

# Consideration about the society after the COVID-19

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**Abstract:** This paper reviews three viewpoints regarding the society after the COVID-19 infection on the concept of safety management. The first is the relationship between With COVID-19 and a zero risk. As a result of coexistence with COVID-19 for more than one year, the Japanese society thought that a zero risk is difficult to accomplish, and some risks will be accepted to maintain social activities. This leads a change in a way of thinking from zero risk to risk-based safety management. The second is the change in the way of working. As a result of having experienced remote work forcibly, it will become the hybrid model that incorporated remote work in a conventional method. Personnel evaluation changes from the seniority system to the job evaluation type, and each person's professional ability will be more focused on. The third is the review of the Japanese society system. In Japan, although the infection level was controlled to some extent by the groupism of the self-restraint of actions by mutual monitoring, there is a limit of managing based on groupism. Moreover, as seen in the delay of vaccine development and the medical care collapse, these problems should be improved by changing Japanese society system.

**Key words:** COVID-19, Zero risk, Way of working, Social system, Groupism, Risk-based safety management

## Introduction

The COVID-19 pandemic started at the beginning of 2020 and still continuing in 2021. Tracing the world history, after the convergence of infectious diseases and epidemics, social structure revolutions occurred. For example, one-third of the population of Europe lost their lives by the plague rage in the fourteenth century. As a result, farm villages were ruined by lack of work force, which led to the Reformation and Renaissance<sup>1)</sup>. After the convalescence of the COVID-19 infection, what kind of society will the Japanese society be changed? There are three viewpoints on the society after the COVID-19 pandemic when reviewing

on the concept of safety management.

The first is an influence on “Zero risk thought” of the Japanese society. “Zero risk thought” is a concept that “safety is a freedom from the risk”. Ms. Yuriko KOIKE, Tokyo Governor, gave “With COVID-19” declaration on May 29, 2020<sup>2)</sup>. “With COVID-19” means the coexistence with the risk produced by COVID-19. Most people think that the COVID-19 infection situation would not to be easily settled. As a result, the society thought that a COVID-19-infected person could not but accept that it occurred to some extent to maintain social activities. This leads to the review of the “zero risk thought” of the Japanese society.

The second is a change of the way of working. Remote work such as telework and time lag works were forcibly conducted from the external pressure produced by COVID-19. Conversely, essential workers such as working in the production spot and clinical practice still require physical presence at work under the strict job rule to avoid

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“Three Cs (closed spaces, crowds, and close contact).” Following, people understood that there were two types of ways of working. Simultaneously, a considerable number of people knew the merits and demerits of remote work and felt that it will become to change into the new way of working.

The third is the need of improvement of the Japanese society system. Although the Japanese government does not have legal regulations and penalty system, the death toll caused by the COVID-19 in Japan is settled at low level compared with that of Europe and the USA. It is an effect based on the Japanese social groupism, which is a way of thinking not to take action that it is different from the group by social mutual monitoring. At the end of March, the third wave of the infection seemed to be settled; however, the sign of the fourth wave began to appear, and the number of infected people increased again. These phenomena indicate that there is a limit in self-restraint based on social mutual monitoring.

### “With COVID-19” and zero risk

#### *Review of the Zero risk thought*

The Japanese society believes a matter without any risk as “Safety”. Conversely, “ISO/IEC guide 51” defines the matter without intolerable risks as “Safety.” The Japanese Occupational Safety and Health Act was revised in 2006, and enforcement of risk assessment was made the obligatory effort. According to the risk assessment guideline, it is prescribed that risk reduction should be conducted in conformity with as low as reasonably practicable (ALARP) principle. Needless to say, the acceptable risk that the ALARP principle demands is not “a zero risk.” As for the zero risk, it is impossible practically to be accomplished as

