

DOI: [10.14515/monitoring.2021.1.1840](https://doi.org/10.14515/monitoring.2021.1.1840)



N. Hosogaya

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For citation:

Hosogaya N. (2021) Development of Telework and its Effects on Japan's Human Resource Management: Artificial Sociality as a Focus. *Monitoring of Public Opinion: Economic and Social Changes*. No. 1. P. 71–90. <https://doi.org/10.14515/monitoring.2021.1.1840>.

Правильная ссылка на статью:

Хосогая Н. Развитие удаленной работы и ее влияние на управление человеческими ресурсами в Японии в фокусе искусственной социальности // Мониторинг общественного мнения: экономические и социальные перемены. 2021. № 1. С. 71—90. <https://doi.org/10.14515/monitoring.2021.1.1840>. (In Eng.)

DEVELOPMENT OF TELEWORK AND ITS EFFECTS ON JAPAN'S HUMAN RESOURCE MANAGEMENT: ARTIFICIAL SOCIALITY AS A FOCUS

*Nobuko HOSOGAYA*¹ — Associate Professor, Faculty of Economics
E-MAIL: n-hosoga@sophia.ac.jp
<https://orcid.org/0000-0002-6899-0093>

¹ Sophia University, Tokyo, Japan

Abstract. This study explores social and economic activities that promote 'telework' and its impact on human resource management in Japan. Telework had not been common in Japan's workplaces, but the situation suddenly changed when the COVID-19 pandemic began to spread in 2020. The Japanese government issued the declaration of emergency and encouraged the commerce, industry, and other enterprises associations to introduce telework as a 'new way of working'. To emphasize the characteristics of telework in Japan, the article observers research outcomes published recently. We argue that there is a difference between companies' size and location and the level of their employees' skills: telework has already been implemented in some major companies, while there is a marginal development in online work in rural areas and in small and medium-sized enterprises. A hybrid type of face-to-face and online communications emerged as the result. The article finds out the domains where Japanese corporations adopted telework and shows some changes and effects caused by telework in work styles and human resource management. In conclusion, we systematize the data in a respective research realm and classify the elements associated with artificial sociality.

РАЗВИТИЕ УДАЛЕННОЙ РАБОТЫ И ЕЕ ВЛИЯНИЕ НА УПРАВЛЕНИЕ ЧЕЛОВЕЧЕСКИМИ РЕСУРСАМИ В ЯПОНИИ В ФОКУСЕ ИСКУССТВЕННОЙ СОЦИАЛЬНОСТИ

ХОСОГАЯ Нобуко — доцент, факультет экономики, Софийский университет, Токио, Япония
E-MAIL: n-hosoga@sophia.ac.jp
<https://orcid.org/0000-0002-6899-0093>

Аннотация. В статье исследуются социальные и экономические условия, способствующие становлению и развитию удаленной работы (телеработы), и ее влияние на управление человеческими ресурсами в Японии. Телеработа никогда не была обычной трудовой практикой в Японии, однако ситуация внезапно изменилась в 2020 г. в связи с распространением пандемии COVID-19. Японское правительство объявило чрезвычайное положение и призвало торговые, промышленные и прочие бизнес-ассоциации ввести удаленную работу как «новый способ трудовой деятельности». Последствия распространения телеработы оказались настолько существенными, что вызвали изменения в традиционном для Японии стиле трудовой деятельности. С целью выделения характеристик удаленной работы в Японии в статье анализируются релевантные теме результаты национальных эмпирических исследований. Мы отмечаем, что между размером и месторасположением компаний, с одной стороны, и уровнем квалификации их сотрудников, с другой, существуют различия: если в ряде крупных японских корпораций телеработа уже успешно внедрена, в сельской местности и на малых и средних

предприятиях страны наблюдается лишь незначительное ее развитие. На основании этого в статье делается вывод о становлении гибридного типа личных (face-to-face) и онлайн- деловых коммуникаций. Подводя итог, мы выделяем сектора занятости, в которых удаленная работа уже внедрена, а также описываем обусловленные ею изменения в стиле трудовой деятельности и управления человеческими ресурсами. В заключение мы систематизируем данные в соответствующей исследовательской области и классифицируем элементы, ассоциируемые с искусственной социальностью.

Keywords: telework, artificial sociality, Japan, COVID-19, human resource management

Ключевые слова: удаленная работа, телеработа, искусственная социальность, Япония, COVID-19, управление человеческими ресурсами

Introduction

This study explores the social and economic activities that promote telework¹ and its impact on human resource management (HRM) in Japan. Telework is a technological innovation and is now closely associated with efforts to advance artificial intelligence (AI). Nonetheless, it refers to a business practice that was not widespread in Japan until 2020. However, following the COVID-19 crisis, on April 13th, 2020, Japanese Minister of Economy, Trade and Industry, requested the heads of the Japan Chamber of Commerce and Industry and other small- and medium-sized enterprises associations encourage to promote telework and other actions from the standpoint of preventing expansion of the novel coronavirus disease. Companies should encourage office workers to shift to telework at their homes in principle and reduce the number of workers showing up at offices by at least 70 % even if such workers need to go to the offices for unavoidable reasons, except those who need to continue working to maintain social functions².

