

EXAMINING REGULATORY CAPTURE: LOOKING BACK AT THE FUKUSHIMA NUCLEAR POWER PLANT DISASTER, SEVEN YEARS LATER

Kiyoshi Kurokawa, MD, and Andrea Ryoko Ninomiya, MPhil
Politics*

“Never let a good crisis go to waste,” Winston Churchill

I. Introduction

The Fukushima nuclear power plant disaster, which occurred seven years ago in March 2011, sent waves of shock throughout the world. The disaster was triggered by an earthquake and tsunami, two natural disasters of extraordinary scale, one in a century and in a millennium, respectively, in this region of Japan. Yet, it may have been surprising that such a disaster could have happened in Japan, a country known for its science and technology, engineering and high educational attainment.

The failure that accounted for the disaster and its aftermath was one of governance rather than of technology and engineering. The regulatory and legal framework that allowed this failure of governance was found to be toothless and ineffective due to collusion between the nuclear industry, ministries and regulators of the Government of Japan. The National Diet of Japan Fukushima Nuclear Accident Independent Investigation Commission (NAIIC), of which author Dr. Kiyoshi Kurokawa served as Chairman, concluded that this *man-made* disaster was a case of regulatory capture, in which the Japanese nuclear regulatory agencies, agencies

*Dr. Kurokawa is a Professor Emeritus of University of Tokyo and of National Graduate Institute for Policy Studies and Chairman, Health and Global Policy Institute. See his blog for full profile: <http://kiyoshikurokawa.com/en/> [<https://perma.cc/RST2-VM5P>].

Andrea Ryoko Ninomiya holds an MPhil in Politics from the University of Oxford and has previously worked at the Chatham House Asia Programme and at the Asia Pacific Initiative.

See <http://naiic.org> [<https://perma.cc/F5GA-LFE7>] for the NAIIC Executive Summary and the chapters of the full report under Main Report.

of the Government, served the interests of the nuclear power industry, instead of protecting the safety of the public.

Since the Commission published its final report and submitted its recommendations to the National Diet in July 2012, little progress of significance can be observed. Major problems at the Fukushima plant have yet to be resolved, such as leakages of radioactive substances into the environs and the Pacific Ocean and the search and plan for nuclear core meltdown debris are yet to be seen, while the bigger issues of governance, such as lack of transparency and openness are also ongoing.

In September 2012, the regulatory bodies at the time of the accident, the Nuclear and Industrial Safety Agency (NISA) and the Nuclear Safety Commission (NSC), were replaced by the Nuclear Regulatory Authority (NRA), now under the Ministry of the Environment. Unfortunately, this has not been making significant progress, only amounting to cosmetic changes. Thus, the NRA has not demonstrated sufficient independence or transparency. I have personally heard the accounts of many internationally recognized experts who have stated that Japanese nuclear safety requirements remain inferior to the International Atomic Energy Agency (IAEA) standards.

In spite of much reason to doubt the effectiveness of the reforms, more nuclear power plants are currently on track for approval to NSA restarted. At the time of writing this article, four nuclear reactors were in operation: Units 1 and 2 of the Sendai Power Plant in Kagoshima Prefecture, which came back online in 2015,¹ and Units 3 and 4 of the Takahama Power Plant, which were restarted in 2016² and after a temporary shutdown,³ allowed to operate again in

¹ Press Release, The Kyushu Electric Power Co., Inc. (Kyuden), *Return to Commercial Operation of Sendai Nuclear Power Unit No. 2* (Nov. 17, 2015) http://www.kyuden.co.jp/en_information_151117.html [<https://perma.cc/8JS4-2Z4C>].

² At the Takahama Power Plant, Unit 3 was restarted on January 29, 2016 and Unit 4 on February 26, 2016. However, they were temporarily taken offline after Unit 4 experienced an automatic shutdown just a few days later on February 29. Subsequently, the Otsu District Court issued an injunction halting their operation.

2017.⁴ A further nineteen reactors have applied to the NRA to be approved for restarting operations. In Saga Prefecture, the Genkai plant, Units 3 and 4, are expected to be restarted later in 2017.⁵ Genkai Unit 3 started March 23rd, 2018, but stopped one week later due to leakage of water pipeline.

To understand the reasons for the lack of significant progress in policy reforms, it is necessary to go beyond the legal changes and examine the underlying institutional factors. Doing so exposes the reality that the structures of regulatory capture⁶ are still firmly maintained. This paper first reviews the work of the NAIC investigation and then examines issues with the regulatory framework of the nuclear industry in Japan. It then delves into the institutional factors and societal background that laid out the groundwork for the nuclear disaster to occur. It argues that in addition to greater reform of safety regulations, the *mindset* shared by many Japanese that underlies many organizations in Japan must undergo major change to transform into one that encourages more diversity and upholds the *obligation to dissent*. Above all, the principles of responsibility and accountability to the public must be followed on individual and institutional levels to corporate and the government. If such changes are not made, another Fukushima disaster may happen again. In an increasingly globalizing world, the international consequences of national crises are tremendous—risking reputations of nations, those involved in nuclear industry and policy, and beyond. In order to avoid facing another

³ Press Release, The Kansai Electric Power Co., Inc. (KEPCO), *Takahama Unit 4 Automatic Reactor Trip* (Feb. 29, 2016) http://www.kepcoco.jp/english/corporate/pr/2016/_icsFiles/afieldfile/2016/02/29/2016_feb29_1.pdf [<https://perma.cc/5E6B-SRMJ>].

