Risk Communication and Japan's Fukushima Daiichi Nuclear Power Plant Meltdown: Ethical Implications for Government-Citizen Divides

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ABSTRACT

The response of Tokyo Electric Power Company (TEPCO), which has been hobbled by a natural disaster, provides startling lessons in how organizations that disregard public outcry, even in a high-context culture that embraces pauses, silences, and understatements in communication exchanges, can be vulnerable to stakeholder backlash. The risk communication used by TEPCO in the wake of the meltdown at the Fukushima Daiichi Nuclear Power Plant in March 2011 continues to raise major ethical questions among families with children at risk for illnesses from radiation leaks—and from contamination. TEPCO's actions exacerbated tensions in government-citizen divides. This article analyzes the implications of such divides for the ethics of TEPCO's risk communication—that is, communication between those facing a health or an environmental risk and an organization with the wherewithal to reduce or control significantly that risk or its impact.

Keywords: Confucianism, ethics, Fukushima Daiichi Nuclear Power Plant, image-restoration theory, risk communication theory, TEPCO

> We have been deceived. And we've been betrayed. I believe my children's thyroid cysts are because the radiation was so high in the beginning.
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> —Ash (2013; statement by a Japanese mother)

> Risk communication was a possible way to help [health care workers] understand the current radiation situation correctly and therefore not personalize risks…The fear of health risk by radiation at low doses is widely spread especially among parents of small children… [T]o understand the updated radiological status of environment and people in Japan, the accurate and continuous radiation measurements should be steadily executed.
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> —Matsuda et al. (2013, pp. 24-25)

Effective risk communication is predicated on symmetrical communication, which is inherently ethical and contributes to positive market outcomes, organizational effectiveness, values-driven crisis management, aspired corporate reputation, and to positive media coverage (e.g., Huang, 2004). It also engenders and sustains healthier, cleaner, safer communities. Understandably, then, in the ongoing Ebola crisis in sub-Saharan Africa, the World Health Organization was quick to reveal a "quarantine lapse" (Gladstone, 2014, p. A7) and "multiple high-risk opportunities for transmission of the [Ebola] virus to others" ("Ebola Situation," 2014, para. 5) as key factors responsible for the worst outbreak of Ebola in four West African countries: Guinea, Liberia, Mali, and Sierra Leone. That viral crisis placed Texas Health Presbyterian Hospital, in Dallas, in the spotlight in late 2014. On October 10, 2014, the hospital hired Burson-Marsteller to launch a major image-restoration campaign in the aftermath of evolving evidence on its seeming unpreparedness to treat the first U.S. case of infection from the hemorrhagic Ebola virus. While Presbyterian Hospital does not shield itself from the unnaturalness of its public challenge, that of Tokyo Electric Power Company (TEPCO), which has been hobbled by a natural disaster, provides lessons in how organizations that disregard public outcry can expose themselves to stakeholder backlash. This article draws upon classical ethical theories and Confucian philosophy to analyze, within the framework of Benoit's (1995, 1997) image-restoration theory, risk communication used by TEPCO in the wake of the meltdown at the Fukushima Daiichi Nuclear Power Plant (FDNPP) in March 2011.

But TEPCO, in the aftermath of the triple disaster of March 11, 2011, engaged in practices that were antithetical to open, two-way symmetrical and ethical communication. Granted, such ideal communication symmetry has been criticized as unattainable in practice, as a real-world rarity, and as unrealistic (Holtzhausen, 2000; Holtzhausen, Petersen, & Tindall, 2003; Murphy, 1991; Van der Meiden, 1993). And the validity and application of the symmetrical-asymmetrical dichotomy across cultures and national boundaries have been questioned (Holtzhausen, Petersen, & Tindall). Nonetheless, the normative ideal of symmetrical communication (Grunig, 2001; Grunig & Grunig, 1992) makes it particularly relevant to TEPCO, which is under siege and whose communication management practices have been under increasing public scrutiny since March 11. This article argues, then, that if the company had engaged in post crisis communication activities that were palpably open, mutual, and ethical, its long-nurtured reputation and credibility would not only have been protected from a public onslaught but that such an outcry would not have morphed into a formidable element on its business landscape.

