

Risk Assessment from a Legislative Perspective:

The Relationship between Characteristics of Laws and Policies
and the Concept of Risk in Various Countries

Takenori Mishiba

1. Introduction

Since fiscal 2014, I have examined what laws and policies need to be formulated in order to sustain and improve the effectiveness of efforts to ensure health and safety in a post-industrial age. Supported by research grants from the Ministry of Health, Labor, and Welfare, this work compared Japan to the UK, the US, and the EU. In addition, I have also separately studied German legislation since my time as a graduate student.

In specific terms, I realized that important issues were:

- ① Responding to changing times and situations
- ② Responding to the harmful effects of more complex and broader provisions and perfunctory compliance
- ③ Promoting legal compliance and enhanced health and safety by small and medium-sized companies
- ④ Effective use of limited government resources (and resources of public entities performing governmental functions)

本稿は、2017年2月16日（木曜日）に独立行政法人労働安全衛生総合研究所（厚生労働省所管）が英米の安全衛生を所管する政府機関に所属する専門家と日本の専門家、政府職員を招いて開催した労働安全衛生に関する国際ワークショップにおける筆者の英語による講演内容を文書化したものである。

Risk is typically understood to be

① “the probability of an accident or disaster occurring” x ② “the extent of damage incurred when such an incident occurs”.

Both ① and ② are abstract, and ① and ② are influenced by how they are viewed in a given country, in a given industry, in a given company, and by a given supervisor.

Risk assessment encompasses subsequent responses to risks, and researchers have noted that risks that cannot be dealt with tend to be downplayed, at least in the case of Japan.⁽¹⁾

Based on an understanding that “risk is an ambiguous concept, and risk can be defined differently depending on a country’s laws and policies and its culture,” this paper describes the characteristics of foreign and Japanese laws and policies. This paper also discusses the relationship between those laws and policies and the concept of risk. Here, Japan has been compared to the UK and Germany. The UK has an independent occupational health and safety code and it has traditionally emphasized occupational health and safety. In Germany, occupational health and safety stems from numerous areas of law, and the Accident Insurance Institution (Berufsgenossenschaft) plays a major role in occupational health and safety pursuant to social insurance legislation.

(1) “A study on the background for and the characteristics and effectiveness of occupational Health and Safety legislation in other countries focusing on the risk assessment and the applicability of that legislation to Japan” (Study chair: Mishiba, T.) supported by 2014–2016 grants-in-aid for scientific research from the Ministry of Health, Labor, and Welfare (National Institute of Occupational Safety and Health project), p.120, 126 of the second book.

In the aforementioned research project, I also examined American laws and policies, but the US will not be covered here.

2. Characteristics of laws and policies on health and safety in different countries (the UK and Germany)

2. 1. The UK: A comprehensive legal system buttressed by a culture that emphasizes health and safety

British occupational health and safety legislation is primarily the Health and Safety at Work Act 1974 (HSWA). Compared to Japanese legislation, the characteristics of this legislation are that it:

- ① Is balanced (carrot and stick),
- ② Is simple and clear,
- ③ Is multilateral and multi-faceted,
- ④ Emphasizes autonomy and employer and employee talks,
- ⑤ Is specialized and flexible (give and take between enforcement agencies and business),
- ⑥ Is backed by vast material and personnel resources

Underlying this legislation is the noted Robens Report: Safety and Health at Work (Hansard, July 19, 1972) and a culture in which government officials, employers, and employees emphasize health and safety, as recommended by the Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187) of the International Labor Organization (ILO). There seems to lie a class divide between employers and employees as the context for this culture and employees are mindful of protecting themselves.

① covers health, safety, and welfare. The HSWA has general duties

clauses backed by penalties that attribute risks to their source (without being limited to employers) and that require those sources of risk to ensure that efforts to protect employee health, safety, and welfare are effective. The HSWA also imposes hefty fines for violations⁽²⁾ and it stipulates and imposes imprisonment for executives who have been negligent in properly managing employee health and safety. That said, the HSWA has facilitated compliance through simplification of regulations and greater flexibility in regulatory approaches and it gives individual employers considerable latitude with regard to the form of their compliance. Such provisions accommodate companies without hampering their business operations.

② refers to requirements specified by the HSWA as well as clear systems of rules, which consist of (a) regulations supplementing those requirements, (b) guidance to facilitate adherence, and (c) Approved Codes of Practice (ACOP), that are lie between (a) and (b). The legal standing of ACOP is intentionally murky, resulting in advantages and disadvantages. This point was recently discussed by the Confederation of British Industry (CBI)⁽³⁾

③ reflects a British rule of thumb that no single policy can effectively ensure health and safety. This philosophy is evident in “the breadth” of

(2) From 2011–2012, the average penalty amounted to just under £30,000/incident (Selwyn, Norman/Revised by Moore, Rachael: *The Law of Safety and Health at Work 2013/2014* (22nd edition), 2013, p.149). In one instance, however, a penalty of £10 million was imposed on Balfour Beatty (though it was later reduced to £7.5 million by an appeals court) (See, *Balfour Beatty Rail Infrastructure Services Ltd v. R.* [2006] EWCA Crim 1586 (05 July 2006)).