After this request companies had seriously to take on two social responsibilities which include providing their employees with a safe working environment and simul-

¹ The term 'telework' is equivalent to such expressions as 'telecommuting' or 'work from home'. Blount [2015] explains the reason for the existence of multiple expressions by the diversity of socio-cultural backgrounds when the newly phenomenon occurs. It is essential to consider the labour and employment system, the degree of ICT development, and the social and historical background in which the phenomenon developed. However, in terms of telework style, even though some different expressions exist, common factors are location and work-related travel. In Japan, the term 'telework' is generally used.

² Ministry of Economy, Trade and Industry. METI Requested Related Associations to Promote Teleworking of Workers and Other Actions as Responses to Government's Declaration of State of Emergency Involving Novel Coronavirus Disease. 2020. 13 April. URL: https://www.meti.go.jp/english/press/2020/0413_002.html (accessed 11.02.2021).

taneously keeping their business operations going. Consequently, various companies that had been reluctant suddenly began to introduce the system.

Such online communication was also uncommon in Japanese HRM field. However, the impact of 'telework' is currently considered a powerful means of changing traditional work styles. It is thought to alter relationships seen in the conventional office setting at various stages of the labor process: communication, leadership, and the exchange of authority and obedience.

Although AI has already been introduced in some fields such as the digital economy and society, artificial sociality (AS) has not yet been widely adopted. Further, the concept itself is not clearly defined. This article aims to contribute to the formulation of an AS concept from a Japanese perspective with foci on HRM studies. We will first briefly describe AI's progress in Japan, and the development of work processes in places where telework has been implemented. In order to emboss distinctive character of Japan's telework, we refer some relevant research in countries other than Japan. We will thereafter discuss recent workplace changes that have occurred with the manifestation of the COVID-19 crisis, by referring to some recent research outcome. To put in precisely, we will ascertain the levels and parts of society the telework has been introduced. In other words, we have classified which domain of Japanese corporations adopted telework. Then we attempt to systematize data in these research contents to classify the elements which associate with artificial sociality.

Japan's Concern of Artificial Intelligence and Artificial Sociality

In fact, with the ongoing development of the information and communication technology (ICT) over recent decades, AI is already an essential aspect of the Government's public policy. This can be seen in its proposed concept of 'Society 5.0'³:

The Japanese government has proposed Society 5.0 as a vision of the future society the country is aiming for. Society 5.0 is a society that follows the hunter-gatherer society (Society 1.0), agrarian society (Society 2.0), industrial society (Society 3.0), and information society (Society 4.0). Society 5.0 refers to a human-centered society that achieves both economic development and solutions to social challenges by means of systems that fuse cyber spaces with the real world in a highly integrated manner.

AI has been expanding in various areas. However, in comparison with other industrialized societies in relation to the introduction of AI, Japan is seen to have fallen behind. According to a survey conducted by Japan's Ministry of Internal Affairs and Communications in 2016, only 5% of Japanese workers answered that artificial intelligence had been introduced in their places of work (the choices were: 'it has already been used' and 'it has been introduced but has not used yet')⁴. By contrast, 13.7% of workers in the United States answered that AI had been introduced in their workplac-

³ Ministry of Internal Affairs and Communications of Japan. The White Paper on Information and Communications in Japan. 2019. URL: <https://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2019/2019-index.html> (accessed: 30.01.2021).

⁴ Ministry of Internal Affairs and Communications of Japan. The White Paper on Information and Communications in Japan. 2016. URL: <https://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2016/2016-index.html> (accessed: 30.01.2021).

es⁵. Besides, only 5.6% of Japanese workers responded that they planned (including having an actual timetable as well as being under consideration) to introduce AI in the future, while 16.5% of the workers in the United States gave a positive answer⁶. This is about three times higher. Moreover, depending on future efforts, the difference may widen further. There is also a similar tendency in studies concerning telework. In formal situations in Japan, telework has not been widely used. Besides, where the proportion of telework is small, and where AI has been widely discussed and already introduced in some areas of Japan, the concept of AS has not widely penetrated in any Japanese social scientific discourse.

Rezaev and Ivanova [2018] show the following three dimensions of AS: the first one is human–human interactions that proceed through machines, for instance, in social networks. The second is human-machine interactions — from programmers to computer service, and from users at work to playing games children. The third is a computer-computer (screen-to-screen) communication. Therefore, the social nature of AI could be conceived in two ways: ‘strong’ artificial sociality does not yet exist; it would be in the ability of AI to interact spontaneously and be emotionally involved in communication; ‘weak’ artificial sociality is an empirical fact of the participation of AI in various social interactions, in this sense, it is expanding more and more today.

As previously mentioned, in order to elucidate the AS concept and its usage, it is essential to accumulate case study data from various fields. Thus, we attempt to provide some current ideas regarding ICT effects on workplace communication in Japan’s HRM studies that relate to AS, especially as an example of the first type, — human–human interactions of AS.

The Characteristics of the Japanese-Style Employment System and New Trends in Communication

The term ‘telework’ as often used comes from the terms ‘tele’ which refers to a distant place, and ‘work’. Therefore, we derive a concept of a flexible work style that utilizes information and communication technology, regardless of location or time, from a distance. The Ministry of Internal Affairs and Communications indicates the new work style⁷:

In the realm of how people work, working arrangements have drawn attention in which people do not belong to a company or organization but instead work in a freelance capacity via the Internet on one-off projects or short-term assignments.

In addition to economic activities, a change is seen in lifestyles⁸:

It is now possible to elicit emotional responses from a large number of people transcending real-world human relationships and the geographical bounds of daily life by posting the

⁵ Ibidem.

⁶ Ibidem.