A TWOFOLD PURPOSE

The overarching purpose of this paper is to decipher several communication management lessons, grounded in ethical theories, that can be learned from a nuclear-plant crisis that is engendering a global discourse on the public safety of using nuclear energy (Baba, 2013; Gralla, Abson, Møller, Lang, & Wehrden, 2014; Hardie & McKinley, 2014; Steinhauser, Brandl, & Johnson, 2014a, 2014b, "Taiwan Stops," 2014). It also examines the appropriateness of the communication practices undertaken in response to that crisis.

This article focuses on two areas. *First*, it analyzes TEPCO's communication management practices within the context of the organization's culture, as well as that of the larger society dominated, as it were, by its stakeholders. And it does that by acknowledging the extent to which communication practices differ between, say, the West and the East. In Japan and South Korea, for example, where Confucian values influence and guide corporate behavior, public relations is practiced largely as media relations and publicity (Berkowitz & Lee, 2004; Cooper-Chen & Tanaka, 2008; Kim & Kim, 2010; Park, 2001).

Second, this article presents classical ethical theories and Confucian philosophy as a beachhead toward analyzing TEPCO's public actions vis-à-vis the triple disaster of March 11. It argues that, to the degree that its actions were not predicated on an ethical communications framework, the company made itself vulnerable to stakeholder ire, distrust and scorn, necessitating, as it were, protests, demonstrations, and calls for extra-organizational oversight. How does ethics—conceptualized within universal and Confucian values—justify or negate the premises of TEPCO's actions?

SIGNIFICANCE

This article is significant for two reasons. First, as noted in CBS's "60 Minutes," three years after the March incident, the earthquake "not only shook the ground, it shook the Japanese people's faith in their government and in the nuclear power industry" ("3 Years Later," 2014). In the annals of the International Atomic Energy Agency, the Fukushima nuclear meltdown was one of only two accidents that had a "Level 7" nuclear-disaster rating, the highest possible, on the International Nuclear and Radiological Event Scale. The other, the Chernobyl Nuclear Plant accident in Ukraine, part of the then-Soviet Union, occurred 25 years earlier. Both accidents have a commonality: their massive human and environmental toll evoked major public concerns, particularly among national, regional, and global health agencies (e.g., Baba, 2013; Gralla, Abson, Møller, Lang, & Wehrden, 2014; Hardie & McKinley, 2014). Such effects engender antinuclear protests and movements in Canada (Leeming, 2014); in Japan (Ogawa, 2013; Angelique & Culley, 2014); in Taiwan ("Taiwan Stops," 2014; Hsu, 2014); in the United States (Angelique & Culley, 2014; Taylor, 2013); and in elsewhere (e.g., Taylor, 2013; van der Zeijden, 2014). Because nuclear plants should focus on the main sources of risks such as accidents caused by extreme events like earthquakes or

floods (Wald, 2014), it is important that such risks be increasingly communicated with residents most likely to be directly affected by meltdowns.

Second, as a consequence of the public outcry over nuclear energy, increasing attention is being directed to the risks of operating nuclear reactors, not only in Japan but also in other nations. For example, against the backdrop of the Fukushima accident, the United States National Academy of Sciences, in July 2014, issued a report in which it recommended, among other things, that the U.S. nuclear industry and the U.S. Nuclear Regulatory Commission strengthen their capacities for assessing plant risks from external events that can lead to loss of safety functions, improve the resilience of specific nuclear-plant systems, and enhance U.S. emergency response ("Committee on Lessons Learned," 2014). In Japan, consequences of such public outrage are also legal: at least 17 nuclear-energy lawsuits have been filed by local governments and activist groups against Japan's central government. Sixteen of those lawsuits are pending, as of this writing. And Prime Minister Shinzo Abe's cabinet embraces nuclear power even though there is growing public opposition to that form of energy (Fackler, 2014a, b; Kingston, 2014). Particularly in nuclear-energy-dependent Japan, communication practices of the nation's largest utility company raise umpteenth questions, some of which are examined in this article.