(3) See, Mishiba, T. op. cit., p.339 of the first book (portion of interview with CBI).

the comprehensive approaches shown below.⁽⁴⁾ These approaches will not be discussed in detail here, but they do warrant perusal.

- a) Achieving good regulation,
- b) Effective and proportionate enforcement,
- c) Expert inspectors,
- d) A system of safety representatives to monitor and facilitate management of health and safety in the workplace,
- e) Training in safety leadership (e.g. formulation of standards for the workplace and punishments and rewards as appropriate) by leaders of work projects,
- f) Standards to increase awareness of safety and promote modification of behavior (e.g. British Standards),
- g) Reliable collection of information on work-related injuries or illnesses and accidents/incidents by a specialized public body (Health and Safety Executive (HSE)),
- h) Obliging project designers, clients, and relevant contractors in the construction industry to safely conduct operations,
- i) Fostering experts in health and safety through private organizations and verifying the competence of those experts,
- j) Laws and ordinances stipulate that competent persons be appointed for risk management,
- k) Improving the safety of facilities and equipment through technical innovations

④ refers to a functioning system of safety representatives to monitor and facilitate health and safety in the workplace. These representatives are appointed by recognized labor unions and they will engage in efforts to ensure health and safety; these representatives must also have opportunities to participate in training (with pay) needed to engage in those efforts. Safety

(4) Mishiba, T. op. cit., pp.347–350 of the first book (portion of communication with Build UK).

representatives must be given information necessary for efforts to ensure health and safety (including information in the possession of the employer and inspectors). These representatives will also play a leading role in a system of safety committees. Unfortunately, these approaches are lacking in Japan.

In fact, numerous lawsuits have been brought in relation to the efforts of safety representatives to ensure health and safety and to ensure they receive opportunities for training, so safety representatives are active in the UK. Employee involvement in workplace health and safety and the framework for talks serve as a “conduit” in terms of spreading national laws and policies on health and safety into the workplace.

⑤ is particularly evident in the British system of inspectors. Both the national government and local governments are responsible for enforcing British health and safety legislation. The national body responsible is the HSE, which recruits inspectors in accordance with their level of technical expertise. The HSE screens for the inspectors it wishes to employ and trains those inspectors for a certain period. Inspectors have the power to enforce laws, which includes the power to take legal action in some instances. Inspectors include many veterans with experience in corporate efforts related to health and safety and with qualifications related to health and safety issued by private organizations. I conducted interviews with employers’ organizations and employees’ organizations in the UK and found no indications of inspectors lacking expertise.

That said, the HSE’s efforts to secure funds, as typified by the “Fee for Intervention” scheme instituted by the Health and Safety (Fees) Regulations 2012, have been criticized by business executives as turning the

HSE into “a business entity.” The “Fee for Intervention” scheme charges the employer for supervision and guidance to address its health and safety violations.

⑥ is readily indicated by the running costs of the HSE, which total close to £150 million annually (Health and Safety Executive: The Health and Safety Executive Annual Report and Accounts 2013/14 (HC228)).

However, a policy to reduce annual expenditures by 40% over a 4-year period starting in 2011–2012 was instituted at the behest of a coalition government (Spending Review 2010 settlement). Inspectors have focused their inspections of workplaces with serious risks and personnel have been reduced.

In summary, the UK has a framework that encourages organizations such as companies to study health and safety.

Other notable aspects of the British approach to health and safety are:

① It stipulates that urgent responses are the starting point for and the main thrust of risk management,

② ACOP clearly indicate that health and safety assistants should be competent,

③ Risk management is basically legally mandated. When criminal liability is found based on a violation, the inadequacies of risk assessment (where it failed and where it was insufficient) must be specifically defined. This procedure is often followed in the stages of an accident investigation, so violations are primarily filed on (referred for prosecution) after the fact,

In addition, the inadequacies of risk assessment tend to be determined

while referring to the ACOP.⁽⁵⁾

④ An employer is primarily responsible for managing health and safety, but the employer is obligated to appoint “competent persons” (individuals who are likely to be deemed competent because they have relevant qualifications) to facilitate health and safety. Accomplish this is viewed as the employer “attempting to meet” its legal obligation to manage health and safety,

⑤ Qualifications related to health and safety are issued by private organizations. The handling of hazardous substances, machinery and appliance safety, theories of health and safety, communication, and training techniques require a high level of expertise. This expertise can initially be obtained through a commensurate training period and multi-faceted review,

⑥ In order to ensure risk management, the British HSWA emphasizes:

- (a) Provisions that safeguard the efforts of safety representatives,
- (b) Provisions on talks between employers and employees, such as talks with employees (employee representatives) and the establishment of consultative bodies,
- (c) Provisions on providing information to employees,
- (d) Ensuring the implementation of provisions that mandate risk management

After the EU issued Council Directive 89/391/EEC (the Occupational Safety and Health (OSH) “Framework Directive”), the EC and EU expanded their risk management policies. In response, the UK had to codify the principles of risk management into domestic law and it had to document risk assessment. The British health and safety system had a framework that substantially coincided with the OSH “Framework Directive” from the start,

(5) Mishiba, T. op. cit., p.241 of the first book (portion of interview with HSE).

so the system adapted rather readily to the OSH “Framework Directive.”