⁴ Press Release, The Kansai Electric Power Co., Inc. (KEPCO), *Decision on petition of appeal pertaining to temporary restraining order against provisional disposition order pertaining to demand of injunction preventing resumption of operation of Units 3 and 4 of Takahama Nuclear Power Station* (Mar. 28, 2017) http://www.kepcoco.jp/english/corporate/ir/brief/pdf/2017_mar28_2.pdf [<https://perma.cc/2KCM-4XKE>].

⁵ World Nuclear News, *Court ruling clears path for restart of Genkai units* (Jun. 13, 2017) <http://www.world-nuclear-news.org/RS-Court-ruling-clears-path-for-restart-of-Genkai-units-1306174.html> [<https://perma.cc/LSJ5-JJAV>].

⁶ George J. Stigler, *The Theory of Economic Regulation*, 2 *The Bell J. of Econ.* 3, (1971).

catastrophe, we *must not let this crisis go to waste* and must apply the lessons learned.

II. The Mandate and Principles of NAIIC

NAIIC was the first parliamentary independent investigation commission since Japan became a constitutional democracy. In order to ensure the independence of the legislative, executive and judicial branches of the Government, commissions of this kind that investigate significant state matters are a regular part of many democracies. However, NAIIC was ground-breaking, as it was the *first* in Japan. The establishment of NAIIC and the selection of its ten commissioners were mandated by the National Diet, through a law enacted on September 30, 2011. The Commission officially began its investigation on December 8, 2011 and submitted its report⁷ to both Chairs of two Houses of the National Diet on July 5, 2012, in “approximately six months” as stipulated by the law. The law mandated the Commission with “the legal power to request the submission of relevant documents and the power to request the Joint Council of the Houses of Representatives and Councilors to invoke parliamentary investigation rights”.⁸

The Commission was based on the principles of transparency and commitment to the people, the future and the world. There were nineteen Commission meetings, which held hearings with thirty-eight key individuals, and which all held press briefings that were

⁷ Along with the official Japanese report, NAIIC submitted the Executive Summary written in English which describes the key points of the full report (Main Report) to the global audience. In October 2012, the entire English translation of the full report was released. Both the Executive Summary and the Main Report are available in pdf format on the NAIIC website, <http://naiic.org> [<https://perma.cc/5L5H-T3EL>]. The Main Report is split into chapters and readers can access each chapter in pdf or html form. NAIIC, *Reports* (Sept. 12, 2012), <http://warp.da.ndl.go.jp/info:ndljp/pid/3856371/naiic.go.jp/en/report/> [<https://perma.cc/FH8F-JVU2>].

⁸NAIIC, THE OFFICIAL REPORT OF THE NATIONAL DIET OF JAPAN FUKUSHIMA NUCLEAR ACCIDENT INDEPENDENT INVESTIGATION COMMISSION [*hereinafter* NAIIC Report], *Introduction* 6 (2012), http://warp.da.ndl.go.jp/info:ndljp/pid/3751543/naiic.go.jp/wp-content/uploads/2012/08/NAIIC_Eng_Introduction_web.pdf [<https://perma.cc/NE3G-TCHZ>].

open to the public and media and were broadcast online with a simultaneous English translation. In addition to the nineteen meetings, NAIIC conducted approximately 900 hours of interviews and hearings with more than 1,000 people. It conducted surveys with responses from more than 10,000 evacuees and 2,400 plant workers, held three town hall meetings and made visits to nuclear plants and three research missions overseas.

The NAIIC Report was made available online in both English and Japanese, as well as a book published by Tokuma-Shoten. Additionally, a short video animation series⁹ explaining the NAIIC investigation and report in both languages was created by university students, which can also be viewed online.

III. Findings of the NAIIC Report: Regulatory Capture

The main findings of the investigation were the underlying structures of regulatory capture in the nuclear power sector in Japan. The Commission examined the relationship between the operators and regulators and concluded that the two main regulatory bodies, NSC and NISA, failed to carry out their responsibilities of developing and enforcing safety requirements to protect the public. Fearing that new regulatory requirements would interfere with their operations and weaken their position in lawsuits, TEPCO opposed them by lobbying the regulators and government through the Federation of Electric Power Companies (FEPC).

But fundamentally, the lack of autonomy from industry interests was built into both organizations from the start. NISA, the main regulatory agency, lacked independence due to its ill-fated establishment as an organization originally a part of the Ministry of Economy, Trade and Industry (METI), which actively promoted the nuclear power industry.¹⁰ Similarly, NSC, the advisory body

⁹ See NAIIC, *Home* (Oct. 31, 2013), <http://naiic.net/en/> [<https://perma.cc/SF4S-2X45>] (containing illustrated videos explaining what happened in the Fukushima nuclear accident).

¹⁰ NAIIC Report, *Chapter* 5, 52, http://warp.da.ndl.go.jp/info:ndljp/pid/3856371/naiic.go.jp/wp-content/uploads/2012/08/NAIIC_Eng_Chapter5_web.pdf [<https://perma.cc/W3PX-JB8Q>].

responsible for creating the nuclear safety guidelines, was first set up as part of the Science and Technology Agency (STA), an organization established in the 1950s to help promote the nuclear industry in Japan. NSC neglected to establish legally obligatory safety regulations.

The investigation found that NISA failed to carry out its responsibilities of enforcing utility companies to adhere to nuclear safety regulations. NISA gave tacit consent to allow the operators to choose voluntarily whether to apply countermeasures against severe accidents, including external events. Crucial to the Fukushima accident, although NISA required nuclear operators to conduct seismic safety assessments (called “seismic back-checks”) and submit reports to them on the status of the nuclear power plants, they did not require operators to retroactively apply new regulatory requirements to existing plants (the so-called “back-fitting” system). The legal framework to enforce back-fitting was simply never put in place, by regulators, ministries or government. Thus, even as international safety standards progressively changed, old nuclear power plants in Japan could avoid updating their safety levels, leaving them vulnerable to earthquakes and other natural disasters.