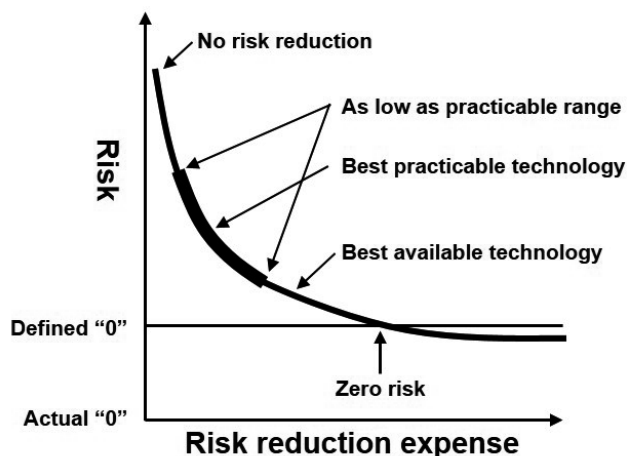


Fig. 1 Relationship between risk reduction expense and risk<sup>3)</sup>

it needs infinite expenditure, as shown in Fig. 1<sup>3)</sup>. As a matter of course, we cannot take measures against all risks because of technical and financial limitation. Therefore, “risk zero” is an ideal aim and is not a feasible aim.

Following the traditional Japanese way of thinking, the Japanese society pursued that the number of infected persons should be zero at the early stage when the COVID-19 infection began. However, the COVID-19 infection continued for a long time, more than one year, and convergence of the COVID-19 infection could not have been foreseen. As a result, many people recognized that it was extremely difficult to zero out the number of the COVID-19-infected individuals.

In the cancellation standards of the emergency declaration of the COVID-19, the number of individuals with one-week onset per population of 100,000 was <0.5 at the stage of April 2020 but became <15 in March 2021. That is to say, most Japanese individuals turned into a way of thinking that infected individuals can be permitted at some extent to maintain social activities. It may be said that “with COVID-19” was converted to a way of thinking from “a zero risk” to “coexisting with a risk” in the Japanese society.

#### *Lesson of the Fukushima nuclear plant accident*

Learning from the Fukushima nuclear plant accident, the most important lesson is reflection of the Japanese society strongly intending “a zero risk<sup>4)</sup>.” As a result of having been managing all small accidents not to happen, measures were not taken after the fatal accident caused by the unprecedented size of a tsunami.

According to strong demands of “a zero risk,” people related to nuclear power generation business could not explain that a risk still remained in the nuclear power generation facilities. Moreover, atomic engineers and plant operators were nervous not to cause small incidents. As a result, the preventive measures against disasters for the fatal accident were not easy to conduct. Moreover, facility remodeling and confirmation test of the safety device were not carried out because such actions would give inhabitants unnecessary misunderstandings and fears of the nuclear plants.

The European Union (EU) established the important rule for the serious accident prevention and from the lesson of the explosion accident of the pesticide factory, which happened in Seveso, Italy, in 1976, in which toxic dioxin gas was released in large quantities in the wide area. The EU promulgated Seveso order for serious accident prevention in 1982. British Health and Safety Executive (HSE) estab-

lished the accident prevention rule in 1999, which was called “Control of Major Accident Hazards (COMAH) Regulations<sup>5)</sup>.” The COMAH Regulations impose the submission of “the safety report” to the HSE, which include a prediction scenario of the serious accident and measures taken in conformity with the ALARP principle.

#### *Risk based Safety Management*

It seemed that the COVID-19 goes to the convergence while repeating several times of rebounds from now on. However, the Japanese society must not handle the COVID-19 pandemic as a transient problem. The Japanese society experiences the COVID-19 pandemic, and most people will receive a concept called “With COVID-19” which indicates the coexistence with a risk and is connected in a review of “a zero risk” intention. I expect that the Japanese society is released from the spellbinding of “a zero risk” thought after the COVID-19 converged. In other words, I think that the Japanese society shifts to a way of thinking of the risk-based safety management from zero risk intention.

