledge and skills. If that person wishes to find a similar occupation within the same industry, then a system of knowledge and skills needed for that particular industrial category should prove useful. However, in reality this is not always the case, as sometimes people must find new occupations in other industrial categories. At such times, a system of knowledge and skills that is shared among occupations and that crosscuts industries is required. One such approach that has examined knowledge and skills that are common to various occupations and crosscut industries is the US Department of Labor's O*NET (Occupational Information Network) program. O*NET publicizes knowledge and skills that are needed to perform jobs as components of occupational information. The knowledge and skills contained in O*NET are examined as required knowledge and skills that are shared across various industries and occupations, rather than belonging to a specific industry or occupation (Peterson, Mumford, Borman, Jeanneret, and Fleishman 1995).

Based on the above, this study sought to examine the knowledge and skills needed to perform jobs in order to identify their structures, and then prepare numerical criteria for a broad range of occupations. Specifically, it prepared a Japanese translation of 33 knowledge items and 35 skills needed to execute jobs that were prepared in O*NET, gathered data via an Internet survey, and conducted an examination to identify their structure through factor analysis. As was mentioned before, survey respondents were asked to rate the necessity of each knowledge and skill in their current occupation using a five-point scale.

The study then conducted a factor analysis targeting all 33 knowledge items using the principal factor method/Promax rotation (Table 2).

Factor 1 has high loadings for such items as engineering and technology, design, and computers and electronics; thus, it can be termed "science and technology." Factor 2 has high loadings for such items as art, history/archeology, philosophy/theology, and mass communication and media, and thus it can be termed "arts and humanities." Factor 3 has high loadings for such factors as therapy and counseling, medicine/dentistry, and psychology, and thus it can be termed "medical care." Factor 4 has high loadings for such factors as sales/marketing, business management, and economics/accounting, and thus it can be termed "business and management." Factor 5 has high loadings for foreign language and native language, and thus it can be termed "language." Factor 6 has relatively high loadings for geography, security, architecture/construction, and transport, and thus it can be termed "civil engineering and security." And Factor 7 has relatively high loadings for biology, chemistry, and food production, and thus it can be termed "chemistry and biology."

Looking at occupations with high factor scores in each factor in order to verify the factors, in "science and technology," mechatronics researcher, general machinery technician, electronics technician, precision instruments technician, and information technology researcher have high scores. The following occupations similarly had high factor scores in their respective factors. In "arts and humanities": novelist, historian, singer, theater director, and scenario writer. In "medical care": psychiatrist, occupational therapist, law instructor,

Table 2. Results of Factor Analysis of Knowledge Needed to Execute Jobs (601 Occupations, 21,033 People)

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
Q11 Engineering and technology	0.954	-0.024	-0.056	0.034	0.111	-0.066	0.039
Q12 Design	0.919	0.174	-0.021	0.044	-0.167	0.021	-0.103
Q10 Computers and electronics	0.800	0.073	-0.084	0.062	0.385	-0.129	-0.170
Q16 Physics	0.794	-0.048	0.148	-0.181	0.061	0.075	0.256
Q14 Machinery	0.782	0.094	0.015	-0.134	-0.459	0.209	-0.050
Q15 Mathematics	0.714	-0.178	0.028	-0.026	0.190	0.099	0.193
Q32 Communications technology	0.614	0.078	-0.054	-0.040	0.390	0.204	-0.260
Q8 Production and processing	0.413	0.085	-0.214	0.331	-0.408	0.017	0.330
Q27 Art	0.130	0.955	0.098	0.038	-0.174	-0.094	-0.090
Q28 History, archeology	-0.104	0.826	-0.056	-0.081	0.143	0.279	0.088
Q29 Philosophy, theology	-0.052	0.729	0.293	-0.056	0.055	0.127	0.061
Q33 Mass communication and media	0.167	0.678	-0.067	0.135	0.358	-0.043	-0.141
Q20 Sociology, anthropology	-0.105	0.523	0.509	0.076	0.070	0.136	-0.025
Q23 Therapy and counseling	-0.034	0.136	0.992	0.034	-0.128	-0.107	0.091
Q22 Medicine, dentistry	-0.067	-0.050	0.815	-0.040	0.022	-0.150	0.384
Q19 Psychology	-0.076	0.325	0.790	0.136	-0.011	-0.058	-0.064
Q24 Education and training	0.194	-0.018	0.753	-0.019	0.045	0.098	-0.029
Q4 Sales, marketing	-0.067	0.176	-0.175	0.906	0.018	-0.190	0.060
Q1 Business management	0.174	-0.003	0.128	0.858	0.108	-0.006	0.135
Q3 Economics, accounting	-0.045	-0.059	-0.057	0.787	0.237	0.134	0.063
Q5 Customer services, inter-personal services	-0.215	0.025	0.062	0.756	0.017	-0.106	-0.093
Q6 Human resources and labor management	-0.005	-0.153	0.285	0.662	-0.023	0.337	0.004
Q26 Foreign language	0.140	0.324	-0.121	-0.045	0.794	-0.118	0.196
Q25 Native language	0.007	0.371	0.022	-0.004	0.782	-0.098	0.035
Q2 Clerical work	0.106	-0.175	-0.002	0.415	0.684	0.011	-0.031
Q31 Legal science, political science	-0.060	-0.163	0.177	0.114	0.511	0.433	0.000
Q21 Geography	-0.156	0.351	-0.213	-0.181	0.202	0.784	0.273
Q30 Security	0.216	-0.115	0.212	0.010	0.112	0.574	-0.117
Q13 Architecture, construction	0.344	0.046	0.052	-0.017	-0.291	0.555	-0.035
Q7 Transport	0.008	0.103	-0.353	0.209	-0.145	0.497	0.100
Q18 Biology	-0.019	-0.008	0.345	-0.006	0.119	-0.001	0.765
Q17 Chemistry	0.493	-0.130	0.184	-0.070	0.067	-0.067	0.644
Q9 Food production	-0.142	0.043	-0.121	0.267	-0.113	0.299	0.517
Inter-factor correlations	Factor 1	-.11	-.15	.00	.04	.29	.23
	Factor 2		.31	.24	.29	.20	.08
	Factor 3			.09	.57	.30	.10
	Factor 4				.12	.34	-.06
	Factor 5					.27	-.08
	Factor 6						.12