⁷ Ministry of Internal Affairs and Communications of Japan. The White Paper on Information and Communications in Japan. 2019. URL: <https://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2019/2019-index.html> (accessed: 30.01.2021).

⁸ Ibidem.

videos or music, pictures, stories, or messages that you make, on various sharing sites or social media channels.

A person that performs telework is called a teleworker. Further, according to the definition of the Ministry of Land, Infrastructure, Transport and Tourism of Japan, a teleworker is a person that works using ICT outside their workplace⁹. According to the ministry's survey, telework is divided into three types¹⁰:

- (a) working from workers' home residences,
- (b) working from satellite offices, which refers to teleworking for those who work in a fixed place such as a satellite office, shared office place,
- (c) mobile works, which refers for those who work outside of their office places, such as their clients' offices, hotels during business trip, and coffee shops during their travel.

Telework has not always been popular in Japan as it is now. The introduction of telework in Japan began in the 1980s. This was mainly to support female office workers that found it a little difficult to commute to their office following childcare and other family reasons. In the 1990s, the government supported the telework measures for reducing costs by decentralizing offices from metropolitan areas, developing local economies, and encouraging social participation of people with disabilities and the elderly. Many companies have introduced telework for peripheral workers to have flexible working hours and locations, rather than for core male employees. Until this stage, the promotion policy of telework was positioned to balance between people's economic activities and their lives.

In 2013, however, Japanese government released the 'World's Most Advanced IT Nation Creation Declaration' where they regarded and advocated telework as a part of the work style reform which was necessary for creating an IT nation. Thus, it is a part of pressing for improvement in Japanese companies' traditional employment management.

Although telework has been encouraged for many years in Japan, it has not yet penetrated to workplaces of Japanese. Even though the government encouraged telework and media has focused on telework, the actual implementation has not followed.

The Relationship between 'Membership-type' Employment and HRM

Introduction of telework has delivered a heated debate on Japan's employment system. The study on characteristics of Japan's employment has been conducted not only by Japanese researchers, but also foreign experts. It has long been mentioned that although the feature of Japan's employment system is characterized by its history of industrial development, it requires environmental adaptation.

Supposedly, the primary characteristic of Japanese companies was a professional system in which work is allocated to people and their wages determined by reference to qualifications and promotion based on the performance of the duties assigned to

⁹ Ministry of Land, Infrastructure, Transport and Tourism of Japan. Heisei 29nendo terewa-ku jinko jittai chosa chosakekka gaiyo [Survey on the Telework Population and Work Condition in 2017]. 2018. URL: https://www.mlit.go.jp/crd/daisei/telework/docs/29telework_jinko_jittai_gaiyo.pdf (accessed: 30.01.2021). (In Jap.)

¹⁰ Ibidem.

them. Nihon Keizai Dantai Rengokai (Japan Business Federation) indicates that the character of the 'Japanese-style employment system' consists of adherence to the three leading characteristics [Nihon Keizai Dantai Rengokai, 2020: 11]:

- (1) batch hiring of new graduates from school,
- (2) long-term and lifetime employment until retirement age, and
- (3) seniority-type wage system.

These three characteristics have been a feature of Japan's employment system since the end of World War II [Sugayama, 2011].

Further, it is quite common in the Japanese society to assume that the long-term employment system basically continues until retirement age. Academic specialists in this area tend to choose the term 'long-term,' rather than 'lifetime'. This issue tends to be discussed in terms of the method of work assignment and the education and training of workers' skills. Therefore, it is indivisible from the condition of the labor market and the education system in that country. Marsden [1999] proposed to set up the criteria for comparing employment systems, when examining the relationship between managerial authority and worker obligations. He takes account of these two characteristics for identifying Japan's employment character by connecting jobs to works and organizing tasks into jobs. It is essential for Japanese companies to train their employees, as it prioritizes allocation of employees' workplace according to companies' needs, rather than each employee's ability at the time of the contract. The point is to assign people to the workplace (function) rather than to a specific job. Although this method is limited to apply to large corporations, it is regarded as an absolute Japanese model. Since then, discussions on similar ideas have been delivered in Japan.

This employment system is defined as the 'membership-type employment'. The job demarcation and wage determination under the 'membership-type employment' contrasts with what is found in many Western companies in which job-based wage system is present¹¹ [see also: Hamaguchi, 2014]. In the Western 'job-based type' employment system, employees' salary is defined by the job content and its value in the local labor market. Since the contract presupposes the job existence, theoretically the contract will not be renewed when the job disappears, and the employee loses employment. In Japanese corporations, under the 'membership-type' employment, the job descriptions are not prepared for the majority of employees. This is also the case for new graduates' batch hiring. They are hired without specifying certain job demarcations. Employees are in charge of various duties when they get ordered. Therefore, even if their current jobs disappear, they are relocated to another work and thus the employments continue. As a result, a long-term stable employment is established as a corporate system. Employees are theoretically required to take charge of any job at anywhere, according to companies' orders. Since the job content changes at the companies' orders, the necessary training program is executed by the company's responsibility during business hours.

'Membership-type employment' begins with the bulk recruitment or collective adoption of new graduates from universities and high schools. When hired, a member (employee) considers themselves part of a company. In other words, freshmen would

¹¹ Hamaguchi K. Addressing the Problems with Japan's Peculiar Employment System. *Nippon.com*. July 24, 2013. URL: [Addressing the Problems with Japan's Peculiar Employment System | Nippon.com](#) (accessed: 30.01.2021).

enter a certain company and work there until retirement. Further, students start hunting for jobs while still in school, and their potential duties are not limited; what follows is a human resources development process for promotion during which the employee will take charge of various kinds of jobs within the company.