The consequences of the lack of regulatory enforcement culminated in the Fukushima accident. NISA and METI required seismic back-checks to be held at the Fukushima nuclear power plant after NSC revised the 1981 “Regulatory Guide for Reviewing Seismic Design of Nuclear Power Facilities” in 2006. Following this, in 2009, TEPCO submitted interim reports that showed Units 1 through 4 at the Fukushima nuclear power plant had extremely limited seismic safety facilities. However, TEPCO did not release any further reports, making an internal decision to extend the deadline for the final report from June 2009 to January 2016. NISA was aware of the need to conduct anti-seismic structural reinforcement recommended by the revised guidelines on the facilities. Yet, NISA tacitly consented to the delay of the further back-checks and left it to the discretion of TEPCO to decide whether to implement the reinforcements. Indeed, the Commission investigation found that the reinforcements had not been implemented in Units 1 through 3

in the Fukushima Daiichi Nuclear Power Plant.¹¹ In this sense, the negligence and collusion of the regulator and industry produced a precarious situation, providing the foundation for the *man-made* disaster to occur.

Although based on indirect evidence, the Commission suggested there was a possibility that the earthquake caused significant damage in Unit 1 of the Fukushima Daiichi power plant before the tsunami. In contrast, TEPCO has claimed that the damage was caused by the tsunami, which they could not have foreseen and therefore could not have done more to prevent the accident. However, as Japan is a country that is particularly prone to earthquakes, it would be prudent for the authorities to seriously consider this possibility for all other nuclear power plants in Japan. The Commission recommended that a third party should continue to investigate this issue.

Moreover, NSC guidelines were lenient and neglected to provide regulatory requirements for cases of severe accidents. Accordingly, in its list of safety risks to consider, TEPCO omitted the risk of a severe accident. Specifically of importance to the Fukushima accident, the guidelines did not consider the possibility of a prolonged blackout of a nuclear power station. Reflecting this, TEPCO's manual for the emergency response to a severe accident did not have instructions for the case of a prolonged station blackout and power loss scenarios.¹² This negligence was fatal, as it was a blackout in the nuclear power station that was the first step in the long chain of events in the Fukushima nuclear catastrophe. Additionally, NSC also did not consider other issues such as the security of nuclear power plants and the spent-fuel stockpile, which are an obvious target for terrorists through physical and cyber-attacks. Overall, as the NAIIC Report concluded,

¹¹ *Id.* at 4; NAIIC Report, *Executive Summary*, 16 (2012), https://www.nirs.org/wp-content/uploads/fukushima/naaic_report.pdf [<https://perma.cc/S4C5-D78V>].

¹² NAIIC Report, *Chapter 1*, 38, http://warp.da.ndl.go.jp/info:ndljp/pid/3856371/naaic.go.jp/wp-content/uploads/2012/08/NAIIC_Eng_Chapter1_web.pdf [<https://perma.cc/45ML-C4JR>]; NAIIC Report, *Executive Summary*, *supra* note 11, at 33.

Tokyo Electric Power Company (TEPCO), as the nuclear operator, the Nuclear Safety Commission (NSC) and the Nuclear and Industrial Safety Agency (NISA) as the regulatory authorities, and the Ministry of Economy, Trade and Industry (METI), as the government body promoting nuclear power, all failed to correctly prepare and implement the most basic safety requirements . . .

¹³

IV. Policy Recommendations by NAIIC and Responses by Governmental Agencies

Based upon its findings, NAIIC provided policy recommendations on the legal and regulatory aspects involving the operation of nuclear power, as well as on governance and crisis management. The seven recommendations are listed in the Appendix A to this paper. Regarding legal reform, NAIIC recommended that an integrated legal framework be established in order to avoid the confusion of multiple laws and government agencies. The laws must define the roles of the nuclear operators, require regular and timely reviews as well as “back-fitting.” The Commission also set out criteria for new regulatory bodies to follow, including a high degree of independence, transparency, requirement for regulatory bodies to report to the National Diet on their decision-making processes and the prohibition of stakeholder involvement. Furthermore, it recommended the National Diet to monitor the nuclear regulatory agencies by calling them to explanatory hearings to the Diet, tracking their progress and implementation of the recommendations.

After the NAIIC Report was submitted to the National Diet in July 2012, governmental bodies were prompted to introduce some changes but they have been formalities at the minimum required level. The NRA, now under the Ministry of the Environment, was established to replace NISA and NSC in September 2012. Additionally, some laws were amended in June 2012 to include new

¹³ NAIIC Report, *supra* note 8, at 10.

regulatory requirements on nuclear safety, which went into effect in July 2013. These requirements introduced the “back-fitting” system, measures against terrorism, and combined some nuclear safety regulations (the Electricity Business Act, for periodic inspections, was incorporated into the Reactor Regulation Act)¹⁴.

Although the most pressing and basic amendments were made, there has been little monitoring by the National Diet and interest in reforms has largely disappeared. After the submission of the NAIC Report, the House of Representatives of the Diet has only called upon Commission members to speak at a hearing on one occasion. Moreover, the House of Councilors has yet to take substantial action. Thus, the National Diet has done little to monitor the new regulatory agency. In his book *3.11: Disaster and Change of Japan* (2013), Professor Richard Samuels, who specialises in Japanese politics, argues that few signs of change can be seen in politics and general democratic processes in Japan since the Fukushima disaster.¹⁵ One positive development was that in May 2017, I was appointed the Chairman of the Advisory Board of the Special Committee of seven members on the Investigation of Nuclear Power Issues in the House of Representatives as recommended by NAIC report.¹⁶ Yet, this is just the beginning of a long process and much more work need to e done.