health nurse, and speech therapist. In “business and management”: certified small- and medium-sized enterprise management consultant, restaurant manager, business consultant, bank branch manager, and owner of insurance agency. In “language”: patent attorney, legal scholar, translator, marine safety officer, and police officer. In “civil engineering and security”: marine safety officer, tunnel engineer, navigator, tunnel excavation worker, and anthropologist. And in “chemistry and biology”: botanist, pharmaceuticals researcher, bacteriologist, agriculturalist, and biotechnology researcher.

The study analyzed skills by broadly dividing them into two categories. The first category is “basic skills.” In today’s rapidly changing society, people must possess skills that allow them to constantly acquire and communicate information and to scrutinize that infor-

Table 3. Results of Factor Analysis of Basic Skills (601 Occupations, 21,033 People)

	Factor 1	Factor 2
Q2 Active listening	1.037	-0.292
Q4 Speaking skills	0.965	-0.283
Q9 Learning strategy	0.880	0.010
Q8 Active learning	0.858	0.115
Q1 Reading comprehension	0.806	0.102
Q3 Writing skills	0.665	0.233
Q10 Monitoring	0.663	0.138
Q6 Science	-0.098	0.896
Q5 Mathematics	-0.164	0.707
Q7 Logic and analysis	0.488	0.638
	Inter-factor correlation	.49

mation logically and mathematically. Put another way, these are skills for learning and adapting to change. Such skills are summed up as "basic skills." The other category is "cross-functional skills." Here, the study used sociotechnical systems theory, which studies human behaviors in an industrial society, as a reference to establish generalized skills for each field, such as problem-solving and technical, social, resource management. The survey was conducted using 10 basic skill items and 25 cross-functional skill items.

Table 3 shows the results of factor analysis of basic skills. Factor 1 covers skills that form the foundation for performing an occupation, such as the ability to absorb knowledge—namely, active listening, speaking skills, learning strategy, active learning, and reading comprehension. Consequently, it is termed "base skills." Factor 2 has high loadings for science, mathematics, and logic and analysis; thus, it is termed "math and science skills." The existence of a factor loading in excess of 1.000 is attributable to the use of oblique rotation.

Looking at occupations with high factors scores in order to verify the factors, speech therapist, psychiatrist, attorney, pediatrician, and practitioner of acupuncture or moxibustion scored high in "base skills," while physiologist, botanist, biotechnology researcher, engineering researcher, and mathematician scored high in "math and science skills."

Table 4 shows the results of factor analysis of cross-functional skills. Factor 1 has high loadings for instrument monitoring for facility operation, operation and control, equipment maintenance, trouble-shooting, and machinery and system repair. Consequently, it is termed "technical skills." Factor 2 has high loadings for working with others, understanding others, persuasive ability, negotiation, service orientation, and leadership; thus, it is termed "human skills." Factor 3 has high loadings for requirements analysis, computer

Table 4. Results of Factor Analysis of Cross-Functional Skills
(601 Occupations, 21,033 People)

	Factor 1	Factor 2	Factor 3	Factor 4
Q23 Instrument monitoring for facility operation	1.034	0.104	-0.058	-0.113
Q24 Operation and control	1.012	0.017	-0.071	-0.079
Q25 Equipment maintenance	0.967	-0.014	-0.091	0.125
Q26 Trouble-shooting	0.884	0.000	0.197	-0.085
Q27 Machinery and system repair	0.881	-0.068	0.007	0.088
Q28 Quality control inspection	0.580	-0.219	0.336	0.129
Q12 Working with others	0.153	0.919	-0.281	0.022
Q11 Understanding others	-0.085	0.877	-0.166	0.062
Q13 Persuasive ability	-0.088	0.858	0.211	-0.074
Q14 Negotiation	-0.117	0.821	0.284	-0.084
Q16 Service orientation	-0.034	0.814	-0.216	0.029
Q15 Leadership	0.327	0.808	-0.151	0.061
Q17 Ability to solve complex problems	-0.146	0.639	0.531	-0.171
Q35 Human resource management	0.091	0.521	0.117	0.458
Q32 Time management	-0.173	0.516	-0.004	0.249
Q18 Requirements analysis	-0.285	-0.087	0.885	0.234
Q22 Computer programming	0.149	0.028	0.808	-0.214
Q19 Technical development/improvement	0.107	-0.120	0.663	0.272
Q31 System evaluation	0.515	0.075	0.646	-0.085
Q30 System analysis	0.564	0.072	0.611	-0.113
Q21 Installation	0.324	-0.032	0.590	0.084
Q29 Judgment and decision-making	0.217	0.000	0.569	0.346
Q34 Materials management	0.219	-0.015	-0.135	0.963
Q33 Money management	-0.447	0.063	0.239	0.744
Q20 Selection of tools, equipment, & facilities	0.369	0.049	0.124	0.557
Inter-factor correlations	Factor 1	-.30	.47	.32
	Factor 2		.13	.11
	Factor 3			.50

programming, technical development/improvement, system evaluation, system analysis, and installation; thus, it is termed “computer skills.” And finally, Factor 4 has high loadings for materials management and money management, and thus it is termed “objects management skills.”