Concerning the batch hiring of new school graduates, job skills are transmitted through inhouse training. The inhouse training is basically conducted by face-to-face communication, as freshmen and junior workers learn by watching the seniors' performance. This type of training is referred to as 'on the job training (OJT)'. Through this process, direct supervisor observes and evaluates how workers carry out their duties and what attained out of their work. This supervisor's observation is important to evaluate employees' abilities and ensure the effectiveness of training. At the same time, that observation is also important in evaluating employees' achievement.

Consequently, the direct supervisors' evaluation of employees has large effects upon these employees' promotion. In other words, the results of the evaluation are the major factors that are considered in the decision to upgrade their employees. This is the fundamental norm and form in developing human resource management. Hence, in this seniority principle at the work system, the length of one's work is related to both an employee's wage rises and the record of promotion within the company.

The salary is rather linked to the employee's grade on the status ladder in the company. Therefore, remuneration involves seniority-type wages, in that their wages are raised every year based on the progress in job performance ability, which is reflected in the upgrading of the ladder. This seniority-wage rise suggests that the number of years of service and work experience will eventually improve the job performance ability.

The Japanese-style employment system, which focuses on hiring and also training, designated as 'membership-type employees', has various merits. However, as the business environment changes, challenges are expected to direct orientation towards job-type. Nihon Keizai Dantai Rengokai [2020: 12—13] has formulated an understanding of these challenges in these terms:

While many companies, especially large ones, place importance on the batch recruitment of new graduates, mid-career recruitment has been relatively restrained. This makes it difficult for those that could not get the desired job during the difficult employment environment to re-challenge themselves¹². It is also difficult to develop high employability outside the company because the company's internal measure system promotes human resources suitable for that particular company. Consequently, the labor market's fluidization was hindered. Further, the external labor market was insufficiently developed. This is considered one of the reasons why job-type employment did not spread in Japan.

However, when telework increases, it is likely that the traditional work allocation and seniority system will have become less effective, and a job-based employment system

¹² This is considered to be the case for a large-scale school graduates in the economic downturn period of the 1990's, who are called 'the ice age generation'. Those generation who experienced this employment difficulty and could not get an appropriate job at the initial employment stage did not go well in their subsequent job change. Since they were placed at a disadvantage in Japanese labor market, there have been deliberation as it is regarded that the society was unfair between generations.

would replace it. Well-known companies such as KDDI, Hitachi¹³, Shiseido, and Fujitsu have announced that they will shift to a 'job-type' personnel system¹⁴.

Previous Research on Factors in the Features of Telework/Telecommuting

The trends of the abovementioned large corporations may have some influence on the Japanese companies' employment system. However, each company's actual choice can be conditioned on multiple factors. In this section, by reviewing previous research on telework and human resources management, we will systematize the components for the social relationship at these online workplaces. In this process, we can find possible references in the new communication style's deliberation, so-called AS. This will also provide us with essential points for considering possible changes in Japanese places of work after the rapid prevalence of telework under the COVID-19 crisis.

Telework is defined as a work organization that implies remote working (distant from the company's main premises and without the physical presence of any person in charge of controlling the teleworker's job execution) and resorts to ICTs. The lack of the physical presence of a manager or supervisor raises issues that differ from the traditional management systems in workplaces [Dambrin, 2004]. In telework, it is highly possible for managers, supervisors, and workers not to share workplaces and time. Therefore, telework brings about various issues that differ with the conventional management style in workplaces. The issues include elements that influence the work environment, information exchange, management process (especially managers' roles and skills), and time or timing in the management process.

First, there are personal factors that are related to the workplace and work environment. The work environment is a significant source for productivity; therefore, the management is expected to be responsible for the preparation and provision of a suitable one. However, in the case of telework or telecommuting, a necessary working environment tends to be prepared and set up by the individual and family initiatives. Therefore, environmental related issues appear to be closely connected to personal and family features. Additionally, productivity or measured work outcomes are evidently influenced by personal and family factors. These personal characteristics include the workers' gender [Maruyama, Tietze, 2012; Pignini, Staffolani, 2019]; personality, educational background, family features [Smith, Patmos, Pitts, 2018]; occupation [Maruyama, Tietze, 2012], as well as the quality of the home-office environment that they can provide [Morganson et al., 2010; Nakošienė, Bučiūnienė, Goštautaitė, 2019]. Research on the remote work environment in normal times can consider the dispatch

¹³ Hitachi is a Japanese company that Ronald Dore analyzed in his well-known book 'British Factory, Japanese Factory' published in 1973. Since then, Hitachi has remained one of the most famous and influential companies in Japan. Currently, the chairman of Hitachi is the chairman of Nihon Keizai Dantai Rengokai, who has a great influence on the statements from the business community on the issue of the Japanese employment system. On the other hand, for several years, Hitachi had positioned the senior management class as a global key position to prepare the introduction of Global Talent Management (GTM) system. In line with the introduction of GTM which is often used in multinational companies, it is reported that Hitachi started to introduce job descriptions for their global key positions. See Owada N. Sekai 30 man nin wo Jobu gata ni tankan, Hitachi ga sodaina jinjikaikaku ni idomu honto no riyu' [The Real Reason Why Hitachi is Taking on a Grand Personnel Reform by Converting 300,000 People around the World to a Job Type]. XTECH. 2020. August 19. URL: <https://xtech.nikkei.com/atcl/nxt/column/18/01400/081300001/> (accessed: 11.02.2021). (In Jap.).