In terms of the system’s effectiveness, serious work-related accidents decreased by 1/3 after the enactment of the HSWA and data place the UK among European countries with the fewest work-related accidents. The system has also been effective for small and medium-sized companies, but measures to reduce work-related illnesses have not yielded satisfactory results.

2. 2. Germany: A legislative system, predicated on the principles of social democracy, that incorporates the results of scientific research on work-related issues through a system of employer and employee autonomy

- Characteristics of German health and safety legislation can be summarized as:

- ① Health and safety laws and regulations stem from various areas of law,
- ② It sets high goals, such as the “humanization of work,” and it legally compels the achievement of those goals,
- ③ It has a framework that emphasizes scientific research (on work-related issues) and that incorporates (=reflects) the results of that research,
- ④ It has a framework for independent management (free of government involvement) through employer and employee talks underpinned by social democracy,
- ⑤ It is affected by EU/EC laws and policies

German health and safety legislation promotes scientific research on work-related issues involving government officials, employers, and employees and it facilitates the dissemination of the results of that research. Those

results are incorporated in national laws and policies and even in health and safety measures in individual workplaces through employer and employee talks.

German health and safety legislation includes both national occupational health and safety engineering legislation and independently implemented social insurance legislation. The Business Inspectorate oversees the former and technical inspection organizations oversee the latter.

The Employee Protection Act (Arbeitsschutzgesetz) was enacted in 1996 to codify the OHS “Framework Directive” into domestic law and to consolidate the principles of health and safety found in different laws and regulations. However, the Employee Protection Act did not truly eliminate disparate health and safety legislation.

Clauses on general duties related to health and safety are the basis for German occupational health and safety engineering legislation and are currently found in Section 3 of the Employee Protection Act. Like the British HSWA, the Employee Protection Act has a proviso stipulating that duties are imposed “to the extent that business operations allow.”

Unlike the British HSWA, however, the German general duties clauses themselves are not backed by penalties.

First, public bodies are given the power to issue enforceable orders in order to impose the duties in those clauses and means of assessing penalties for violations. Second, individual inspectors are entrusted to implement laws and regulations in the form of individual orders in light of conditions in a given workplace and the means of assessing penalties for violations (the penalties are essentially limited to fines) (Section 22, Point 3, Section 25, Point 1, Item 2, Sub-items a) and b) and Point 2, and Section 26, Point 1 of the German Employee Protection Act).

Enforceable orders include the Ordinance on Workplaces (Arbeitsstättenverordnung), which comprehensively ensures safety in the workplace and its surroundings (e.g. appropriate room temperatures, noise suppression, break areas, and restrooms). Enforceable orders also include the Hazardous Substances Ordinance (Gefahrstoffverordnung), which mandates labeling and assessment and management of risks related to the manufacture of certain hazardous substances, regulates their distribution and handling of other hazardous substances.

As of 2007, there were 3,340 business inspectors enforcing the Employee Protection Act.⁽⁶⁾ The data are a bit dated, but in 1995 close to 280,000 workplaces were inspected out of close to 2.25 million workplaces. Guidance was issued in close to 34,000 incidents (including incidents not related to health and safety), and close to 200 incidents were referred for prosecution. Other relevant German laws are shown below.

- Laws related to chemical substances: E.g. the “Chemicals Act” (Chemikaliengesetz) of 1980
- Laws related to the safety of machinery: Spurred by ratification of the Guarding of Machinery Convention, 1963 (No. 119) of the ILO, the Machinery Safety Act (Maschinenschutzgesetz in 1968) prohibited manufacturers and of machinery and appliances from distributing dangerous machinery and appliances in line with EU and domestic regulations (in 1980, the Act was revised into the Act on the Safety of Appliances (Gerätesicherheitsgesetz) and then integrated into the Product Safety Act (Produktsicherheitsgesetz vom 2004)

In a broad sense, health and safety legislation in the area of environmental law includes the Federal Emissions Control Act, the Waste Management Act, and the Water Management Act. Especially, efforts of workplace delegates (Betriebsbeauftragte) as stipulated by these acts

(6) Monitoring Labor Standards, Ministry of Health, Labor, and Welfare, http://www.mhlw.go.jp/jigyo_shiwake/dl/15-2a.pdf (Last accessed: February 5, 2017).

have contributed to occupational health and safety.

The “Occupational Safety Act” (“Arbeitssicherheitsgesetz,” formal name: Gesetz über Betriebsärzte, Sicherheitsingenieure und andere Fachkräfte für Arbeitssicherheit vom 1973, or the Act on Occupational Physicians, Safety Engineers and Other Occupational Health and Safety Specialists of 1973) was intended to implement workplace safety and occupational health through improved systems of managing health and safety in the workplace. The Act requires implementation of “convincing recognition of occupational medicine and safety engineering.”