Looking at occupations with high factors scores in order to verify the factors, the following scored high in their respective factors. In “technical skills”: clinical engineer, marine engineer, sound engineer, electrical discharge machine engineer, and building manager. In “human skills”: law instructor, attorney, speech therapist, social welfare organization officer, and psychiatrist. In “computer skills”: systems engineer (IT architect), systems engineer (project management), systems engineer (software development), systems engineer (application specialist), and information technology researcher. And in “objects management skills”: flower designer, craft designer, nail artist, restaurant manager, and fast-food shop manager.

(2) Work Environment: Environmental Structuring of Jobs and Workplaces

Work environment has become a focus of attention as a factor regulating a person's performance in his or her job. First, it was physical environment (e.g., lighting, temperature, humidity, air current, sound, vibration, work space, posture, etc.) that drew attention, and then, following the famous Hawthorne studies, it was psychosocial work environment (e.g., human relationships in the workplace, etc.). In addition, the structural characteristics of jobs in themselves attracted attention as a factor influencing performance.

A study on the classification of such work environments by Strong et al. (1999) is well known. According to Strong et al. (1999), based on analysis of previous research, the work context taxonomy that consists of the work environment variables is defined by a hierarchical structure comprised of three higher order dimensions, and a number of second-order dimensions. The three higher order dimensions include interpersonal relationships, physical work conditions, and structural job characteristics. Moreover, these dimensions are divided into second-order dimensions from which specific item-level constructs are generated. A factor analysis of the results of data gathering based on the work environment that were established in this way identified seven factors; namely, Environmental Conditions, Physical Activity and Manual Work, Managerial and Interpersonal Relations, Structured and Machine Operations, Business or Office Environments, Health and Safety Conditions, and Interacting with the Public. However, the factors Business or Office Environments, Health and Safety Conditions, and Interacting with the Public have low contribution ratios of 6%, 4%, and 3%, respectively, and contain items that are difficult to interpret. Thus, these factors can be eliminated, leaving the first to fourth factors as main factors.

Here, this study used the items identified in the study by Strong et al. (1999) and O*NET project as references to prepare items like those presented below after excluding items that overlap with knowledge, skills, and other items. It then asked actually employed workers to rate each using a five-point scale. The items are as follows: Association with others (none – always); responsibility for work outcomes and results (no responsibility whatsoever – extremely large responsibility); impact of errors (not serious – extremely serious); contact with outside clients, etc. (no importance whatsoever – extremely high importance); coordination (no importance whatsoever – extremely high importance); accuracy/exactness (no importance whatsoever – extremely high importance); repetitive activities (no importance whatsoever – extremely high importance); machine driven work pace (no importance whatsoever – extremely high importance): confrontation with others during work (almost none – every workday); indoor work (almost none – every workday); outdoor work (almost none – every workday); exposure to hazards (almost none – every workday); seated work (never – continually or almost continually); standing work (never – continually or almost continually).

The study conducted a factor analysis of the obtained mean ratings for each occupation on each work environment using the principal factor method/Promax rotation (Table 5). Factor 1 has a high negative loading for standing work and high positive loading on seated

Table 5. Results of Factor Analysis of Work Environment
(601 Occupations, 21,033 People)

		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Q14	Standing work*	-1.015	0.030	-0.036	0.010	0.011
Q13	Seated work	0.983	-0.025	0.018	0.039	0.018
Q5	Coordination	-0.003	0.857	0.011	-0.018	0.078
Q1	Association with others	-0.272	0.727	-0.145	0.031	-0.181
Q9	Confrontation with others during work	0.095	0.650	0.249	-0.174	0.207
Q4	Contact with outside clients, etc.	0.093	0.580	0.120	0.156	-0.200
Q10	Indoor work*	-0.096	-0.007	-0.935	0.002	0.093
Q11	Outdoor work	0.003	0.191	0.859	0.016	-0.084
Q12	Exposure to hazards	-0.288	-0.112	0.433	0.170	0.375
Q3	Impact of errors	-0.022	-0.024	0.134	0.941	0.094
Q2	Responsibility for work outcomes and results	0.011	-0.080	-0.032	0.891	-0.239
Q6	Accuracy/exactness	0.138	0.230	-0.227	0.441	0.296
Q8	Machine driven work pace	-0.047	-0.053	-0.004	-0.091	0.923
Q7	Repetitive activities	0.135	0.157	-0.244	0.021	0.492
Inter-factor correlations	Factor 1		.18	-.36	.16	.10
	Factor 2			-.16	.53	-.17
	Factor 3				-.06	.01
	Factor 4					.05

Note: Items marked with an asterisk (*) were reverse-scored items.

work, and thus it is termed “seated work.” Factor 2 has a high loading for items connected with association with others, and thus it is termed “association with others.” Factor 3 has a high negative loading for indoor work and high positive loading for outdoor work, and thus it is termed “outdoor work.” Factor 4 has a high loading for items connected with impact of errors and responsibility for results, and thus it is termed “degree of impact/responsibility.” And Factor 5 has a high loading for machine driven work pace and repetitive work, and thus it is termed “machine driven work pace.”

Looking at occupations with high factor scores in order to verify the validity of the factors, the following occupations scored high in their respective environment factors. In “seated work”: translator, cartoonist, stenographer, taxi driver, and Japanese dressmaker. In “association with others”: attorney, bank branch manager, medical social worker, sommelier, and flight attendant. In “outdoor work”: taxi driver, reinforcing bar worker, garbage collector, scaffold worker, and forestry worker. In “degree of impact/responsibility”: surgeon, physician, train driver, judge, and judicial scrivener. And in “machine driven work pace”: airport passenger service agent, stenographer, customs officer, radiological technologist, and data input worker.