¹⁴ Nihon Keizai Sangyo shinbun Indigoburū kaichō shibata reiji — jobu-gata koyō e no gekiyaku (SmartTimes) [Indigo Blue Chairman Koji Shibata — Powerful Drug for Job-Type Employment (SmartTimes)]. 2020. August 26. URL: <https://www.nikkei.com/article/DGXKZ063032520V20C20A8XY0000> (accessed: 11.02.2021). (In Jap.)

at the customer's office [Morganson et al., 2010]. Further, personal attributes such as gender and childcare were significantly reflected on the workers outcomes [Feng, Savani, 2020].

The second element is the organizational and technological factors that influence the work environment. Although telework places are often provided by the workers, organizational, ICT equipment and technology support is often needed, as these are usually crucial resources leading to a favorable work outcome. The lack of or insufficient ICT support may serve well to reduce the viability of working from home for many people. In fact, it may be one of the reasons why telework has not hitherto made inroads in Japan. Support should be offered when the requirements for the work to be done are not present in the immediate work environment. This is described as the absence of a teleworker-environment fit [Bentley et al., 2016]. The teleworker-environment fit is necessary to secure an appropriate workspace [Nakrošienė et al., 2019], work-life balance [Morganson et al., 2010] and reduce workplace isolation [Golden, Veiga, Dino, 2008]. This outcome is related to personal productivity and satisfaction, overcoming stress and anxiety about one's career [Nakrošienė et al., 2019], and experiencing a sense of inclusion [Morganson et al., 2010].

The third element is exemplified as information exchange. Difference in styles of information exchange will influence the outcome of work, that is, the increased use of mobile technology, which causes a sense of autonomy [Fujimoto et al., 2016] and reduced communication with colleagues, which induces anxiety [Golden, Fromen, 2011; Nakrošienė et al., 2019]. They further bring about a difference in the means of communication, change the knowledge acquisition, and affect the satisfaction level [Lee, Shin, Higa, 2007; Smith et al., 2018]. Additionally, the workers' perception and choice of suitable media has changed [Lee et al., 2007] as new technologies and tools are created in response to the needs at tele-workplaces. The use of these new tools will reduce loneliness and improve communication and work outcomes.

The fourth element is the management process for telework. Although telework does not share a place, it is a process of organized labor. Further, in order to achieve telework, organizational management and coordination are required [Dambrin, 2004]. Studies on telework have examined the two factors fundamental to coordination and management; technology and the person involved. The former is related to media and technology as tools, and the latter reveals the relationship between the manager and their subordinates. These include managers' skills, the effects of remote managers' supervision on associates [Golden, Fromen, 2011], and changes in the employees' perception of management. These factors evidently influence the workers' output. Further, the frequency or duration of telework are the factors that control a manager's influence over the output.

From such previous research, it is inferred that in the management process of telework, the manager's role in providing detailed instructions diminishes. In fact, it is now considered outdated. This is because employees have increasingly had to make autonomous decisions in the execution of their work. Thus, the managers' skills are related to providing directional support similar to that provided by a coach in sports [Groen, van Triest, Coers, Wtenweerde, 2018]. Over time, employees will also focus on output. Supervisor support will also increase employee satisfaction if they contribute

to employees' progress towards achieving these goals. Thus, from the employees' point of view, the manager's role has increasingly become unconvincing or redundant [Masuda, Holtschlag, Nicklin, 2017].

Evidently, time would have some effects on the management process. Steward [2000] showed that gradual changes in employee perceptions and expectations for the management were affected by the passage of time. By experiencing simultaneous communication, management's effectiveness is either strongly realized [Dambrin, 2004], or the personal sense of time and working style changes [Fujimoto et al., 2016]. The use of mobile technology has greatly overturned the conventional management premise that companies and factories are established by workers' gathering in a common workplace and simultaneously sharing time and space.

The State of Emergency and Dramatic Expansion of Telework

In May 2020, the implementation of telework in Japan expanded significantly in response to the COVID-19 crisis, especially after the proclamation of the state of emergency. The first COVID-19 infection in Japan was confirmed in mid-January 2020. Since then, the number of infected people has spread rapidly throughout the country, reaching 1,000 in mid-March, then over 2,000 at the end of March, and over 3,000 in early April. On April 7th, the government issued an 'emergency declaration' for seven prefectures: Tokyo, Kanagawa, Saitama, Chiba, Osaka, Hyogo, and Fukuoka. It was based on the provisions of art. 32, para. 1 of the Revised Special Measures for New Influenza Measures Law [Nihon Seisensei Honbu, 2020: 1]. After that, and by mid-April, the 'emergency declaration' was extended to all prefectures. On the 13th April 2020, Japanese Minister of Economy, Trade and Industry, issued the request for the promoting telework.

Japan's life and economy have changed in an attempt to prevent the spread of COVID-19: there are refrains from going out, government requests to suspend business commuting, and school closures. In response to this, telework has suddenly been promoted among Japanese companies. Further, many universities started to conduct online classes. Under this state of emergency, telework has immediately become a significant issue for management in response to the government's request, though it had been a support measure for employees who had commuting-inconvenience.