From a conceptual standpoint, it is important to note that risk communication per se is not synonymous with the management of the communication process during the planning-prevention, crisis, and post crisis phases. And, from an analytical standpoint, as a pedagogical approach, it is a method for integrating risk communication theory into a well-informed discussion of organizational communication during a major crisis. The case-study approach adopted here is critical to understanding the public relations discipline (Pauly & Hutchison, 2001), "especially in the complex areas of issue and crisis management" (Jacques, 2008, p. 195). That approach is justified by the distinctive use of case analyses in business education to "stand in for actual practice because students are asked to respond to case material 'in role' as if they were preparing background material for strategic decision making, for example, or advising the company's board of directors or management" (Colby, Ehrlich, Sullivan, & Dolle, 2011, pp. 95-96). At bottom, such an approach intersects with two pedagogies—enactment (Colby, Ehrlich, Sullivan, & Dolle) and engagement (Smith, Sheppard, Johnson, & Johnson, 2005)—that offer students and practitioners of crisis management profound learning experiences. And the triple disaster that struck the world's third-largest economy on March 11, 2011, offers an opportunity for doing just that and, *pari passu*, for deciphering several lessons in effective risk communication—that is, communication between those facing a health or an environmental risk and an organization with the wherewithal to reduce or control significantly that risk or its impact. Communication is so critical to managing the fallout from crises that, increasingly, U.S. business-school curricula address the strategic implications of business communication networks for crisis management. Yet, such communication is still a challenge to organizations, particularly in light of the communication pitfalls that compromise their operations (Chen, Sharman, Rao, & Upadhyaya, 2008; Netten & Someren, 2011; Reddy et al., 2009).

TWO THEORETICAL PERSPECTIVES

Image-Restoration Theory

Benoit's (1995, 1997) theory of image restoration holds that, because both image and restoration are essential to organizations and individuals, any organizational misstep that undermines an organization's standing with its publics could be addressed through an image-restoration discourse to develop and understand images that will respond effectively to such an image crisis. The theory focuses on message options—that is, the content of crisis communication or the messages that an organization uses to change stakeholder perceptions when confronted with a crisis. According to Benoit (1995, 1997), five general self-defense strategies underpin the messages: (a) denying charges, accusations or allegations; (b) evading responsibility for an offensive act; (c) reducing the severity of the offensiveness of a wrongful act; (d) taking corrective actions; and (e) admitting or confessing wrongdoing and begging for forgiveness (mortification).

Risk Communication Theory

Risk communication theory, which posits a two-way process between risk managers and their stakeholders, focuses on the nature of present, emerging, or evolving risks and on strategies for controlling, minimizing or reducing them (Mitchell, Smith & Murphy, 2004; Sheppard, Janoske & Liu, 2012; Lundgren & McMakin, 2013). That theory is consistent with communication symmetry.

If the theory is applied strategically to crises, it can ease stakeholder anxieties, minimize deleterious outcomes, and inform decision making. The theory is being applied as a platform for designing communication strategies for physician-patient communication in clinical settings in which all parties assess the changing risks of medication—that is, sharing evidence of harm and benefits in using a particular medication or on staying on a specific regimen (Bonner at al., 2014; Borgsteede, Karapinar-Çarkit, Hoffmann, Zoer, & van den Bemt, 2011; Ghosh & Ghosh, 2005; Ledford, 2011; Welschen et al. 2010). The expected outcomes of such communication include the following: an increase in patient's knowledge, a likelihood of patient compliance, a confidence in a chosen option, and an instantaneous assessment of shared information. It is also being used in responding to emergency and security situations (e.g., Covello, 2011; Sheppard, Janoske, & Liu, 2012), and in assessing food risk (Rutsaert et al., 2013, 2014).

Fischoff (1995) identified seven stages of risk communication and its best practices: (a) get the numbers right; (b) tell publics what the numbers mean, (c) explain what the numbers mean, (d) show publics how they had accepted similar risks, (e) explain how risk benefits outweigh costs, (f) treat publics with respect, and (g) create partnerships between publics and risk communicators.   The absence of effective risk communication can pave the way for a crisis to occur (Coombs & Holladay, 2010), a possibility that leads Heath (2010) to assert "a crisis is a risk manifested" (p. 3).

Lundgred and McMakin (2013) identify three forms of risk communication: care communication, in which the dangers and management of risk communication have been determined through scientific research; consensus communication, which requires significant audience interaction; and crisis communication, which is risk communication within the context of extreme, spontaneous danger.

CULTURAL CONSIDERATIONS AND PRE- AND POST-MARCH 11 COMMUNICATION PRACTICES

To provide an appropriate context for analyzing the interface between TEPCO's culture and its communication practices, an outline of its communications structure is now presented.