The factors that were obtained here were roughly similar to the factors of Strong *et al.* (1999). It is believed that the factors “seated work,” “association with others,” “outdoor

work," "degree of impact/responsibility," and "machine driven work pace" that were obtained in the study are indeed necessary conditions that influence work environment.

(3) Occupational Interests and Occupational Values: A Study of Orientations for Jobs

Holland's hexagonal model of occupational interests (Holland 1985, 1997) is one of the best known occupational interest models. The Vocational Preference Inventory (VPI), which is an occupational interest test, and Self-Directed Search (SDS) that Holland developed are widely used in career counseling and career education. According to Holland's theoretical model, both the personality types and the environments in which people work can be classified into one of six types; namely, realistic, investigative, artistic, social, enterprising, and conventional. When these six types are arranged so that those with higher correlations are placed nearer to each other, the well-known hexagon is formed.

Holland's theory is supported by a large volume of research. In the United States, studies targeting high school students (Day and Rounds 1998; Ryan, Tracey, and Rounds 1996), college students (Fouad 2002; Fouad and Mohler 2004; Hansen, Sarma, and Collins 1999; Hansen, Scullard, and Haviland 2000), and professionals (Fouad, Harmon, and Borgen 1997) are known to support Holland's hexagonal model. The hexagonal model has also come to be largely supported in Japan. Given this, the authors prepared items and collected data in line with Holland's hexagonal model.

In collecting data, the authors asked people who are actually employed in specific occupations to estimate the fitness of 6 typical persons to their own occupation. Responses were given using a five-point scale that reached from "does not apply to my occupation" to "applies to my occupation." The 6 items were as follows: R (realistic): A person who prefers concrete and practical work and activities that entail the manipulation of machines, tools, and objects including animals and plants. I (investigative): A person who prefers inquiring and scholarly work and activities, such as research or survey. A (artistic): A person who prefers artistic work or activity, such as music, design, painting, or writing, etc. S (social): A person who prefers work or activity that involves contact with people or serving people. E (enterprising): A person who prefers work or activity involving planning or operation/management of an organization, etc. And C (conventional): A person who prefers stereotyped work and activities that emphasize and follow standard methods, rules, or customs.

Ginzberg et al. (1951) identified occupational values as an important factor in the selection of occupation. However, the research undertaken by Ginzberg et al. (1951) was qualitative based on the interview technique, and did not identify occupational values in an objectively verifiable manner. The first to introduce an objectively verifiable approach into the measurement of occupational values was D. E. Super. Super (1970) established the Work Values Inventory (WVI) to operationally define and measure occupational values. In later years, WVI was sweepingly revised into what is called the Values Scale (VS) by incorporating more ordinary values that are outside occupational values (Nevill and Super 1989; Super and Nevill 1985).

Another main scale for occupational values is the Minnesota Importance Questionnaire (MIQ) devised by Rounds et al. (1981). Dawis (1991) compared 21 content areas measured by MIQ with other scales for measuring occupational values. This comparison showed that MIQ's 21 content areas covered all of the content areas measured by the other scales, and that none of the other scales covered all of the content areas demonstrated by MIQ. Rounds et al. (1981) conducted a factor analysis of MIQ that revealed six second-order factors. Bolton (1980) also obtained six second-order factors by applying factor analysis to WVI. This result partially reproduced the results of Rounds et al. (1981).

All of the scales for measuring occupational values that were mentioned above are comprised of items that focus on people rather than occupations. As an exception, Sager (1999) mentions the Minnesota Job Description Questionnaire (MJDQ: Borgen et al. 1968; Dawis 1991). This scale is comprised of the same 21 content areas used in MIQ and asks respondents to describe their own occupations.

Based on the above, the authors established six items for measuring occupational values. We then asked people who are actually employed in specific occupations to estimate the fitness of 6 items to their own occupation. Responses were given using a five-point scale that reached from "does not apply to my occupation" to "applies to my occupation." These six items were prepared by using the six factors of MIQ and MJDQ as a reference and then eliminating items that overlap with other items, such as occupational interests and work environment. The resulting items are as follows. Sense of achievement: An occupation that, when compared to other occupations, produces a clear link between the results of effort and a sense of achievement. Growth: An occupation that, when compared to other occupations, allows opportunities to learn new things and grow through working. Social status: An occupation that, when compared to other occupations, provides recognition and prestige. Human relationship: An occupation that, when compared to other occupations, brings joy to other people or a feeling of friendship and harmony with colleagues, etc. Autonomy: An occupation that, when compared to other occupations, allows autonomous decision-making or execution of jobs based on personal initiative. Working conditions: An occupation that, when compared to other occupations, offers employment or compensation security and a safe work environment.

Table 6 shows the means and standard deviations of the mean ratings for occupations on occupational interests. Looking at overall means, they ranked in descending order of interests as follows: R→S→I→E→C→A. This indicates that, as a general tendency for occupations, there are many occupations of the R category or the S category. It is also a result that supports the view that the first dimension in classifying occupations is "people vs. things" (Prediger 1982; Tracey and Rounds 1996). At the same time, while A had the smallest mean, it also had the largest standard deviation. This suggests that some occupations perfectly fit people of the A category, while other occupations hardly fit them at all.