### **Way of working**

#### *Applicableness of Remote work*

Various ways of working spread during the COVID-19 pandemic. Previously, it was natural to leave the house for the workplace. However, according to the external pressure caused by the COVID-19, the head office and office work sections could not operate by the way of working that they adopted conventionally. As a result, employees at these sites forced to work remotely such as telework and time difference commuting. On the other hand people who worked in production sites, healthcare sites, construction sites, and transportation business still requires physical presence at work. Most people recognize that there are two types of working, namely, “the duties that person adjusted was difficult” and “the duties that people could adjust it flexibly.”

However, as a result of having experienced remote work forcibly, most people realized good points and problems of remote work. There is a merit such as being able to participate in a meeting and lecture easily even from a distant place without the commuting time. In contrast, the work that has been performed until now was conducted based on the instructions from the boss and this custom, which was rooted in the Japanese society for a long time, had become one of large obstacles in the adoption of remote work by most companies.

#### *Changes in work model and personal evaluation*

The membership work model is a characteristic of the Japanese society. The membership work model does not prescribe content of the work. Moreover, the employee acquires much experience through job rotation. The employment was guaranteed to work until a retirement age. In contrast, the employee have no choice for getting the transferred which was ordered from the company. The management in the membership work model is strict, and the personnel evaluation of “the long service type” to receive raise according to the number of years continuously worked is applied. Advantages of this model is the shares of way of thinking in the organization if the person can experience various kinds of work. And this model enables employees to acquire sufficient techniques and skills through job rotation. Moreover, the person can be grown up to the human resource who can do the judgment made in the general field of vision.

As for the job type work model, personnel evaluation is conducted based on the result. In the Japanese society, job type personnel evaluation has been attempted, but was not able to take it in well. After the COVID-19 pandemic, how will such a Japanese way of working change? As for the reliable thing, many people experienced remote work and realized that each person’s specialty was strongly demanded more than before. To think about the way of working style after the COVID-19 pandemic, many people felt that a way of working gradually switched over from a conventional membership type to a job type. The policy of “job type working” was already proposed by large companies, such as Fujitsu, Mitsubishi Chemical Holdings Corp, and Hitachi.

I think that the way of working in the future shifts to “the hybrid model” that incorporated a job type in a conventional membership type. Moreover, the professional ability that each one has would be focused on more than the present situation.

### **Change in the Japanese system**

#### *Groupism type society*

The COVID-19 infection situation of March 26, 2021 is shown in Table 1.

Comparing Japan with other countries, the number of infected and deceased individuals in Japan are smaller than those in the EU and USA. As a general evaluation, it may be said that the Japanese society was able to manage the mortality rate of COVID-19 in a good standard than those in Western countries, although there are no legal regula-

**Table 1. The COVID-19 infection situation (March 26, 2021)**

Country	Infected number per 1 million	Death number per 1 million
Japan	3,676	71
China	63	3
The United States	90,874	1,652
The U.K.	63,813	1,866
France	67,750	1,430
Germany	32,863	906

tions and penalty system. This reason is possibly that one restrained oneself from an action based on the “Japanese social groupism<sup>6)</sup>” and that each one watches each other’s actions and regulates it mutually.

The third crowd of infection was able to restrain it somehow, but the new fourth wave attacks, and the influence becomes more terrible until now. It is thought that it has a limit to manage the action of all people by Japanese social groupism. I think about the reason as a result that urbanization advanced and that there is a group of people who do not obey action regulation based on mutual monitoring. Therefore, an action self-restraint based on the groupism will become difficult, and some laws and regulations and penalties might be required for preventing COVID-19 spread.

#### *Collapse of the medical care system (during the COVID-19 pandemic)*

Though the number of the beds of medical facilities in Japan is more top level than foreign countries, a crisis of the medical collapse is going to be caused by the lack of doctors and nurses. The reason is that 80% of hospitals in Japan are private and there seems to be circumstances that administrative authority was hard to extend<sup>7)</sup>.

In 2009, “new influenza” was developed, and “new influenza special measures law” was established in 2012. The main point of the regulation is that government suppress the outbreak of the patient at the initial stage of the infectious disease. And it is extremely important to establish the medical care supply system as quick as possible. Measures were taken based on this policy in the early stage of COVID-19 infection, but the reinforcement of the medical care system did not readily advance.