TEPCO's Communications Structure

During the March incident, TEPCO had an elaborate communications department organized in three sections: public relations, investor relations, and supplier relations (TEPCO, 2010). Those sections had an overarching purpose: to develop and nurture good relationships with the company's stakeholders. But there were differences among them. The public relations section, for example, focused on customers, local community, and other strategic publics. It provided information through commercials, newspapers, advertisements, websites, brochures, and public relations facilities. To answer customers' inquiry, service centers provided information to customers. For local communities, because TEPCO believed that one of its social responsibilities was to protect natural resources and to ensure access to them by future generations, it launched programs and activities that engaged people and also provided opportunities to local children to think about the environment (TEPCO, 2010).

The investor relations section reported investment updates to stockholders and investors through annual reports and the company's website; the latter funneled opinions from outside the company to stockholders and investors. The unit held explanatory meetings on management plans and settlement of accounts and exchanged opinions with investors and stock analysts.

The supplier relations section focused on clients. And it reported management plans, movements in the utility's investments, and information about ordering plans for environmental organizations.

Two years after the occurrence of the disaster, TEPCO established a Social Communication Office, which "is intended to enhance risk communication activities to resolve organizational issues through promoting improvement of [its] corporate culture and risk communication in compliance with social standards" (TEPCO, 2013). This office focuses on explaining the company's challenges to local residents and on providing updated information in-house to improve internal and external communications.

Cultural Considerations

Organizational culture (that is, organizational climate and leadership), national values, and perceptions of corporate communications influence management values and communication practices (e.g., Benn, Todd, & Pendleton, 2010; Dastmalchian, Lee, & Ng, 2000; Hofstede, 1985, 1986; Jang, 1997; Ralston, Holt, Terpstra, & Kai-Cheng, 1997). Hofstede (1985), for example, writes: "Organizations have prevalent value systems which are part of their organizational cultures. These value systems show a national component according to the nationality of the organization's founder(s) and dominant elite" (p. 347).

And there is a growing body of research that concludes that cultural factors influence a form of risk communication: crisis-response strategies (An, Park, Cho, & Berger, 2010; Low, Varughese, & Pang, 2011; Taylor, 2000). Low, Varughese and Pang (2011), for example, found differences in the crisis-response strategies used by Asian and Western organizations: the Taiwanese government used predominantly mortification and corrective action strategies to address a natural disaster whereas the U.S. government used predominantly bolstering and defeasibility and other strategies such as shifting the blame and attacking the accuser. Communicators in sub-Saharan Africa and Asia, because of their high-context attributes, are likely to engage in nuanced, implicit, and indirect communications whereas those in dominant United States' culture and in the United Kingdom, France, Germany, and Switzerland, with their low-context attributes, are wont to be open, explicit, and direct in their risk communications.

Pre-March 11

The company had been at the forefront of communication excellence in Japan. Over several years, for example, it used a series of commercials to provide safety and educational information on energy use: from how to save energy to how to use electricity safely ("Denko's Electricity," 2010.) The main character in that series was a girl named *Denko-chan*. She was also featured on the company's fliers and was synonymous with its public identity in 1987 ("TEPCO's Character," 2012.) The company ran a "*Denko-chan* shop," where it sold merchandise associated with her, and established a *Denko-chan* website as a public-information channel. Both were, however, shut down after the crisis occurred.

Some of TEPCO's commercials targeted children in Japan's Kanto area, where the company had a monopoly over electricity supply. The company's community relations unit created "TEPCO Electric Energy Museum" on several sites across the country ("Public Relations Facilities," 2012.) There were 32 such facilities, which, as public relations buildings attached to plants, had elaborate theme parks geared toward young mothers, who tended to be most worried about nuclear accidents and radiation (Onishi, 2011). Those facilities also demonstrated to Japanese children the importance of electricity (Ito, 2011). There were 48 reactors in 18 commercial nuclear facilities in Japan, and all have been shut down since September 2013 ("Japan Faces a Summer," 2014.)

TEPCO's far-reaching public relations facilities and operations were a paradox to the company: they provided much-needed educational information to the Japanese public even as those facilities engendered the myth of energy safety—that Japan's nuclear power plants were absolutely safe (Onishi, 2011). But the public, for whom risk communication was critical, was not informed about the downside of nuclear energy. Absent such information, the public was quick to criticize the company for disseminating incomplete, misleading information in the aftermath of the March 11 catastrophe.