The authors also obtained correlations among the ratings at the occupation level (Table 7). The positive correlation between S and E was the largest, followed by the large

Table 6. Means and Standard Deviations of Occupational Interests in 601 Occupations (601 Occupations, 21,033 People)

	R (realistic)	I (investigative)	A (artistic)	S (social)	E (enterprising)	C (conventional)
Mean	3.65	3.32	2.90	3.55	3.15	3.05
SD	0.46	0.54	0.75	0.66	0.48	0.35

Table 7. Correlation Matrix of Occupational Interests in 601 Occupations (601 Occupations, 21,033 People)

n=601

	R (realistic)	I (investigative)	A (artistic)	S (social)	E (enterprising)	C (conventional)
R (realistic)	-	.235 ***	-.016	-.436 ***	-.268 ***	-.080 *
I (investigative)		-	.215 ***	-.081 *	.292 ***	-.325 ***
A (artistic)			-	.271 ***	.436 ***	-.482 ***
S (social)				-	.531 ***	-.041
E (enterprising)					-	-.253 ***
C (conventional)						-

Note: *** $p < .001$, * $p < .05$.

negative correlation between A and C. This suggests a tendency for occupational interests of S and E to be necessary in both cases. Conversely, in the case of A and C, one occupational interest is necessary to an occupation but the other interest is not. Within the hexagonal model for occupational interests, adjacent categories are more similar to each other, while opposing categories (i.e., categories on diagonal lines) are the least similar to each other. Thus, the results achieved by the study agree with the model.

Table 8 shows the means and standard deviations of the mean ratings for occupations on occupational values, and Table 9 shows correlations among the ratings at the occupation level. In Table 8, sense of achievement has the highest mean, followed by autonomy. On the other hand, working conditions had the lowest mean, followed by social status. Looking at all occupations, it can be concluded that sense of achievement and autonomy are easily obtained, while working conditions and social status are not. Table 9 suggests that sense of achievement, growth, human relationship, and autonomy have strong positive correlations. It can be concluded that a person in an occupation that provides a sense of achievement has a job that gives a sense of growth, satisfaction with human relationships, and autonomy.

Table 8. Means and Standard Deviations of Occupational Values in 601 Occupations (601 Occupations, 21,033 People)

	Sense of achievement	Growth	Social status	Human relationship	Autonomy	Working conditions
Mean	3.73	3.59	2.84	3.46	3.64	2.78
SD	0.48	0.57	0.55	0.44	0.49	0.53

Table 9. Correlation Matrix of Occupational Values in 601 Occupations (601 Occupations, 21,033 People)

n=601

	Sense of achievement	Growth	Social status	Human relationship	Autonomy	Working conditions
Sense of achievement	-	.764 ***	.500 ***	.464 ***	.799 ***	-.280 ***
Growth		-	.742 ***	.472 ***	.747 ***	.075
Social status			-	.298 ***	.537 ***	.428 ***
Human relationship				-	.407 ***	-.093 *
Autonomy					-	-.140 **
Working conditions						-

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

Although working conditions has a strong positive correlation with social status, it has statistical significance but small coefficients of correlation with the others (sense of achievement, autonomy, and human relationship); thus, it can be considered relatively independent. Social status shows positive correlations with all of the other occupational values. Thus, it can be concluded that an occupation having high social status can satisfy all values—sense of achievement, growth, human relationship, autonomy, and working conditions.

Table 10 shows the correlations among the previously mentioned occupational interests and occupational values at the occupation level. R shows a weak positive correlation with sense of achievement, but also weak negative correlations with growth, social status, human relationship, and working conditions. This suggests that a sense of achievement can be obtained from an occupation or job in the R category, but satisfying other values is difficult. On the other hand, S and E show positive correlations with all values; S has a particularly strong correlation with human relationship, while E has particularly strong correlations with growth and autonomy. Additionally, I also shows relatively strong positive correlations with all values, with the exception of human relationship. This suggests the possibility that

Table 10. Correlations of Occupational Interests and Occupational Values (601 Occupations, 21,033 People)

	R (realistic)	I (investigative)	A (artistic)	S (social)	E (enterprising)	C (conventional)
Sense of achievement	.133 **	.423 ***	.549 ***	.286 ***	.408 ***	-.474 ***
Growth	-.082 ***	.617 ***	.501 ***	.455 ***	.563 ***	-.469 ***
Social status	-.172 ***	.585 ***	.194 ***	.364 ***	.449 ***	-.156 ***
Human relationship	-.111 **	-.072	.372 ***	.743 ***	.365 ***	-.150 ***
Autonomy	.036	.527 ***	.521 ***	.327 ***	.508 ***	-.491 ***
Working conditions	-.216 ***	.212 ***	-.376 ***	.117 **	.149 ***	.293 ***

Note: ***$p < .001$, **$p < .01$.

occupations and jobs in the S, E, and I categories satisfy values related to self-improvement and values related to lifestyle stability. A shows relatively strong positive correlations with sense of achievement, growth, social status, human relationship, and autonomy, but also a fairly strong negative correlation with working conditions. Conversely, C shows a positive correlation with working conditions only, and relatively strong negative correlations with all other values.

IV. Application of the Results and Possibilities for the Future

1. Multidimensional Numerical Criteria for Occupations and Possibilities for Their Application

As the above discussion has shown, it is possible to organize knowledge into seven factors, skills into six factors, and work environment into five factors. Adding six factors for occupational interests and six factors for occupational values makes a total of 30 factors. It is possible to refer to these factors as numerical criteria seen from 30 occupational aspects. The following provides an examination of these 30 numerical criteria.

Japan Institute for Labour Policy and Training (2012) presents all of these 30 numerical criteria in its Appended Table 1. There, the means are set at 0.0 and standard deviation (SD) at 1.0 for all scores. The authors chose four characteristic occupations from this table and made them into the graphs shown in Figure 1 and Figure 2.