Moreover, a review of the NRA in January 2016, conducted by the IAEA, deemed that the nuclear safety law needed to be amended to make on-site safety checks more effective. In the review, the IAEA also inspected Japanese nuclear facilities, including the Fukushima plant. The leader of the mission, Philippe Jamet, a French regulatory commissioner, stated that the inspection rules at Japanese nuclear facilities were inflexible and did not allow a quick response in case of a problem. At a press conference, Jamet said that Japan has a comprehensive framework but, “it doesn't give enough freedom for the inspectors to react immediately and to provide

¹⁴ Nuclear Regulation Authority, *New Regulatory Requirements for Light-Water Nuclear Power Plants—Outline* 2 (August 2013), <http://www.nsr.go.jp/data/000067212.pdf> [<https://perma.cc/DEQ3-ME96>].

¹⁵ RICHARD J. SAMUELS, *3.11: DISASTER and CHANGE in JAPAN* (2013).

¹⁶ NAIC Report, *supra* note 8.

results . . . At any time and for any plant, inspectors should be allowed to go where they want.”¹⁷

Japan has a responsibility to the international community for upholding the highest levels of safety and transparency in regulating its nuclear power plants. As nuclear power plant accidents such as Fukushima and Chernobyl have proved, nuclear power has far-reaching consequences not only for the country, but for the world. Especially as globalization progresses, unexpected, *black swan* events can have larger impacts and risks. The construction of nuclear power plants is increasing, particularly in emerging economies such as China, Turkey and even the United Kingdom. Thus, it is ever important to establish and monitor regulatory structures, through which we can avoid the same mistakes and networks of collusion as occurred in Japan. As Winston Churchill once stated, “Every crisis should be an opportunity,” and we must apply the lessons learned from the Fukushima disaster to avoid future crises.

Moreover, it is not only international and governmental organizations that should be involved but also the public, which should have a heightened sense of awareness of these significant issues. Civil society can play an important role, not only in the aftermath of crises, but on the everyday level, in being critical of their governments and upholding *the obligation to dissent*, which I will explain in the next section.

V. Context of Institutional Culture in Japan

In order to understand how the regulatory capture of the nuclear industry in Japan was formed, the context of the institutional and societal factors in Japan must be explained. In the chapter on the Fukushima disaster in his excellent book, *Bending Adversity*, David Pilling writes accurately, “the accident exposed in a flash—quite

¹⁷ Mari Yamaguchi, U.S. News, “The International Atomic Energy Agency says Japan has improved its nuclear safety regulation since the 2011 Fukushima disaster, but it still needs to strengthen inspections and staff competency” (Jan. 22, 2016, 6:55 AM), <http://www.usnews.com/news/science/articles/2016-01-22/iaea-japan-nuclear-regulation-should-improve-skills-law> [<https://perma.cc/4CJZ-2N6G>].

literally—some of the worst traits of ‘old Japan,’ with its elitist and secretive bureaucratic culture. That culture had served Japan reasonably well in the post-war years when it was driving economic catch-up. But it was deeply flawed.”¹⁸ In this section, I describe the context of mindset behind the strong adherence to maintaining hierarchical social structures and promoting organizational interests, which, in this case, were prioritized over protecting the lives of the Japanese public.

In the postwar period from 1945, Japan achieved remarkable economic growth, overtaking West Germany to become the second largest economy after the United States as early as 1968. In 1979, an American scholar, Ezra F. Vogel, published *Japan as Number One Lessons for America*¹⁹ in order to warn US business leaders and policymakers about this new global economic competitor. Yet, the book became a bestseller and more widely read in Japan than in the US, hitting the sweet spot of the Japanese psyche, which had longed to catch up with the West since the Meiji Restoration. They had now not only caught up, but had surpassed the West. However, amongst some this pride was accompanied by complacency and arrogance. The inertia of the postwar successes became widespread. Institutional collusion and negligence by nuclear regulatory agencies fostered the safety myth of nuclear power, exacerbated by the *groupthink* mindset. Japan serves as a prime example of why upholding *the obligation to dissent* within organizations is crucial to maintaining a healthy democracy—and how its absence can be fatal in times of national crisis.

After World War II, Japan was able to reach high levels of economic growth through the *Iron Triangle* of government, industry and bureaucracy, as well as academia and media. The tightly knit system of *Japan Inc.* enabled the defeated country to concentrate its energies into one national effort and contributed greatly to Japan’s economic success. The idea of a *rich country and strong army* that drove the Meiji government to militarize was refocused on economic growth and building up export-led industries. METI and

¹⁸ DAVID PILLING, *BENDING ADVERSITY: JAPAN AND THE ART OF SURVIVAL* 260 (2014).

¹⁹ EZRA F. VOGEL, *JAPAN AS NUMBER ONE LESSONS FOR AMERICA* (1979).

its predecessor MITI (Ministry of International Trade and Industry) took industrial policies that successfully promoted automotive manufacturing and steel production. Japanese companies worked together by maintaining close horizontal and vertical ties through the *keiretsu* system, in which a main bank provided finance, companies held cross-shareholdings and kept close ties with suppliers. Within corporations, the *salarymen* enjoyed the stability of lifetime employment, so long as they fit neatly within the seniority-based hierarchy and toed the company line.