In September 2002, TEPCO announced its commitment to a four-point "Corporate system and climate of individual responsibility and initiative": (a) promoting disclosure of information and ensuring transparency of nuclear operations, (b) creating a work environment in which proper operations can be conducted, (c) strengthening internal surveillance while reforming its corporate culture, and (d) promoting adherence to corporate ethics (Arora, 2011a, b).

Yet, in a seeming contradiction of the tenets of that initiative, TEPCO organized, at its Tokyo headquarters, two forms of press conferences: one on the Fukushima crisis, the other on the supply of electric power in general. The former was held in a small press room with an audience capacity of 40, the latter in a large room with a 300-person capacity (Uesugi & Ugaya, 2011). TEPCO executives tended to participate in the large-room press conference. Freelance journalists and members of the international media could only participate in the large-room conference. And when the issue of having a combined press conference was raised by freelance journalists, TEPCO responded that the separation had been discussed with and approved by Kisha Kurabu, Japan's influential press club. The subtext: the smaller the number of media attendees, the better the company's control over the nature and the amount of news disseminated.

Perhaps more paradoxical is that TEPCO's then-president, Masataka Shimizu, was also president of the Japan Society for Corporate Communication Studies, an academic society that studies how corporations should communicate with their stakeholders from management perspectives ("About Japan Society," 2010.) Its mission is to conduct theoretical and applied research and to chronicle evolving strategies and tactics for public relations and other communications activities. Through strategic research, it also investigates new ways by which corporations can better communicate in Japan and develops management structures in an increasingly globalizing business environment. It publishes several newsletters and reports for corporate members and organizes conferences in which key management issues are analyzed.   In many ways, then, TEPCO and its leadership had been in the forefront of developing, disseminating, and expanding "best practices" in corporate communications in Japan.

Post-March 11

Even though the company had an elaborate, active communications program, it did not participate directly in national efforts to bring constituents up to date on fast-breaking developments, deferring instead to news agencies to fulfill that critical need. Initially,

traditional news media were the purveyors of information on the natural disaster. How did TEPCO respond initially and subsequently to the unfolding crisis?

On March 11, TEPCO's chair, Tsunahisa Katsumata, was in China with a group of Japanese politicians and representatives of Japan's publishing and newspaper companies (Watanabe, 2011). Such foreign junkets were a part of TEPCO's strategic outreach to Japan's news media staffers, for whom, as Watanabe (2011) noted, the company holds an annual reception. The March 11 temblor struck during that China trip, which was reported in only one local publication, a major weekly magazine, *Shukan bunshun.* Other news outlets ignored that story.

Nearly three weeks later, Katsumata admitted at a TEPCO press conference on March 30 that his company was covering most of the travel expenses for the trip (Tanaka, 2011a). That raised key questions about the independence of the news media and the disinterestedness of politicians charged with overseeing the development and implementation of the nation's nuclear-energy policies.

TEPCO's first press release after the earthquake stated that the reactors at FDNPP in "Units 1, 2, and 3 were operating and automatically stopped. Units 4, 5, and 6 [were] regularly inspected" (TEPCO, 2011a). Even though the plant was crippled, the company did not announce how dire the situation was. Rather, TEPCO's press releases downplayed the severity of the crisis, insisting that safety had not been compromised because the amount of leaked radiation was minuscule. Yet, the national government announced the evacuation of local residents within 3 km radius of FDNPP (TEPCO, 2011b). Even so, TEPCO did not state unequivocally that the station was safe or unsafe, an indication of inexplicit communication pattern in a high-context society that emphasizes pauses and silences in communication exchanges.

In a press release on March 14, 2011, TEPCO wrote:

> At approximately 11:01a.m., an explosion, followed by white smoke, occurred at the reactor building of Unit 3. It was believed to be a hydrogen explosion. It appears the reactor containment vessel remains intact; however, the status of the plant and the radioactive levels outside the plant are being investigated. Some workers were injured. Ambulances are on their way to care for them. TEPCO continues to take all measures to restore the safety and security of the site and is monitoring immediate surroundings (TEPCO, 2011c).