Cause investigation is necessary for medical collapse:

- lack of the human resources who can cope with the infectious disease of a doctor and nurse.
- lack of the public medical institution that is available

for administrative control.

In the future, an infectious disease such as COVID-19 will attack again. Learning from a lesson of COVID-19, my opinion is that expansion of medical facilities and upbringing of medical personnel are necessary.

#### *Development of the vaccine*

Although Japan is said to be a high-technology country, why is a vaccine not developed in Japan? Three reasons are conceived:

1. The infectious disease is fatal if it develops once, but the onset probability is extremely small.

There is a limit that a private company works on such research and development. Therefore, public support should be necessary. The US forces spent tens of millions of dollars annually in such a biotech company and secured the vaccine of various styles from a normal period.

2. The development cost is extremely high, including the large-scale clinical study for the vaccine.

3. The Japanese society has distrust in the vaccine<sup>8)</sup>. The reason why Japan was behind other developed nations with regards to the approval of the vaccine is the nature of the careful nation. It may be said that the distrust in the vaccine was born by the reports of severe aftereffects that occurred for smallpox or uterine cervical cancer vaccine. The government did not generally compare the merits and demerits. As a result, the pharmaceutical maker became negative against vaccine development. Furthermore, permission to use developed vaccine in Japan was late in comparison with the U.K. and the United States. As for this reason, there is difference in the way of thinking in the correspondence at the time of the emergency outbreak. The U.K. and the United States did the special authorization at the time of the emergency outbreak. The Japanese Government adopted a way of thinking that they authorized after evaluating safety of the vaccine carefully.

These problems, such as the medical system or vaccine

development, already occurred at the time of infection of new influenza in 2009. Without working on the solution of these problems, the COVID-19 pandemic attacked the Japanese society. Repeating the same mistake should not be allowed.

## Conclusion

With the invasion of the COVID-19 infectious disease, the problem of the Japanese society system has become clear. Even if an embarrassing thing happens to us, after the convergence, we are apt to think that “it was good like that.” We must not forget the problems that occurred in the COVID-19 pandemic as a transient misfortune. These problems are caused by the system of the Japanese society. It is necessary to be improved.

The problem that should be settled is arranged as follows:

(1) The zero risk is an idea target. Learning from the COVID-19, it will be necessary to receive some risks from the point of view to maintain social activities. Accepting the coexistence with some risks, safety recognition of Japan will be equal with the global safe recognition.

(2) Under the influence of COVID-19 infection, many people could not but do remote work forcibly. As a result, a way of working switches from a conventional membership type to the hybrid system, which is combined with the job type. Moreover, the personnel evaluation system switches from a seniority type to result type. It indicates that each person should have more-better-than high professional ability.

(3) As a problem of the Japanese social system, groupism gradually collapsed. As a result, legal regulation comes to cannot but intensifies it to some extent after the COVID-19 pandemic. It is necessary to regard the delay of vaccine development and weakness of the medical system as the problem on the system and should be settled.

Specifically, “a zero risk” would be considered as strongly “evil” associated with safety management system in Japan. Because of this way of thinking, it was difficult to conduct the preparation for the serious accidents beforehand. Europe and the USA learned from fatal disasters and the serious accidents that previously occurred and usually performed the preparation to a fatal situation. Europe and the USA prepared for a fatal situation even if the outbreak probability is extremely small. It led to early development of the vaccine with support from the government. In Japan, the risk level would be evaluated as small risk in the case of outbreak probability as extremely rare to occur, even if a

fatal situation will be expected to occur. Therefore, Japan did not take measures for fatal matters. The representative examples are the Fukushima nuclear plant accident caused by the tsunami and this COVID-19 pandemic. The problems that resulted from this COVID-19 pandemic are the alarm bell for a social “zero risk thought” in Japan. As for the concept called “with COVID-19,” the Japanese society is a chance to be opposite to “a zero risk.” Moreover, the Japanese society has to proceed to risk-based safety management from zero risk intention.

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