JILPT¹⁵ survey on the Application of Telework/Work from Home

In reference to the JILPT survey, we can see how telework was established as a 'new way of working' after the spread of the COVID-19 pandemic and the cancellation of the declaration of emergency by the government [Takami, 2020]. All the research samples included those that applied telework during the period of the state of emergency. In this section, we focus on full-time workers and confirm the relationship between the applicability of telework.

Taking advantage of work-life change by the COVID-19 pandemic, the 'working from home/telework' has expanded rapidly. Prior to the state of emergency in early April, three-quarters of the companies had not even introduced telecommuting as an

¹⁵ JILPT — The Japan Institute for Labour Policy and Training.

optional form of working (see fig. 1). During the state of emergency, telecommuting spread throughout the nation. Particularly, under the state of emergency, telework has adapted to almost every employee, including male core members in the company to protect their safety and economic activity. It was very different from four decades ago, when telework was applied only for the company’s flexible or peripheral employees.

Figure 1 The number of days of ‘working from home / teleworking’

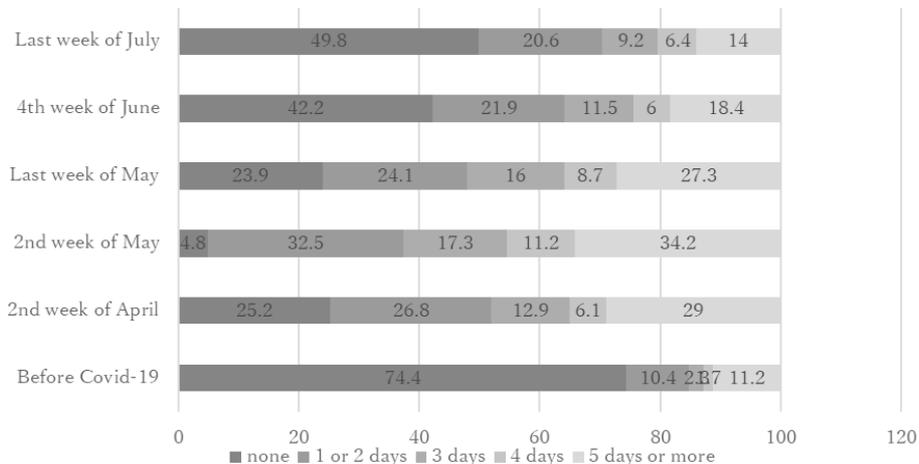


Fig. 1. The number of days of ‘working from home/teleworking’¹⁶

This can be confirmed by data for the period before the declaration of the state of emergency. In the second week of April three-quarters of companies introduced more than one telework day per week. During this time, 29% of the companies telecommuted for five days or more per week. Over the ‘second week of May’ the percentage rose significantly. More than 95% of the companies introduced telework for more than one day, and over one-third of the companies applied telework for five days or more per week. However, the proportion of ‘not implementing’ began to increase when the government lifted the state of emergency on May 25, and afterwards, that is the last week of May onwards. In the last week of May, approximately a quarter of the companies reported that they had completely stopped telework. In the 4th week of June, this percentage further increased to 42.2%. Moreover, by the 4th week of July, about half of the companies had stopped telework (see fig. 1).

By referring to the JILPT survey, we identify some characteristics in the applicability of telework during the period of the state of emergency. Takami [2020] selected full-time employees from the JILPT May survey data and found clear trends in the applicability of telework.

Table 1 shows the condition of the applicants’ working from home under the state of emergency. First, this table indicates that telecommuting did not apply to all kinds of workers. Evidently, from the ‘total’ column, the larger ratio of applicants is categorized into

¹⁶ Source: Takami [2020].

‘did not work from home’ while less than 30% worked for ‘three days or more a week’. The number of people that worked from home three days or more a week is characterized by being male, highly educated, working for an information industry, service industry, manufacturing industry, large companies, and in urban areas such as Tokyo.

Table 1. Applicants working from home during the state of emergency (Full-time work before the COVID-19 pandemic)*

Telework per week		0 (%)	1 or 2 days (%)	3 days or more (%)	N
Total		49.8	20.6	29.6	652
Gender	Male	46.7	21.5	31.7	460
	Female	57.3	18.2	24.5	192
Academic backgrounds	High School Graduates	65.6	14.6	19.8	96
	Vocational school/junior college Graduates	59.1	17.0	23.9	88
	Undergraduates/Postgraduates	44.9	22.4	32.7	468
Industry type	Construction industry	84.8	6.1	9.1	33
	Manufacturing industry	48.5	20.8	30.7	231
	Electricity, gas, heat supply, water supply	60.0	20.0	20.0	10
	Information and communication industry	29.6	14.8	55.6	108
	Transportation industry	48.3	31.0	20.7	29
	Wholesale/retail	62.3	17.0	20.8	53
	Finance/insurance business	53.1	31.3	15.6	64
	Real estate business	42.1	47.4	10.5	19
	Education and learning support business	54.5	31.8	13.6	22
Service industry	55.4	14.5	30.1	83	
Company size	Less than 29 people	53.8	17.9	28.2	39
	30–299 people	57.1	22.1	20.9	163
	300–999 people	52.2	20.0	27.8	115
	More than 1,000 people	45.1	20.3	34.6	335
Personal annual income before COVID-19	Less than 3 million yen	68.0	9.3	22.7	75
	3–5 million yen	58.3	20.6	21.1	204
	5–7 million yen	43.9	23.9	32.3	155
	7 million yen or more	39.9	22.0	38.1	218
Residential areas	Greater Tokyo area (1 metropolitan area and 3 prefectures)	35.1	21.4	43.5	271
	Kansai area (3 prefectures)	57.0	20.0	23.0	100
	Other areas	61.6	19.9	18.5	281

* Source: Takami [2020]. The table is made with some selected items.