Looking at skills in Figure 1, programmer has a high score for computers. Looking at knowledge, mold design engineer has a high score for science and technology, while ad designer has a high score for arts and humanities. As for work environment of Figure 1, all four occupations show roughly the same scores, with seated work having higher scores and

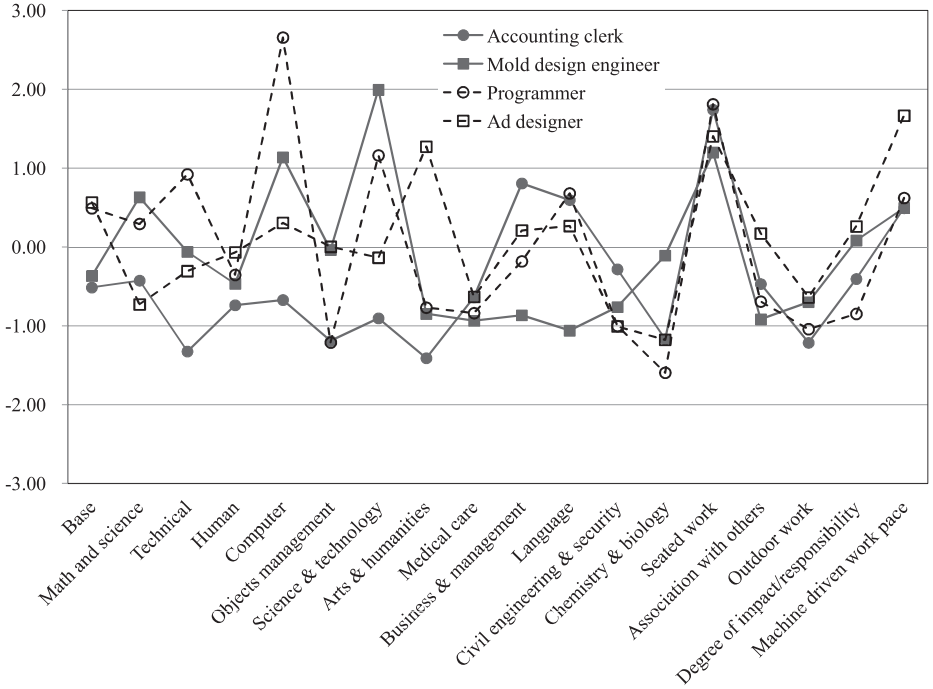

Figure 1. Example of a Numerical Profile (Skills, Knowledge, Work Environment)

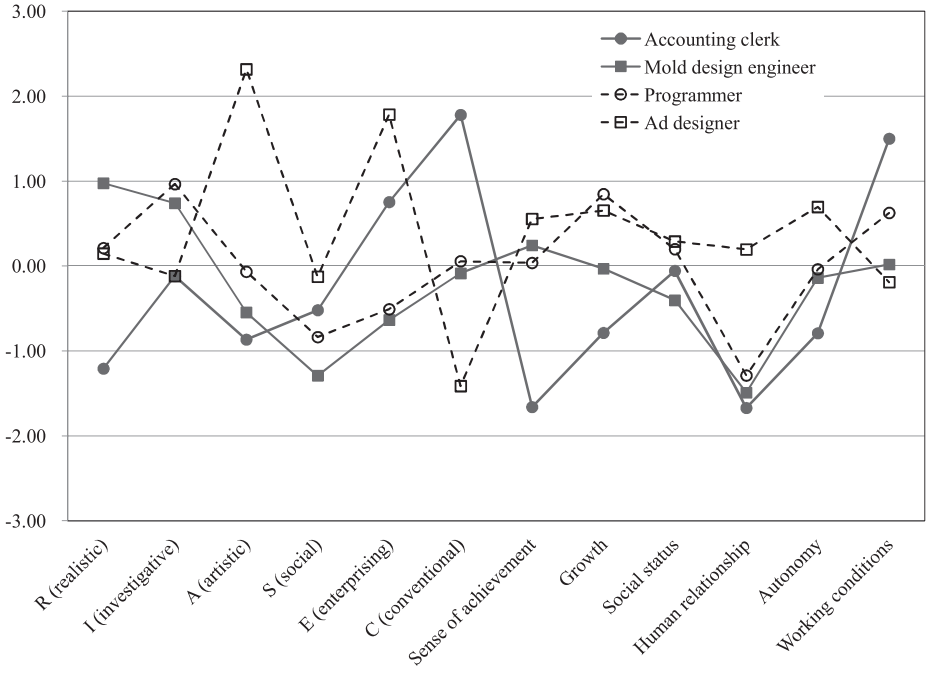

Figure 2. Example of a Numerical Profile (Occupational Interests, Occupational Values)

outdoor work having lower scores. Looking at occupational interests in Figure 2, ad designer has high scores for A (artistic) and E (enterprising), while accounting clerk has a high score for C (conventional). As for occupational values in the same graph, accounting clerk has a low score for sense of achievement, but a high one for working conditions. It is apparent that there is almost no difference among the four occupations for social status.

In the way shown here, the numerical criteria table for 601 occupations can quantifiably show the characteristics of each occupation. As an example of its application, when a person finds employment in an occupation that is outside his or her previous experience, the table could be used to compare the person's previous occupation with the new occupation in order to reveal where differences exist or do not exist. Appended Table 1 of Japan Institute for Labour Policy and Training (2012) standardizes all means at 0.0 and SD at 1.0. This makes it possible to find where the new occupation fits in among all of the various occupations, and learn its relative position. In other words, using the table shows whether the importance of each skill or knowledge factor is average (at a point near 0.0) or how many SDs away it is. If, for example, an occupation has a skill or knowledge factor that is two SDs away, it will stand out among many occupations that are only a few percentage points away stochastically.

Thus, the numerical criteria table showing occupations from 30 aspects that was discussed here can be used for occupation-to-occupation comparisons among all 601 occupations that appear within it. The table can also reveal the relative positions of particular occupations among many.