The context for the enactment of the Occupational Safety Act was an increase in highly uncertain problems, such as work-related illnesses, increase in work-related accidents despite an increase in inspectors, and a tendency that work-related accidents seldom occurred in workplaces where competent health and safety personnel such as occupational physicians were assigned.⁽⁷⁾

The most prominent characteristic of German health and safety legislation is the major role played by providers of accident insurance pursuant to social insurance legislation (Artikel 29 Absatz 1, Sozialgesetzbuch (SGB) Viertes Buch (IV) or Book IV, Article 29, Section 1 of the Social Code). In other words, both employer and employee representatives constituted the Accident Insurance Institution (Berufsgenossenschaft). The Accident Insurance Institution was collectively responsible for providing compensation for work-related accidents and preventing those accidents. In its role in preventing accidents, The Accident Insurance Institution was granted the power to formulate Accident Prevention Regulations (Unfallverhütungsvorschriften) (many provisions of those regulations overlapped other laws and regulations, and the Accident Prevention Regulations were enforced through administrative

(7) BT-Drucksache, 7/260, S.1.

penalties). Having the same organization oversee accident prevention and compensation placed structural pressure on the Association to reduce compensation costs and it integrated preventive policies and compensatory policies. This approach had a substantial advantage.

An overview of that approach is described here:

(1) Like Japan, Germany mandates participation in workers' compensation insurance. As of 2015, about 4 million companies were participating in the system.⁽⁸⁾ Prevention efforts are naturally targeted at companies that are compelled to participate in the system.

(2) Key efforts by the Accident Insurance Institution to prevent work-related accidents include: ① responding to inquiries from employers and educating employers, ② monitoring the protection of employees by an employer, ③ providing tailored information and training to the health and safety departments in individual companies, ④ inspecting machinery and appliances and safety and protective equipment, ⑤ assessing and analyzing health and safety risks in the workplace.

In the area of preventing "occupational diseases," company-instituted health checkups are conducted. Unverified information on serious illnesses or injuries is examined and statistics are compiled. Specialized research on "occupational diseases" is conducted via networks of designated hospitals and universities.

(8) Deutsche Gesetzliche Unfallversicherung (DGUV), Geschäfts- und Rechnungsergebnisse der gewerblichen Berufsgenossenschaften und Unfallversicherungsträger der öffentlichen Hand 2015, p.6.

(3) In Germany, the Federal Ministry of Labor and Social Affairs (Bundesministerium für Arbeit und Soziales, or BMAS) does not announce the incidence of work-related injuries. That task is the responsibility of the Accident Insurance Institution.

Pursuant to Book VII, Article 197 of the Social Code (Artikel 197, SGB VII), employers are obligated to report work-related injuries requiring 4 days of leave from work or longer. These injuring must be reported to insurers, such as the Accident Insurance Institution, but insurers do not appear to be obligated to report those injuries to national authorities.

For a long time, Germany had the highest incidence of work-related accidents among other countries in the EC. According to DGUV-Statistiken für die Praxis, the number of work-related accidents that employers are obligated to report has consistently decreased. However, Germany still has a slightly higher number of accidents per 1,000 full-time employees than Japan does. Moreover, reports of “occupational diseases” and recognized cases of those diseases have increased. “Occupational diseases” are becoming a somewhat persistent (prolonged) problem, and authorities are struggling with measures to deal with that problem. German authorities have created an Occupational Disease List and they periodically review that list. Compensation for skin disorders has recently been reviewed, so reports of “occupational diseases” will likely increase.

(4) Based on Book VII, Articles 15 and 16 of the Social Code (Artikel 15 und 16, SGB VII), the Accident Insurance Institution has enacted Accident Prevention Regulations with the approval of BMAS, and these regulations are the crux of German policies to prevent work-related accidents.

There are over 100 Accident Prevention Regulations, and those regulations are extremely detailed in light of the peculiarities of individual industries. Thus, a company complying with these regulations would generally meet the requirements of German laws and regulations. Numerous guidelines have been created in line with the regulations.

(5) As of 2015, there were 1,836 technical inspectors who enforce the Accident Prevention Regulations on companies⁽⁹⁾; in 2015, about 220,000 companies, about 5–6% of the companies subject to the regulations, were inspected.⁽¹⁰⁾ Like national inspectors, inspectors from the Accident Insurance Institution have the power to conduct unannounced inspections. The Accident Insurance Institution can impose an administrative penalty for a violation of the Accident Prevention Regulations. Fines only account for about 0.1 percent of the annual revenue of the Accident Insurance Institution.⁽¹¹⁾

(6) A training program conducted by the Accident Insurance Institution has 20–30,000 participants annually. Just looking at health and safety supervisors who can provide rudimentary guidance, the program has already trained over 1 million people.

Section 618 of the German Civil Code (Bürgerliches Gesetzbuch, or BGB) intentionally expanded public statutes on health and safety into civil

(9) DGUV-Statistiken für die Praxis 2015, p.85.

(10) DGUV-Statistiken für die Praxis 2015, p.86.