Results of Working from Home

There has been some research on the actual penetration of telework ever since the government lifted the state of emergency. In terms of teleworkers satisfaction and productivity, as a general assessment, workers appear to appreciate telework. Although the survey outcome indicates that telework is viewed as inefficient, their reported satisfaction level is not negative. Approximately 60% of the respondents answered that they were satisfied, where 18.8% of them answered 'satisfied' and 38.2% answered 'somewhat satisfied' [Nihon Seisansei Honbu, 2020]. After this survey, Nikkei HR conducted a similar survey from July 30th to August 7th, 2020 that involved the registered members of 'Nikkei Career NET' (the number of valid responses was 735). According to this survey, 76% of the respondents experienced telework (working from home) during a state of emergency (April to May), while approximately 90% of them answered that they would like to continue telework in the future. Enatsu et al. [2020] report on teleworking and employees' problems and their psychological conditions from 3,073 respondents from questionnaire surveys conducted in April and August 2020. They found that those who have experienced telework report that they give a positive evaluation to the continuation of telework.

As for the productivity, the Japan Productivity Center conducted a survey on the concerns of the workers regarding the spread of the new coronavirus infection, in May 2020. The survey targeted 1,100 employees aged 20 and over, excluding self-employed and family workers. More than 30% of the respondents claimed to have realized that efficiency had improved in terms of the telework style of work raised in the survey. Meanwhile, 7.2% answered that 'efficiency has improved' and 26.6% answered that 'efficiency has slightly improved'. However, 66% replied that efficiency had declined, of which 41.4% had indicated that efficiency had 'slightly reduced' and 24.8% answered 'decreased' [Nihon Seisansei Honbu, 2020].

Enatsu et al. [2020] provide a similar outcome. In particular, they indicate that people might develop proficiency in remote work (online literacy) which leads to workers' productivity growth. In other words, people who engage in a lot of remote work spend less time in meetings, and their skill grows through work, and think that remote work is comfortable. Those who have experience in remote work respond that they do not have communication difficulties in this time of remote work introduction.

Enatsu et al. [2020] identify several factors which hinder telework penetration into Japanese workplaces. They point out that the fit between telework and work assignment influence the employees' working style and their psychology. People who find it difficult to bring their work online tend to report the negative feeling on telework. They have a hard time in securing space, especially setting furniture. Experienced individuals can occupy online devices by their own, but there are problems with furniture properties. Other survey has indicated that although companies allow home use of company-owned PCs necessary for teleworking, they have not offered any other allowance. If it goes onto full swing in the future, these problems need to be fixed¹⁷.

¹⁷ Mitsubishi Research and Consulting. (16 Nov) Tele wa-ku no roumukanri nadonikannsuru jittachosa [Survey on Labor Management of Telework]. Ministry of Health, Labour and Welfare. 2020. November 16. URL: https://www.mhlw.go.jp/stf/newpage_14849.html (accessed: 30.01.2021). (In Jap.)

In addition, when the management of working hours is the same as that of normal conditions, and many companies manage their attendance online¹⁸, workers are under the stress due to the fact that the time constraints are the same as usual. Furthermore, those who have experienced remote work prior to the COVID-19 situation finds the improvement and growth of their own skills through remote work. This can be understood that the skills of remote work made it easier for individuals to conduct autonomous learning, but it is not clear for individuals who do not have experiences to have problems in their learning.

Looking at the overall trend from these survey results, telework is not recognized as a new working style for all workers. It is not presently an established option and might only be a temporary expansion during the state of emergency. However, on this occasion, core employees with higher educational backgrounds, those commuting for larger companies in Tokyo, and those that are the typical core members of the traditional Japanese employment system, will also be aware of the possibilities of various work styles.

In particular, the improvement of online literacy has brought about the possibility of replacing the complex communication that was actually experienced in the Japan's workplace, leading to their sense of growth, challenges, and their comfortable feelings [Enatsu et al., 2020]. It is expected that further research can more precisely identify online literacy, skills and learning abilities individuals acquire through repeated teleworking.

Expected Changes in the Work and Life in Japan

Following the progress of online communication, changes in various situations are expected to occur. Particularly, the media is paying attention to various changes, including lifestyles and employment systems requirements. In this section, we address how the changes are introduced in the mass media, and further examine whether these changes occur nationwide.

Remote work has influenced their sense of psychological distance from the company and this has become an opportunity to review the relationship between work and life. Over the last six months, people's thoughts what takes to deepen and establish their own personality and to enrich their lives outside of their work have changed [Enatsu et al., 2020].

In terms of lifestyle changes, suburban areas have become popular as there is no need to commute to the city center offices. There are some articles in newspapers and journals on moving to a rural area and how 'going to work' online occurs in such circumstances. The term 'workation' has also been used domestically. The term comes from work and vacation. It means to telework while on a break, especially at a travel destination. Some real estate companies are promoting villas by encouraging reforms the work style that involves a shift to holiday resorts.

Changes in the forms of employment have also been discussed on mass media. There is a view that job-type works likely to expand. The characteristic of Japanese-style employment has been the collective recruitment of new graduates, which coincides with the structured seniority and wage systems. Contrastingly, in job-type employment

¹⁸ Ibidem.

experienced personnel in sales and technology have an advantage in searching and landing a job. Their salary increases when they change jobs by being employed by a company that offers a higher salary or so. There is a caution in job type employment in terms of easy dismissal. For instance, 'employees are more likely to be dismissed' following the shift of employment in the job-based employment system, developed by telework¹⁹. Some will be dismissed following poor-quality work and duties, or their inability to perform as required.