The availability of such numerical criteria can provide the foundation for various researches. For example, if data on a change from one occupation to another exists, then, as was described above, it becomes possible to see how orientations or abilities were affected by the change. More specifically, it becomes possible to examine whether the new occupation allows the person to demonstrate his or her abilities or not. Moreover, because actual job transfer involve factors that go beyond orientations or abilities (among them changes in pay or whether a particular occupation is available in a particular region), the numerical criteria will make it possible to quantifiably examine various changes in occupation that actually occur in terms of not only wages and employment opportunities, but also orientations or abilities.

These 30 numerical criteria can also be used to find distances among occupations. Japan Institute for Labour Policy and Training (2012) used these numerical criteria to calculate the Euclidean distance between occupations and then highlighted in gray those falling within a 10% range that begins with the closest distance. This occupation-to-occupation distance matrix shows the proximity of occupations to each other from numerical criteria that were discussed heretofore; namely, skills, knowledge, work environment, occupational interests, and occupational values. Because listing all occupations here is not possible, Table 11 shows the first six occupations appearing on Appended Table 2 of Japan Institute for Labour Policy and Training (2012), and arranges them beginning with those that have the

Table 11. Distance between Six Selected Occupations and Other Occupations

		Actuary		Aroma-thera-pist		General office clerk		General machine technician		Rice farmer		Web creator
1	Actuary	0.000	Aromather-apist	0.000	General office clerk	0.000	General machine technician	0.000	Rice farmer	0.000	Web creator	0.000
2	Product developer	4.882	Industrial counselor	5.405	Accounting clerk	2.617	Semiconduc-tor engineer	2.630	Greenhouse vegetable grower	2.887	Ad designer	2.709
3	International civil servant	4.992	Coffee shop owner	5.589	School clerk	3.210	Mold design engineer	2.678	Aquaculture worker	3.464	Graphic designer	3.239
4	Patent attorney	5.126	Cosmetics salesperson	5.634	Administra-tive clerk (national)	3.508	Electronics technician	3.101	Form carpenter	4.121	Book editor	4.157
5	Systems engineer (application specialist)	5.187	Talent manager	5.870	Administra-tive clerk (prefectural/ municipal)	3.989	Production & quality control technician	3.338	Plasterer	4.393	Magazine editor	4.319
6	Systems engineer (IT architect)	5.241	Life insurance underwriter	6.151	Stationery shop clerk	4.235	Mold builder	3.851	Agricultural engineer	4.468	Systems engineer (software develop-ment)	4.586
7	Administra-tive clerk (national)	5.257	Chinese food cook	6.238	Goods purchaser	4.268	Programmer	4.021	Stable attendant	4.865	Technical illustrator	4.680
8	Systems engineer (software development)	5.295	Social education supervisor	6.246	Taxi dispatcher	4.422	PC installer	4.233	Machine woodwork-er	5.183	Systems engineer (application specialist)	4.693
9	Production & quality control technician	5.298	Car salesperson	6.379	Data input worker	4.468	Machine repairer	4.266	Dry cleaner	5.343	Product developer	4.739
10	Taxation worker	5.694	Funeral director	6.570	Parking lot manager	4.583	Engineering researcher	4.439	Shipbuilder	5.641	Systems engineer (IT specialist)	4.757
11	Systems engineer (IT specialist)	5.794	Ad director	6.661	Computer maintenance worker (IT maintenance worker)	4.610	Computer maintenance worker (IT maintenance worker)	4.464	Dye worker	5.649	Magazine reporter	4.817
12	Trading company sales representative	5.809	Tour conductor	6.704	Product manager	4.626	Customer engineer	4.486	Janitor	5.838	Customer engineer	4.863

Note: The matrix shows occupation-to-occupation distance between the first six occupations appearing in Appended Table 2 of Japan Institute for Labour Policy and Training (2012) and 12 other occupations (including that occupation) that are ranked beginning with those having the closest proximity. In Appended Table 2, the 10% of occupations having closest proximity among all occupations are colored; in this table, corresponding locations are similarly shown in gray.

closest distance to others. The first occupations, actuary and aromatherapist, do not have a single occupation in gray outside of themselves, which indicates that there is some distance between them and the other occupations. For the next occupation, general office clerk,

nearby occupations include accounting clerk, school clerk, administrative clerk (national), administrative clerk (prefectural/municipal), and stationery shop clerk, etc. For general machinery technician, occupations in proximity include semiconductor engineer, mold design engineer, electronics technician, production and quality control technician, and mold builder, etc. For rice farmer, occupations in proximity include greenhouse vegetable grower, aquaculture worker, form carpenter, plasterer, and agricultural engineer. And for web creator, nearby occupations include ad designer, graphic designer, book editor, magazine editor, and systems engineer (software development) , etc.

Heretofore, most people considering a change in occupation have tended to search for openings in occupations that are proximate to their occupation of experience. In such cases, they have had to judge proximity subjectively. However, the availability of these data makes it possible to list proximate occupations based on numerical criteria. Of course, the relationships among occupations cannot be identified from this appended table alone. Even if proximity is shown based on numerical criteria calculations, changing occupations is not easy when special licenses, qualifications, education, or training are required. Thus, users of the data will need to bear this point in mind as they search for actual possibilities for occupational change using the occupation-to-occupation distance discussed here as a reference.

2. Study Results and Future Application

"Occupation" is a concept familiar to all adult workers. Everyone has some image of the world of occupations and how they fit into it. We have all heard people speak of their personal experiences or feelings concerning their occupations. However, few of us have an accurate understanding when it comes to the occupations that are not around us. Moreover, with the exception of the United States' O*NET project, no effort has been made to objectively identify and quantify the multidimensional aspects of occupations. Amid such circumstances, this study sought to quantify occupations in a multidimensional manner in terms of abilities, orientations, etc., and present the results as numerical criteria for Japan. The following is an examination of the study's results and implications.

