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## 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 “*jo*i (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 *jo*i 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 *jo*i appraisal must keep showing enthusiastic and cooperative attitude to his/her superior continuously. There is little possibility to receive high *jo*i 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.<sup>1</sup>

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).<sup>2</sup>

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<sup>1</sup> 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.

<sup>2</sup> 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).<sup>3</sup>

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).<sup>4</sup> 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

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

<sup>3</sup> 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.

<sup>4</sup> 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.

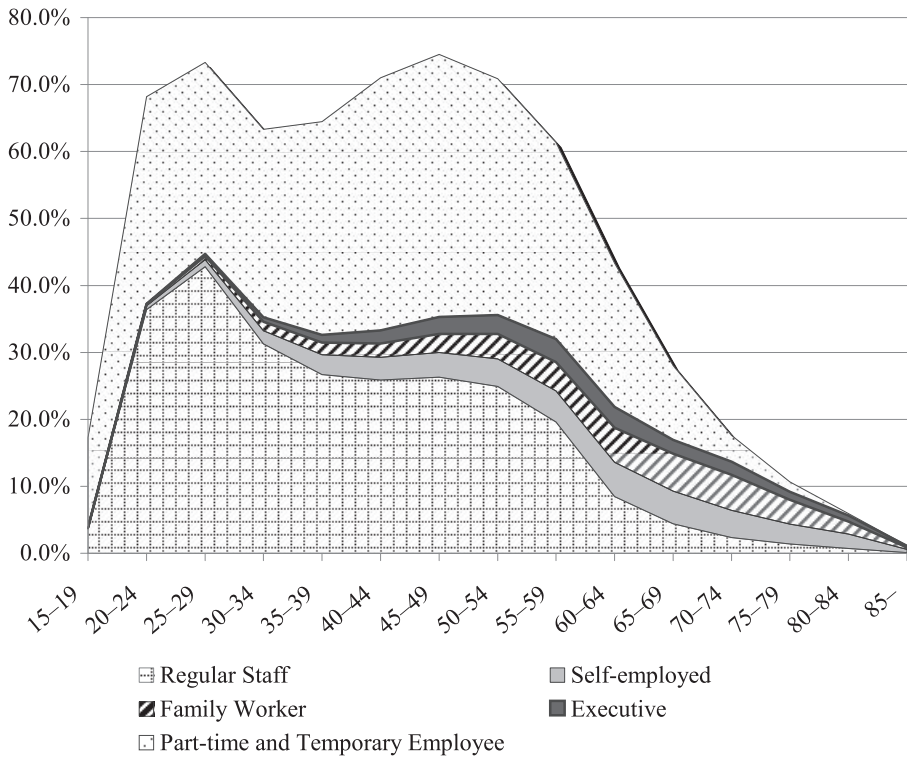
The respondents to the research unanimously said that regardless of the amount of work, the wage is fixed because a sales allowance is paid. Although the sales allowance is reward for their long hours of extra work, in reality it can rarely compensate for the actual overtime worked.

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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