Nevertheless, human resource management must be influenced by changed human–human interactions. The COVID-19 impact has brought about changes in people's communication at workplaces. In the case of COVID-19 and lockdown, the workers who have been assigned to the telework, must stay and work at home. A big problem has been raised about human-to-human communication from our encounter with the sudden barrage of telework. What was previously considered vital is no longer viewed as essential to the productivity of a workplace. Consequently, the primary communication style among Japanese companies is deemed to be utterly changed.

ICT-based work style has, to some extent, become a new stream in Japan as they have adapted to Japanese customs and workplaces. Whether or not this workstyle coexists with the old conventional system for the future is something to be examined by further research. Regarding communication in the management process, the perception of appropriate management and the shared value behind it is emphasized. Communication is essential for maintaining coaching. Evaluation by skill development on the employee and supervision process is also an important factor for the employees' promotion and wage increase. Therefore, the supervisor's daily supervision and evaluation is a significant subject in Japanese management. However, as telework progresses, the appropriate support and evaluation style will change. Even in Japan's case, especially among large companies, job-based employment comes to be seen as appropriate because it is easier to measure work output.

Concluding Remarks: Possible Link to Artificial Sociality

The extent of telework penetration influences the utility of human resources, more broadly, the Japanese corporation's characteristics. Consequently, a hybrid type of face-to-face with online communications can also develop. These must greatly influence the day-to-day details of human resource management in the future. It must also have a decisive effect on the job training and patterns of recruitment. Although several articles have indicated that problems exist with new employees' education, there have not yet been made any large-scale research in this matter.

This issue, in relation to hiring younger employees, can have a more powerful impact on communication style and defusing corporate value into employees. Survey results show experienced workers who have assigned to telework have not reported serious problems in online workplace communication. Newly hired employees are trained and, therefore, organizationally socialized through detailed supervision and close communication. The prospective issue is how communication and value sharing will be carried out via ICT.

¹⁹ Kuhara Y. Senmon Rinzai 'jobu-gata koyō' Kawa'i [Expansion of Professional Human Resources 'Job-Type Employment']. *Tokyo Shinbun*. 2020. September 28. P. 1, 3. (In Jap.)

However, even though many workers that have experienced telework prefer this work style, the penetration of telework is currently obviously limited. The difference exists between the size and location of companies and the level of employees' skills. As previous research review shows, there are still severe problems for the company side, such as the cost of introducing ICT and supporting or preparing the home office for the employee. Large corporations may implement it in their workforces. Further, it may be appropriate for some highly skilled workers. Telework has already been implemented to some extent in some major companies. There is also a marginal development in online work from rural areas and in small and medium-sized enterprises. The further evolution of technology and tools is vital for the broader acceptance of telework. Particularly, if the problem of the COVID-19 rises again in the future, it is possible that the next telework request will come out, and the situation may gradually progress in the future.

On the other hand, for well-funded companies, it is clear from previous research outcomes that telework and online work can break the physical and spatial barriers of the office. Spatial issue supports the further globalization of companies. The fact that large companies like Hitachi are trying to reduce the infinitive number of jobs in membership type and shift to job types, which is one of the characteristics of Japan's employment system. This shift is also largely related to the problem of globalization.

Hofstede [2018] discusses AS based on cross-cultural issues, which come from his original 'international business idea'. Under the COVID-19 crisis, people had to pay attention to domestic telework to prevent the virus from spreading nationwide. Ironically, whether domestic telework will characterize employment nationwide is currently a topic of interest. However, it is presently not that widespread. Nonetheless, there is a strong possibility that telecommunication-oriented work will develop. Further, this comes into focus when a company's international workforce that is variously located must communicate with each other, make decisions, and work co-operatively. In these times of restricted travel, Japan's headquarters of many multinational corporations are enthusiastic about telework, and are more likely to collaborate with their subsidiary offices which are operating overseas. In these companies, a complex mix of various values, norms, beliefs, and rituals exists. In current circumstances, this becomes even more complex for multinational corporation. Misunderstandings that lead to malfunctioning systems are very likely to occur [Hofstede, 2018: 5] when people differ in their values, norms, beliefs, and rituals, but have to collaborate in a single technical environment, or using a single formal organizational structure.

A multi-level analysis is required when we view AS in relation to Japan's cultural components. We shall further deal with the changes in existing communication. Changes in personnel deployment and the utilization of telecommunications are expected to encourage AS, in which both formal social structures and cultural 'unwritten rules' matter. Cross-cultural issues will turn out to be important in many socio-technical systems especially in terms of the AS conception. In terms of human resource management, it is necessary to incorporate corporate values and ethics for their code of activities, even in foreign lands.

In Japan, face-to-face communication still plays a crucial role in human resource management. However, since other types of communication such as online networks have been steadily introduced, they confront the need to implement a new evaluation

system, other than evaluation by observing employees in the company, or by face-to-face communication. This is among the reasons to introduce 'job-type' employment system, which clarifies employees' duties in the context of changes to workplace communication. These changes may be the earliest stages of the emergence of a new international work standard or communication style. The role of AS in how the members of a work community communicate within the multinational corporation's network is now a matter for further research and analysis.

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