First, it must be mentioned that continuous gathering of information on all occupations, whether in the United States or Japan, through conventional occupational surveys—in other words, collecting information by visiting worksites to conduct observations and interviews—is a difficult endeavor. The United States closed all of the occupational analysis field centers that had been located throughout the country around ten years ago. And the job analyses that Japan's Ministry of Labour vigorously conducted nationwide until the 1950s are no longer being implemented on a national scale. Thus, the Internet-based data-gathering technique conducted by this study is looked to as a promising new method. The study conducted an Internet survey of 24,000 people to gather data on detailed and various numerical criteria for 601 occupations. Although this paper does not provide the results of content analysis, it does bring together information on the kinds of specific tasks performed in each occupation. Other studies have also analyzed and examined acquired data using

various methods; however, they almost indicated positions of occupations properly on numerical dimensions. Moreover, as can be seen in Figures 1 and 2 and Table 11, the occupation-to-occupation relationships that are identified from the data are proper for the most part. These results suggest that Internet-based gathering of occupational data is effective and will be applicable to data-gathering for a broad range of occupations. To repeat what was mentioned at the beginning of this paper, the speed at which the occupational world is changing is making data-gathering increasingly difficult. However, data-gathering via the Internet has broadened possibilities for gathering data on wide-ranging and diverse occupations.

One means for resolving labor policy-related issues is to steer society in a better direction by establishing laws or setting up subsidy schemes. However, another effective means for carrying out a policy agenda is to supply objective information. This study presents the various aspects of occupations in the form of numerical criteria that can serve as occupational data, in addition to conventional descriptive contents. Moreover, use of the Internet as described here will allow data-gathering in a broader and timelier manner.

Career consulting is being promoted in Japan as a government policy, and there are many career consultants in business. Even so, objective information on occupations and careers are surprisingly scarce. Thus, there is a need for objectively gleaned and organized information on the wide spectrum of occupations that was presented here. In addition, if use of the 30 numerical criteria for occupations described here is expanded, they can be expected to become shared throughout society, where they will serve as a common language and common standards for occupations and careers in recruiting, job-seeking, skills development, and other endeavors.

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JILPT Research Activities

International Seminar

The Japan Institute for Labour Policy and Training (JILPT) held an International Seminar on Workplace Bullying and Harassment in Tokyo on the 27th and 28th of February 2013. This was a two-day seminar with academics and experts in the field of labor issues. The main purpose of the seminar was to share the situation and ideas for tackling workplace bullying and harassment in selected countries (Canada, France, Germany, Japan, Korea, Sweden, the UK, the US) and the EU, as well as stimulating research activities and policy-making in Japan through cross-national discussions and exchanges of views.

To address the problem of workplace bullying and harassment, it is essential that we gain an accurate picture and precise evaluation of actual conditions based on international comparative research. In this respect, the seminar was a great success, with much thought-provoking discussion and insight into the problem and measures against workplace bullying and harassment in each country from a comparative aspect.

The submitted papers will be published and are scheduled to be posted on the JILPT website (http://jil.go.jp/english/index.html) in due course. The list of speakers and submitted papers is as follows:

Maarit Vartia-Väänänen (EU, Finland), *Workplace Bullying and Harassment in the EU, and Workplace Bullying and Harassment in Finland*

Margaretha Strandmark (Sweden), *Workplace Bullying and Harassment in Sweden: Mobilizing against Bullying*

Löic Lerouge (France), *Workplace Bullying and Harassment in France and Few Comparisons with Belgium: a Legal Perspective*

Helge Hoel (U.K.), *Workplace Bullying in United Kingdom*

Martin Wolmerath (Germany), *Workplace Bullying and Harassment in Germany*

Sookyung Park (Korea), *Workplace Bullying and Harassment in South Korea*

Shino Naito (Japan), *Workplace Bullying in Japan*

Susan Coldwell (Canada), *Addressing Workplace Bullying and Harassment in Canada*

David Yamada (U.S.A.), *Workplace Bullying and the Law: A Report from the United States*

Research Reports

The findings of research activities undertaken by JILPT are compiled as Research Reports in Japanese. Below is a list of Research Reports published since March 2013. The complete Japanese text of these reports can be accessed via the JILPT website (http://www.jil.go.jp/institute/pamphlet/). English summaries of selected reports are also available on the JILPT website (http://www.jil.go.jp/english/reports/jilpt_01.html).

Research Reports

No.157 Collective Agreement Systems in Modern Industrialized Nations: Sectoral Collective Agreements in Germany and France (March 2013)

No.156 The Great East Japan Earthquake and Records on Employment and Labor: 1st Compilation Report on the Project to Record the Earthquake (JILPT, Compilation of the Results of the Project to Record the Great East Japan Earthquake No.3) (March 2013)

No.155 The Great East Japan Earthquake and Human Resource Development Facilities: Records from Disaster Response to Recovery and Reconstruction (JILPT, Compilation of the Results of the Project to Record the Great East Japan Earthquake No.2) (March 2013)

No.154 Working Styles and Awareness of Big City Dwellers in Their 30s: Based on a Comparison with Those in Their 20s in the "Work Style Survey" (March 2013)

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No.115 Use of Young Worker Employment Support Measures in Small and Medium Enterprises (Report on Interview Survey with Staff in Charge of Hiring) (March 2013)

No.114 Foreign Worker Acceptance Policies in Various Countries, Focusing on Highly Skilled Professionals: Comparative Survey of Denmark, France, Germany, UK, EU, USA, South Korea and Singapore (March 2013)

No.113 Job Hunting Activities of International Students: Present Situation and Issues (March 2013)

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No.108 Survey on Minimum Wage and Corporate Action: Outline of Results and Analysis of Impact on Employment (March 2013)

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