As Japanese companies, such as Toyota, quickly rose to become major competitors to global businesses, many scholars and intellectuals tried to understand the distinctive elements of Japanese organizations and culture that allowed them to reach such levels of success. In *MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925-1975*, Chalmers Johnson explained that Japan's cultural values and ways of conducting business and trade was fundamentally different from Western ones.²⁰ In *Cartels of the Mind Japan's Intellectual Closed Shop*, an American scholar describes the insular perspective of the Japanese intellectual establishment.²¹ Karel Van Wolferen, a journalist and expert on Japanese affairs, provided similar analyses in *The Enigma of Japanese Power: People and Politics in a Stateless Nation*²² and *Ningen-o-kōfuku-ni-shinai-nihon-to-iu-shisutemu* [*False Realities of a Politicized Society*].²³

A Japanese scholar of Sociology, Chie Nakane, wrote scholarly books on the hierarchical social relations and ordering of Japanese organizations, such as *Tate-shakai-no-ningen-kankei* [*Japanese Vertically Structured Society*] and *Tate-shakai-no-rikigaku*

²⁰ CHALMERS JOHNSON, *MITI AND THE JAPANESE MIRACLE: THE GROWTH OF INDUSTRIAL POLICY, 1925-1975* (1982).

²¹ IVAN P. HALL, *CARTELS OF THE MIND JAPAN'S INTELLECTUAL CLOSED SHOP* (1998).

²² KAREL VAN WOLFEREN, *THE ENIGMA OF JAPANESE POWER: PEOPLE AND POLITICS IN A STATELESS NATION* (1989).

²³ KAREL VAN WOLFEREN, *NINGEN-O-KŌFUKU-NI-SHINAI-NIHON-TO-IU-SHISUTEMU* [*FALSE REALITIES OF A POLITICIZED SOCIETY*], (Masaru Shinohara trans., 1994) (Japan).

[*Dynamics of Vertical Society*],²⁴ pointing to the social structures of collective behavior as restraining individuality and the potential for Japanese to play dynamic roles on the international stage, in areas other than economics. Even earlier, Ruth Benedict published *The Chrysanthemum and the Sword* (1946),²⁵ based on her study on Japan during WWII. Originally conducted to gather information on the behavior of Japanese for the U.S. Office of War Information, her influential study outlined concepts such as obligation and shame in Japanese society that became the starting point for many subsequent studies on Japan.

Others have made observations on a larger scale, classifying Japan as an entity in itself. In his controversial theory of clashing civilizations, Samuel P. Huntington even deemed Japan as being one out of “seven or eight major civilizations” of the world, which he argued was “defined both by common objective elements, such as language, history, religion, customs, institutions, and by the subjective self-identification of people.”²⁶

VI. *Groupthink* Mindset

Categorizing Japan as a having its own civilization may be extreme. However, it can be said that, as with all societies, there are many norms in Japanese society which have been taught and learned over generations and have developed out of a particular historical and social context. In the case of Japan, many of the encouraged norms of social behavior happen to coincide with some elements of *groupthink*, a term coined by Yale University psychology professor, Irving L. Janis²⁷. Inspired by the term *doublethink*, which was used by George Orwell in his dystopian novel, *1984*,²⁸ as the act of non-

²⁴ CHIE NAKANE, TATE-SHAKAI-NO-NINGEN-KANKEI [JAPANESE VERTICALLY STRUCTURED SOCIETY] (1969) (Japan); CHIE NAKANE, TATE-SHAKAI-NO-RIKIGAKU [DYNAMICS OF VERTICAL SOCIETY] (1978) (Japan).

²⁵ RUTH BENEDICT, THE CHRYSANTHEMUM AND THE SWORD: PATTERNS OF JAPANESE CULTURE (1946).

²⁶ Samuel P. Huntington, 1993 (Summer), "*The Clash of Civilizations?*," FOREIGN AFFAIRS 72(3):22-49.

²⁷ IRVING L. JANIS, GROUPTHINK: PSYCHOLOGICAL STUDIES OF POLICY DECISIONS AND FIASCOES (1982).

²⁸ GEORGE ORWELL, 1984 (1949) (U.K.).

critically believing in two contradictory ideas, Janis used *groupthink* to explain the phenomenon of rationalized conformity in decision making within political and corporate circles. The corporate culture of relative cohesiveness and insularity that tended to be fostered through the postwar Japanese model of employment in mammoth corporations and governmental organizations made people more prone to the *groupthink* mindset of discouraging dissent and criticism.

In Japan, many social norms and activities tend to revolve around the organization to which one belongs, particularly based on university education and employment. The lifetime employment model and the seniority system, common to Japanese companies and bureaucracies, incentivize employees to spend most of their adult life in one organization. Even if lifetime employment is no longer guaranteed in Japan's recession economy, most employers still assume that employees are willing to dedicate a lifetime of work to their organizations.

On the everyday level, such behaviors can be observed in social interactions. For example, when people introduce themselves amongst other Japanese at a dinner or social event in Tokyo, the first words exchanged are often the names of their companies, along with carefully presented business cards, before their names or professions. The expectation is that the company and one's position within it comes first, rather than one's profession or field. In contrast, at international social gatherings in places such as New York or London, people would more likely mention their names and professions first, followed by their companies or organizations and institutions at which they work. Peer pressure to conform is a core part of organizations in Japan, and this behavior is taught at an early age, starting even in kindergarten.