(11) DGUV, Geschäfts- und Rechnungsergebnisse der gewerblichen Berufsgenossenschaften und Unfallversicherungsträger der öffentlichen Hand 2015, p.112, 106–114.

statutes. In other words, the Occupational Health and Safety Act is used to determine violations of civil law as well.

The Accident Prevention Regulations have been upheld in civil cases.⁽¹²⁾

The German Occupational Health and Safety Act uses the following means to incorporate and capitalize upon the results of scientific research on work-related issues.

① Direct legislation

The results of scientific research on work-related issues can roughly be divided into 3 types depending on the certainty of those findings and the extent to which they are generalizable. Protocols for this are explicitly stipulated in laws and regulations.

a) Generally accepted engineering regulations (allgemein anerkannte Regeln der Technik)

E.g. regulations from the DIN or VDE

b) Technical standards (Stand der Technik)

c) Scientific and technical standards (Stand von Wissenschaft und Technik)

≒ A definite understanding of work-related issues (gesicherte arbeitswissenschaftliche Erkenntnis)

a), b), and c) have been used in different ways depending on the areas being regulated. As an example, a) has been used in legislation related to machine safety and c) has been used in laws to ensure systems of health and safety in the workplace, such as the Business Constitution Act (Betriebsverfassungsgesetz) which stipulates frameworks for the involvement of employee representatives in management issues in the workplace and the Occupational Safety Act, and in laws and regulations related to advanced technology, such as the Atomic Energy Act (Atomgesetz) and the Genetic Engineering Act (Gentechnikgesetz).

Some standards have been revised. One example is the standard specifying maximum allowable levels of dust in the workplace (occupational exposure limit; Arbeitsplatzgrenzwert, or AGW), another is a standard

(12) Eg. BAG (Urteil) vom 10.3.1976,5 AZR 34/75, AP Nr.17 zu §618 BGB.

designating carcinogenic or mutagenic substances, and yet another is a standard designating hazardous substances to which employees may be physically exposed (Biologischer Grenzwert (BGW)).

These regulations and standards have been variously criticized for their rigidity and for infringing upon prescriptive jurisdiction, but these regulations and standards have the advantage of saving time and effort when drafting laws and regulations. Thus far, the tendency to emphasize these regulations and standards in legislation and otherwise has not changed.

② Expanding Accident Prevention Regulations and work agreements (Betriebsvereinbarung) (an agreement between a workers' council and a company) predicated on employer and employee autonomy into industries and workplaces

The Accident Insurance Institutions have the power to formulate Accident Prevention Regulations that incorporate the results of scientific research on work-related issues.

In addition, those results can, via a joint decision, be incorporated in a work agreement for a workplace based on the Business Constitution Act (e.g. Section 87, Point 1, Item 7, Section 88, Point 1, Section 90, Points 1 and 2, and Section 91).

One main thrust of German laws and policies on health and safety is employer and employee autonomy, which is predicated on voluntary actions by employees. That stance is substantiated by Sections 81 and 82 of the Business Constitution Act (Artikel 81 und 82, Betriebsverfassungsgesetz), some provisions of the Occupational Safety Act (Arbeitssicherheitsgesetz), and Article 21, Point 1, Items 2 and 6 of the Hazardous Substances Ordinance (Artikel 21 Absatz 1 Nummer 2 und 6, Gefahrstoffverordnung), which provide that:

① Individual employees and a committee of employee representatives (a workers' council) have the right to obtain information on risks in the

workplace,

② When, based on a scientific understanding of a given job, individual employees are considered to be at risk, then employees have the right to refuse to perform that job and the right to request that an employer actively alleviate those risks,

③ The right to participate in appointing health and safety personnel (including occupational physicians), in assigning their duties, and in dismissing those personnel

3 . Japanese laws and policies on health and safety: A system that minimizes mandatory provisions with penalties through provisions and incentives of various forms and types (including civil liability), and that spurs voluntary efforts (emphasizing “momentum-building”)

3 . 1 . Characteristics

Generally speaking, the attitudes and perspectives of senior executives, mid-level managers, and regular employees in Japanese industries differ, but individual employees are a member of an organization or a member of a smaller group within an organization (a department). These employees often feel close “ties” (=organizational commitment) to the organization or the smaller group within the organization, and executive management encourages these ties.

Conditions between employers and employees are fluid. Talented, motivated, and competent employees normally become managers and they have a chance to become executive management. Studies of the domains in the

last days of the Tokugawa shogunate have yielded the “sharing of power hypothesis” (if an individual high in a hierarchy has more power than all of the subordinates combined, he rules, but if he does not, then he must rule with the consent of his subordinates).⁽¹³⁾ According to that hypothesis, subordinates in the organizational hierarchy of a Japanese organization will have vast intangible assets such as knowledge and the trust of others. If those combined assets are greater than the assets of a superior, then the superior cannot make decisions without the consent of his subordinates. In other words, a relative divide exists, though it is not necessary a class divide.

Thus, “momentum -building” is emphasized when overseeing an organization. Integral to this “momentum-building” is leadership by executive management and managers rather than “forcefulness (=exercise of power).” This leadership is permitted as long as there is no marked deviation from the organizational culture or codes of conduct, no deleterious effect on national order, and no serious violations of law. Some ambiguity is intentionally left when crafting and applying rules such as employment regulations, and an organization responds to a given person or situation.

The “sharing of power hypothesis” applies to relationships between the government and companies/business associations. Therefore, compulsory rules are not necessarily implemented and applied uniformly. The “sharing of power hypothesis” also emphasizes coordination, so the government coordinates primarily with business and industry associations as it crafts laws and policies.

Unfortunately, Japanese companies have not generally emphasized oc-

(13) See, Hirai. Y (1995). A Theory of Legal Policy Making (2nd edit.) Yuhikaku, pp.27-33.

occupational health and safety so far, and exceptional personnel are seldom appointed to oversee occupational health and safety. Over the past few years, however, interest in health issues (including mental health issues) has increased.

In light of the aforementioned national circumstances, Japanese laws and policies on health and safety have the following characteristics.

- ① Suitability embodied by a variety of areas regulated
- ② Supervisory guidance and support from government (Chapters 2, 10, 8, and 9 of the Industrial Safety and Health Act)
- ③ Emphasizing actions involving personnel (Chapters 3 and 6 of the Act)
- ④ Enhancing standards to prevent hazards and enhancing risk assessment (Chapter 4 of the Act)
- ⑤ Regulations emphasizing high-risk work and certain factors
- ⑥ Health considerations and sustaining and improving health (Chapter 7 of the Act)
- ⑦ A provision encouraging an employer to create a comfortable workplace (Chapter 7, Section 2 of the Act)
- ⑧ Ensuring the competence of experts and specialized agencies and encouraging and mandating their involvement in the workplace
- ⑨ Varying types of provisions and regulatory intent and a devotion to procedural regulations
- ⑩ Comprehensive prevention (in stages)

- ① Suitability embodied by a variety of areas regulated:

Laws and policies on health and safety have provisions that attribute risks to sources such as designers, manufacturers, and importers of machinery and appliances, manufacturers and importers of materials, and architects and designers of structures and clients commissioning construction projects. Those laws and policies also partially attribute risks to an employer that

may not be directly employing an employee but that may substantially impact the health and safety of that employee. Japanese laws and policies on health and safety emphasize both systematic provisions and suitability. If employees are assigned by a temporary employment agency, then the company temporary employees have been assigned to will be responsible for complying with many of the provisions of the Industrial Safety and Health Act rather than the agency assigning the temporary employee.

That said, sources of risks (besides an employer that is directly employing an employee)- and particularly clients - are seldom obligated to ensure employee health and safety, except if the company is receiving temporary employees.

② Enforcement, supervisory guidance and support from government

Pursuant to the Industrial Safety and Health Act, the government (from the Minister of Health, Labor, and Welfare to individual inspectors) leads and assists relevant parties by devising and formulating major policies, by leading through enforcement and on-site supervisory guidance.

Pursuant to the Act, the government formulates a plan every 5 years and it verifies its implementation. This is a plan for effective allocation of limited government resources. There are cases where the national government has failed to implement regulations suited to the times and it has been held civilly liable for failing to exercise its regulatory authority.⁽¹⁴⁾

In addition to inspectors, national safety and health specialists -government officials- are granted the power to mandated access, the power to conduct

(14) Eg. *Sennan-Asbestos case*, 68 SC Reports (Civil Cases), 799 (2014)

inspections, and the power to collect samples. If an employer has caused a serious work-related accident, the government has the power to order the employer to draft a special remediation plan. An organization recognized by law, the National Institute of Occupational Safety and Health, Japan also has the power to conduct certain inspections.

In addition, provision of support by the state is stipulated in Articles 106 to 108 of the Industrial Safety and Health Act.

Recently, however, local branches of the Ministry of Health, Labor, and Welfare have stopped hiring technical personnel. Instead, they have hired more technical inspectors, but the number of officials specializing in health and safety has decreased as a result. Local offices of the Ministry are being run well, but support from those offices has been affected by the massive workload incurred by individual authorities and the attitudes of officials.

③ Emphasizing actions involving personnel

The Japanese Industrial Safety and Health Act emphasizes improvement of the system of management and delegation of responsibilities, training and appointment of competent persons, but the details have been omitted here.

④ Enhancing standards to prevent hazards and enhancing risk assessment

The Japanese Industrial Safety and Health Act has basic provisions stipulating “necessary actions” an employer must take for a dangerous or hazardous substance and the response to those actions by employees. Under the Act, many regulations have been made to supplement and augment those efforts. The Act currently provides for a host of regulations. The Act also have

provisions on formulating guidelines to facilitate compliance with those regulations (e.g. Articles 27 and 28).

Unlike risk assessment in the US and Europe, risk assessment in Japan is typically not mandatory; in principle, employers are only obliged to make an effort to assess risk in the workplace. However, a recent amendment of the Act mandated risk assessment for 640 chemical substances. The amendment also featured provisions indirectly mandating that a risk assessment be conducted. As an example, conveyors and providers of machinery and harmful substances are directed to submit risk-related information, which the government will disclose to companies actually using that machinery or those substances. This will increase the extent to which a company can foresee civil harm (courts tend to find them civilly liable).