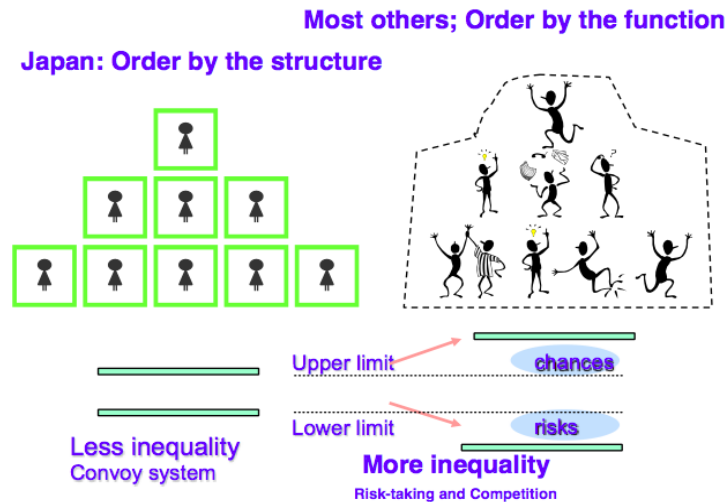


Figure 1—Comparison of the Order in Japan and Many Western Countries

As illustrated in the image above, Figure 1,²⁹ in Japan, many people are likely to view themselves in relation to the organizational structure to which they belong, while in other countries, people may tend to identify themselves by their individual professions and display greater risk-taking and competitive behavior. It could be said that in Japan inequality is less prevalent but there are also fewer chances for individuals to jump to the top. The company-centered, rigid job market also makes it more difficult for people to have a diversified career with experience working in multiple organizations. Even a mid-career engineer with a high level of expertise would face difficulties in moving between Japanese companies. In most companies, there are also close relations between labor unions and company management. These norms and institutional pressures can function as binding mechanisms that inhibit employees from stepping out of line with the company's direction and views.

²⁹ KIYOSHI KUROKAWA, *KISEI-NO-TORIKO: GURŪPU-SHINKU-GA-NIHON-WO-HOROBOSU* [Regulatory Capture: When Groupthink Can Kill] (2013) (Japan).

In the Japanese nuclear power sector, it is arguable that this mindset was widespread in the *nuclear villages* and made it more acceptable for employees and people involved in the nuclear industry to prioritize the industry's bottom line over public safety. In addition to the formal collusion between the regulators and operators, the social and institutional norms were significant underlying factors that provided the groundwork for the *manmade* disaster of Fukushima to occur

Let's be clear on one point—this does not mean that culture must be static. On the contrary, it is of utmost importance to critically question these norms, into which most people have been socialized from an early age. The combination of collusion, negligence by those in positions of power and a long history of institutional norms surely increased the likelihood that such an accident would happen in Japan on March 11, 2011. But I raise these points not merely as a defeatist commentary on Japan's woes, but as a call for change and a plea to individuals to be more critical, to dissent when necessary and to save the nation from another crisis.

VII. Responsibility for the Accident: Institutions and individuals

In the final report of the Commission, specific individuals were not singled out to take the blame for the accident. However, this was not in order to let those in power off the hook. I will examine the problem of the lack of individual responsibility and accountability shortly. But first, I must clarify that the intention of the Commission was to draw attention to the startling fact that Japan lacked a comprehensive plan for crisis management. A crisis management plan is a basic requirement that any country utilizing nuclear power must establish, particularly one that is prone to earthquakes and other natural disasters. No investigative body had pointed to this gaping hole, nor scrutinized the institutional features of the regulatory framework and crisis management guidelines.

The responsibility of the individual leaders must be pursued, but the lack of a national strategy must also be pointed out. These are two different points, both of which are significant, but require separate inquiries. This Commission focused on the institutional elements.

The Executive Summary of the NAIIC Report states, “The underlying issue is the social structure that results in ‘regulatory capture,’ and the organizational, institutional, and legal framework that allows individuals to justify their own actions, hide them when inconvenient, and leave no records in order to avoid responsibility.”³⁰

In this way, the Commission deemed that if the structures of regulatory capture are not reformed, new individuals could easily fill the positions of authority and make the same mistakes as their predecessors. From the perspective of crisis management, regardless of who the individual leaders are, there must be a set of comprehensive plans that can be implemented at any moment in time. Especially at the national level, it goes without saying that crisis management must be carefully planned by those with expert knowledge and experience.

I will mention though, the investigation did find and conclude that, especially in the critical period immediately after the accident, individuals at the top levels in the government, TEPCO and NISA failed to take the necessary steps to prevent or limit the damage. The Act on Special Measures Concerning Nuclear Emergency Preparedness designated NISA as the main organization to take the lead in crisis situations, but it quickly became clear that they had no such capabilities and were unprepared and dysfunctional. The Prime Minister’s Office stepped in, but in doing so, broke the planned chain of command and caused confusion, while failing to declare a state of emergency immediately or informing the public of the severity of the accident. The President of TEPCO did not even conduct the basic task of reporting to the Prime Minister’s Office, the activities and intentions of the operators at the plant. In no way does the NAIIC Report ignore the wrongdoings or waive the responsibilities of these individuals.

VIII. The Lack of Accountability and Transparency

This leads to an important point about the accountability of governmental and corporate leaders in Japan. The lack of

³⁰ NAIIC Report, *Executive Summary*, *supra* note 11, at 21.

transparency in the decision-making processes of the government and relevant bodies during the Fukushima accident has cost them the trust of the international community. In any organization, the greater authority must come with the greater responsibility and accountability. Unfortunately, the meaning of accountability was lost in translation when imported into the Japanese language. The English word *accountability* is translated as the *responsibility to explain* in Japanese, which does not convey the same level of seriousness.