⑤ Regulations emphasizing high-risk work and certain factors

In the past, the Industrial Safety and Health Act mainly regulated construction, machinery, and chemical substances. Over the past few years, the Act has emphasized the regulation of areas such as excessive workloads, mental health, and passive smoking.

Chapter 5 of the Industrial Safety and Health Act specifies machinery and hazardous materials that result in high-risk workplaces, and it stipulates manufacturing licenses, testing, and restrictions on use or transfer of machinery in accordance with the level and nature of risk. Many of the provisions are intended to ensure the competence of inspection bodies and the appropriateness of the inspections they conduct (Article 46-Article 54, Section 6). The Act prohibits the manufacture and use of certain existing hazardous materials in accordance with the level and nature of risk. The Act also

mandates, depending on necessity and priority, the display of risk-related information by labelling and the issuance of documentation during transfer and actions that a company actually using the material must take, such as conducting a risk assessment. The Act also stipulates that the hazardousness (e.g. if they are mutagenic) of new chemical substances must be examined during manufacture and importation and it stipulates that the national government must be notified.

⑥ Health considerations and sustaining and improving health

In light of structural changes to industry, the aging of the workforce, the prevalence of fatigue and stress, and Japan's paternalistic culture, the Industrial Safety and Health Act has expanded regulations to safeguard health in the workplace.

There are 2 systems of health checkups, a system of specialized health checkups that are primarily intended to identify and alleviate work-related risk factors and a system of general health checkups that are primarily intended to manage health in accordance with the health status of an employee. Items examined in a general checkup include lipids in the blood, blood glucose, liver function, urine, and BMI (Body Mass Index), and I am unaware of any comparable system overseas except French.

The Industrial Safety and Health Act has 2 types of provisions to prevent work-related illnesses and injuries. The first is primary prevention, which includes work management and regulations on working hours. Work management involves measuring workplace conditions, assessing those measurements and reacting accordingly, and modifying work itself. Regulations on working hours govern how long an employee is engaged in high-risk

work (where hours worked differ from regular working hours), such as work underwater or work in a high-pressure environment. Secondary prevention involves health checkups to deal with issues overlooked during primary prevention.

Amendment of the Industrial Safety and Health Act enhanced the legally prescribed system of health checkups. In 1996, the Act mandated that employers retain the results of health checkups, that employers listen to input from physicians, that employers act accordingly after checkups (work accommodations in light of the results of health checkups), that employers notify an employee of the results of his general health checkup, that employers provide health checkups to employees working the graveyard shift. In 2006, the Act mandated that employers notify an employee of the results of his specialized health checkup.

The Industrial Safety and Health Act has a provision (e.g. Article 68) prohibiting sick individuals who are unable to work, such as patients with an infectious disease, from working based on the opinion of an occupational physician or another appropriate physician. The Act also has provisions for necessary adjustments to facilitate continued employment of the middle-aged and elderly and the physically disabled. Continued employment can be viewed as one rationale for a recent policy encouraging the treatment of intractable diseases and employment of those affected.

⑦ A provision encouraging an employer to create a comfortable workplace

The Industrial Safety and Health Act covers topics that are clearly distinct from the prevention of a “work-related” “illness or injury.” The Act also firmly sets a “regulatory precedent (≒subject to legal regulations)” with

regard to risks that are highly uncertain but that need to be addressed. In the past, such subjects as encouraging mental health and preventing passive smoking belonged to this category.

⑧ Ensuring the competence of experts and specialized agencies and encouraging and mandating their involvement in the workplace

Occupational health and safety is a management issue requiring expertise. Workplace risks that need to be addressed are highly complex and vary greatly. The Japanese Industrial Safety and Health Act has numerous provisions to ensure the competence of experts and specialized agencies in and outside of the workplace and to encourage and mandate their involvement in the workplace.

Whether experts and agencies need to be part of the workplace or outside it, whether the involvement of experts and agencies needs to be mandated, and the situation and timing for that (mandating of the) involvement will differ depending on the nature and level of risk. Article 80 of the Act stipulates that a company where a serious work-related accident has occurred can be “encouraged” to “listen to the assessment” of an occupational health and safety consultant when the company is directed to draft or modify a special health and safety plan to prevent its recurrence. If an employer cannot measure workplace conditions as stipulated by law by himself, Regulations Enforcing the Act on Measurement of Workplace Conditions (Ministry of Labor Ordinance No. 20 of 1975) “mandate” that measurement will be “entrusted” to a registered government agency that measures workplace conditions.

⑨ Varying types of provisions and regulatory intent and a devotion to procedural regulations

The Industrial Safety and Health Act has numerous provisions that refrain from uniformly imposing substantive obligations, such as provisions mandating that an employer make accommodations, provisions mandating that an employer make an effort to make improves, and procedural provisions. This tendency is particularly evident with regard to health. Many guidelines are ambiguous in nature (are there specific interpretations of laws and regulations, are laws and regulations supplemented, and is compliance facilitated). There are also guides that emphasize codes of conduct.