In English, the meaning of *accountability* goes one step beyond responsibility, signifying the act of carrying out the responsibility that comes with the role. In *How the Mighty Fall And Why Some Companies Never Give In*³¹, Jim Collins also indicates the significance of the meaning and implications of accountability. Often in Japanese organizations, after major corporate or political scandals, those at the top are able to placate critics by fulfilling the *responsibility to explain*, consisting of apologizing and bowing at press conferences. The problems are soon swept under the carpet only to remain unresolved. This too, was the case after the Fukushima accident.

Kiyoshi Yamamoto explores the concept of accountability and how the meaning was lost in his academic work, *Akauntabiriti-wo-kangaeru-dōshite-“setsumeisekinin”-ni-natta-noka* [*Thinking about Accountability—Why It Became “Responsibility to Explain”*].³² Similar to Professor Chie Nakane, he discusses the vagueness of the role of responsibility within Japanese social and power structures. He argues that the Fukushima nuclear accident and WWII were typical cases in Japan, in which responsibility was vague and never pursued. Furthermore, he asserts that the disciplinary aspect of the word accountability is rarely used in the Japanese translation. He

³¹ JIM COLLINS, *HOW THE MIGHTY FALL AND WHY SOME COMPANIES NEVER GIVE IN* (2009) (U.K.).

³² KIYOSHI YAMAMOTO, *AKAUNTABIRITI-WO-KANGAERU-DŌSHITE-“SETSUMEISEKININ”-NI-NATTA-NOKA* [THINKING ABOUT ACCOUNTABILITY—WHY IT BECAME “RESPONSIBILITY TO EXPLAIN”] (2013) (Japan).

draws attention to the sharp contrast between how accountability is viewed by leaders in the United States and in Japan. To indicate the importance attached to accountability in governance in the US, he gives examples such as the renaming of the General Accounting Office, which is under the authority of Congress, to the Government Accountability Office in 2004.

He goes on to examine accountability in Japanese society, taking into consideration the particular elements of the social fabric. Issues in Japanese society, such as the Fukushima nuclear disaster, the Olympus scandal³³, and bullying in Japanese schools prompted Mr. Yamamoto to study this topic. In recent years, a slew of corporate scandals in Japanese firms have emerged, from Toshiba which inflated net profit figures to Kobe Steel which falsified certifications on the strength of its metals.³⁴ These scandals and others,³⁵ reflect a corporate culture in which the difficulty to criticize superiors leads to issues being swept under the carpet, with little transparency or accountability.

VIV. Overcoming *Groupthink* and Reforming Corporate Culture

For the true meaning of accountability to be accepted and for reform to take place in Japan, the *groupthink* village mentality that has dominated corporate and institutional culture must be changed. I have tried to raise awareness of the need to change this mindset by speaking about the Fukushima nuclear power plant disaster and the findings of the Commission. *The obligation to dissent* is extremely important in any organization, whether in the private or public sector. Rather than taking the passive attitude that nothing can be

³³ MICHAEL WOODFORD, EXPOSURE—INSIDE THE OLYMPUS SCANDAL: HOW I WENT FROM CEO TO WHISTLEBLOWER (2012) (U.K.).

³⁴ Peter Wells and Leo Lewis, *Japan Inc: a corporate culture on trial after scandals*, The Financial Times (Jan. 3, 2018), <https://www.ft.com/content/26d4843a-e743-11e7-97e2-916d4fbac0da>

³⁵ See Appendix B

changed, it is critical to express one's opinions regardless of one's age and position. In the book, *Winning*,³⁶ Jack Welch, the President and CEO of GE, has also pointed out *the obligation to dissent* as a significant element of corporate culture for successful companies.

Changing one's *mindset* is also important for positive growth for both businesses and individuals. A 2017 McKinsey study touched upon the effects of norms and mindsets in the office on performance and growth. It showed that cultural norms and perceptions had a significant effect on employees' ability to implement new business strategies in digital technology. Even employees' skill levels in digital technology mattered less for their performance compared to their attitudes and behavioral norms. One suggestion for building a new corporate culture, according to the study, is to hire senior level people from outside of the company to "help inject disruptive thinking that is a source of innovative energy and empowerment."³⁷This could be a key first step in the road to changing attitudes and overcoming *groupthink*.

Some people who visit Japan from abroad are surprised by the stability of Japan despite many decades of recession and the 2011 nuclear and natural disasters. Indeed, the Japanese public, particularly those whose homes were destroyed after March 11, have shown incredible strength and endurance. But, if there are major accidents or problems in the future in other areas, Japan will likely make the same mistakes again, become isolated and lose the trust of the international community. In times of crisis, the fragility of the antiquated structures of Japanese society will be exposed with little to hold them up. As Anthony Fitzsimmons and Derek Atkins observe in their book, *Rethinking Reputational Risk, How to manage the risks that can ruin your business, your reputation and you*, "Typically a crisis has multiple root causes, often systemic, that remained unrecognized and unmanaged but gradually

³⁶ JACK WELCH & SUZY WELCH, *WINNING* (2005).

³⁷ Julie Goran, Laura LaBerge, and Ramesh Srinivasan, *Culture for a digital age*, DIGITAL MCKINSEY (Jul. 2017), <https://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/culture-for-a-digital-age> [<https://perma.cc/NG5C-JHMG>].

accumulated, unnoticed over years. . . .”³⁸ Leaving these decaying pillars as they are will allow more crises like Fukushima will arise, in other areas and sectors. I can only hope that each and every one of the Japanese public will consider this seriously and have a heightened awareness of Japan’s future.

X. Lessons from Fukushima: Crisis to Opportunity

It has been seven years since the devastating tragedy of the March 11 earthquake and tsunami and the Fukushima nuclear power plant disaster. Japan must seize the opportunity to change and to be responsible to its public and to the international community. The historical and social context of Japan made it well-positioned for such an accident to occur, but the structures of groupthink and collusion can form in many places around the world. In terms of governance, the lessons from the disaster can be applied to many areas where the lack of transparency may be an issue. Moreover, as more nuclear power plants are being built around the world, the lessons from Fukushima must be applied and the knowledge gained must be harnessed in order to prevent future nuclear disasters.

Finally, this independent Commission can serve as a model for future investigations to probe issues of significance to the everyday lives of Japanese citizens. Having served as the chairman of the first independent investigation commission mandated by parliament in Japan (and the only one to date), it is my sincere hope that the democratic spirit of the Commission will continue, through the individual awareness and actions of the Japanese people.

Note: This paper is based on presentation and discussion by Dr. Kurokawa at the conference held by the University of Pennsylvania Law School, Center for Asian Law on November 19 and 20, 2015.³⁹

³⁸ ANTHONY FITZSIMMONS & DEREK ATKINS, *RETHINKING REPUTATIONAL RISK: HOW TO MANAGE THE RISKS THAT CAN RUIN YOUR BUSINESS, YOUR REPUTATION AND YOU* 28 (2017).

³⁹ University of Pennsylvania Law School, Center of Asian Law, **Earthquakes, Nuclear Meltdowns, and Chemical Spills: Legal Responses to Disasters in the US and Asia**, <https://www.law.upenn.edu/institutes/cal/conferences/legalresponsestodisaster/> [<https://perma.cc/KN32-2WL7>].

Acknowledgments: This paper is dedicated to all those who lost their family members, affected in various ways and forced to leave their own home following the Fukushima Nuclear Disaster, and to all those who participated in and supported the National Diet of Japan Fukushima Nuclear Accident Independent Investigation Commission.

Appendix A

The Commission's Seven Policy Recommendations⁴⁰

1. "Monitoring of the nuclear regulatory body by the National Diet: A permanent committee to deal with issues regarding nuclear power must be established in the National Diet in order to supervise the regulators to secure the safety of the public."
2. "Reform the crisis management system: A fundamental reexamination of the crisis management system must be made. The boundaries dividing the responsibilities of the national and local governments and the operators must be made clear."
3. "Government responsibility for public health and welfare: Regarding the responsibility to protect public health, the following must be implemented as soon as possible. (1) A system must be established to deal with long-term public health effects, including stress-related illness. Medical diagnosis and treatment should be covered by state funding. Information should be disclosed with public health and safety as the priority, instead of government convenience. This information must be comprehensive for use by individual residents to make informed decisions. (2) Continued monitoring of hotspots and the spread of radioactive contamination must be undertaken to protect communities and the public. Measures to prevent any potential spread should also be implemented. (3) The government must establish a detailed and transparent program of decontamination and relocation, as well as provide information so that all residents will be knowledgeable about their compensation options."
4. "Monitoring the operators: TEPCO must undergo fundamental corporate changes, including strengthening its governance, working towards building an organizational culture which prioritizes safety, changing its stance on information disclosure, and establishing a system which

⁴⁰ NAIIC Report, *Executive Summary*, *supra* note 11, at 22-23.

prioritizes the site. In order to prevent the Federation of Electric Power Companies (FEPC) from being used as a route for negotiating with regulatory agencies, new relationships among the electric power companies must also be established—built on safety issues, mutual supervision and transparency.”

5. “Criteria for the new regulatory body: The new regulatory organization must adhere to the following conditions. It must be: Independent . . . Transparent . . . Professional . . . Consolidated . . . Proactive . . .”
6. “Reforming laws related to nuclear energy: Laws concerning nuclear issues must be thoroughly reformed.”
7. “Develop a system of independent investigation commissions: A system for appointing independent investigation committees, including experts largely from the private sector, must be developed to deal with unresolved issues, including, but not limited to, the decommissioning process of reactors, dealing with spent fuel issues, limiting accident effects and decontamination.”

Appendix B

Japanese Blue Chip Companies Involved in Recent Scandals⁴¹

1. 2011 Olympus Corporation: accounting fraud
2. 2015 Toyo Tire & Rubber Co., Ltd.: falsified performance data for earthquake resistant products
3. 2015 Toshiba Corporation: inflated net profits by \$1.3bn over a seven year period
4. 2015 Asahi Kasei Construction Materials Corp.: falsified data on building foundation piles
5. 2015 Takata Corporation: misrepresented inflator data
6. 2016 Mitsubishi Motors Corporation: inflated fuel economy data by up to 15 percent
7. 2016 Suzuki Motors Corporation: fuel economy testing methods were not compliant with Japanese domestic standards
8. 2017 Nissan Motor Company Ltd.: domestic car inspections carried out by unqualified technicians
9. 2017 Subaru Corporation: domestic car inspections carried out by unqualified technicians
10. 2017 Kobe Steel, Ltd.: gave false certifications to its metals and products
11. 2017 Toray Industries, Inc.: data falsification for tires and various auto parts

⁴¹ Kana Inagaki & Leo Lewis, *String of Scandals Puts Japanese Investors on Edge*, The Financial Times (May 29, 2016), <https://www.ft.com/content/89c00e1c-2263-11e6-9d4d-c11776a5124d> [<https://perma.cc/NA6D-2LLE>].