In addition to educating the public, such “soft law” has various roles such as increasing government revenue, improving systems, underpinning government guidance and assistance, serving as standards to gauge fault in civil suits, and providing a foundation for compulsory codes.

⑩ Comprehensive prevention (in stages)

The Industrial Safety and Health Act stipulates a wide range of preventive measures, from primary to tertiary prevention.⁽¹⁵⁾ The Act also features a general principle for the prevention of risks as stipulated in the OSH “Framework Directive”: “first collectively implement prevention and then perform tailored actions involving personnel to deal with remaining risks.”

That said, as to such a precautionary principle, the Act avoids imposing

(15) This classification was first described by Hugh R. Leavell and E. Gurney Clark. For details, see Goldston, S. E. (ed.) (1987). *Concepts of Primary Prevention: A Framework for Program Development*. Sacramento: California Department of Mental Health.

obligations backed by penalties because of the abstract and general nature of that principle.

3. 2. Results of the latest survey on Japanese laws and policies

Supported by research grants from the Ministry of Health, Labor, and Welfare, I conducted a social survey of people who were directly or indirectly involved in health and safety in Japanese companies. Respondents were asked about future laws and policies on health and safety.

Overall, the most frequent survey response was “not sure” rather than “yes” or “no.” In addition, the following responses revealed a weak inclination to become involved in policies on health and safety and a strong tendency to leave matters to the government and subject matter experts.

Nonetheless, Japan has achieved a high level of health and safety standards compared to many other countries. One reason for this seems to be because individuals at the top and bottom tiers of a Japanese organization differ little in terms of their ability and attitudes. Another reason is presumably attributable to “tempered behavior.”

Q29	Select all of the points you think Japanese industry needs to focus on in order to create a culture that emphasizes health and safety (Multiple answers are allowed).	%
1	Making the system and details of the Industrial Safety and Health Act easier to understand	62.6
2	Giving the Industrial Safety and Health Act greater force and heavily punishing violations	28.8
3	Mandating risk assessment for every risk in the workplace	26.2
4	Promoting Japanese own efforts to ensure health and safety, such as no-accident campaigns and training in anticipating risks, rather than risk assessment	29.4

Risk assessment from a legislative perspective:

5	Increasing the number of officials (e.g. inspectors) with expertise in health and safety	17.0
6	With relevant laws and regulations relaxed, officials such as inspectors could enforce the law and provide supervisory guidance in light of how a company (or organization) is being run	12.6
7	International bodies such as the ISO should enhance regulations on health and safety management	19.6
8	Increase the number of specialized agencies (public or private) that are adept at handling health and safety	11.2
9	Conducting mandatory health and safety training for top management of a company (or organization)	18.4
10	Assigning dedicated health and safety director -board member-within a company (or organization)	12.8
11	Enhancing the status of health and safety supervisors (and particularly safety managers and health managers) within a company (or organization) and giving them sufficient rights and responsibilities to do their work	17.6
12	Having health and safety personnel play a substantive role, e.g. having executives with management authority participate in health and safety committees and making sure that results of deliberations are reflected	11.8
13	Incorporating health and safety training (and particularly hands-on training) in the curriculum for primary school education (e.g. elementary school)	12.2
14	Increasing the number of universities that offer specialization and education in health and safety	9.6
15	Educating the general public about health and safety	15.6
16	Improving the level of health and safety personnel, e.g. a system to renew relevant national certification	13.2
17	Enhancing health and safety training for line managers	14.4
18	Enhancing health and safety training for regular employees (particularly training courses for work supervisors, training for new hires, special training for handlers of hazardous materials, etc.)	20.4
19	Having the labor union be more involved in health and safety	12.8
20	Other	0.6
	Overall	N=500

4. Discussion and Conclusion

As mentioned earlier, this paper has discussed the concept of risk in different countries from a statutory perspective. That discussion revealed the following findings.

① The concept of risk in the UK:

Based on the natural sciences, epidemiology, and experts' empirical rules, employer and employee talks are more open to input from employees. This allows risk to be more broadly defined to include highly uncertain risks, such as psychosocial risks.

② The concept of risk in Germany:

Based on the sciences (and primarily the natural sciences), employer and employee talks result in risk being defined with a high degree of certainty through factors and responses to those factors.

③ The concept of risk in Japan:

Risk is primarily defined by the government based on input from research institutes with close ties to the government and the knowledge and experience of researchers and corporate personnel. In the workplace, risk is interpreted in various ways depending on the size of the company, the type of industry, and executive management's attitude toward health and safety. That said, the average thoughts of employees are often conveyed to executive management through mid-level managers.

Risk assessment from a legislative perspective:

This paper presents part of the results of “a study on the background for and the characteristics and effectiveness of occupational Health and Safety legislation in other countries focusing on the risk assessment and the applicability of that legislation to Japan” (Study chair: Mishiba, T.) supported by 2014–2016 grants-in-aid for scientific research from the Ministry of Health, Labor, and Welfare (National Institute of Occupational Safety and Health project).