TEPCO's press release obfuscated the facts by couching the crisis in words such as "believed," "estimated," and "under investigation." Again, the company was not forthright about what it knew about the risks of the situation and also did not provide enough health information for risk assessment.   In essence, then, TEPCO reneged on its avowed commitment to a basic principle of risk management: assessing an organization's potential vulnerability to crisis, preventing or reducing that potential and engaging in a sustained discourse with strategic publics to enable them, particularly

those who live or work proximal to a nuclear facility at risk for a meltdown, have an informed understanding and assessment of their risks and benefits associated with that facility.

In a press conference on the morning of March 15, TEPCO reported that an explosion had occurred at the power station. It was confirmed that the fourth-floor rooftop area of the Unit 4 Nuclear- Reactor Building had been damaged (TEPCO, 2011d). It was the first time that executives of TEPCO talked publicly about the quake. Such reluctance to share health-risk information publicly, even in a crisis, has cultural roots: it is indicative of the slow reaction time and silence that are hallmarks of Japan's high-context communication style (Cooper-Chen & Tanaka, 2008).

In explaining the state of the nuclear plant at Fukushima, the executives used the following measured, nuanced pronouncements:

- "I need to confirm the information,"
- "We don't have the information with us right now,"
- "We cannot deny the possibilities,"
- "We don't have the data,"
- "We cannot analyze the situation,"
- "I think there might be more radiation because of the explosion,"
- "We cannot judge with the data we have now," and
- "We estimate there was hydrogen explosion" ("Press Conference," 2011.)

TEPCO executives did not appear confident at the press conference, avoided eye contact with their audience, and largely read off a script, staying on message. And they did not answer many of the reporters' probing questions. TEPCO used a shopworn line in assuaging the public: it said it was doing its best to address the fallout from the triple disaster; however, the delivery of that reassurance in itself was nonassuring, its content was ambiguous at best. Cooper-Chen and Tanaka (2008) provide a cultural context for such a response: ". . . in high-context Japan, information is conveyed indirectly or implicitly through *awase* (adjusting messages to the people listening, assuming they will 'catch on')" (p. 103).

Such communication practices exacerbated the divides between organizations— corporate and governmental—and the public, particularly mothers, who were understandably anxious about the presence ("A2") or the absence ("A1") of thyroid cysts in their children and about Japan's continuing preference for nuclear energy and about a seeming minuscule interest in renewable energy sources. Global interest in the latter seems to be on the wane (Zyadin, Halder, Kähkönen, & Puhakka, 2014). Such divides are being further heightened by, as Perko (2014) found, the discrepancy in risk perception between experts and the lay public and by the communication gap between them. Mothers did not ascribe much credibility to government readings on radiation levels and cross-checked those persistently against those they collected on playgrounds, on school premises, and in residential areas. Governments' radioactivity readings were interpreted by mothers as consistently lower than those collected by

them were, further engendering distrust and communication gaps between the government and mothers. Governments' reports on radioactive substances (e.g., cesium) in the environment were also viewed with skepticism by mothers.

RISK OUTCOMES: GOVERNMENT-CITIZEN DIVIDES

Within days of the accident, the government, in response to media queries, announced that it could not guarantee that people exposed to the meltdown would not get cancer. "It's simply a matter of probability," said Yamashita Shunichi, government adviser on radiation health risk. "Nothing is certain. Nobody can guarantee your safety . . . [S]cience isn't perfect" (in Ash, 2013).

A post-March 11 development, from a clinical standpoint, was that 18 months after the meltdown, children in the worst-hit prefectures developed nose bleeds, skin rashes, nodules, thyroid cysts, and leukopenia (low white-blood-cell count). In pre-March 11, the children were asymptomatic and free from such ailments. But in post-March 11, the government and TEPCO were guarded in their efforts to inform citizens about the extent of the calamity, to reassure them that appropriate steps were being taken to rein in the effects of the meltdown, and to assuage citizens whose distrust of government statements or concern about actions being undertaken to encourage a quick return to normal life were viewed as too little, too late.

Citizens' Stance
- Safety cannot be guaranteed by anyone or by any institution. Mothers assume the odious and risk-laden responsibility of measuring radiation levels in their own neighborhoods and on school playgrounds. A Japanese mother, armed with radiation monitors for checking government readings, said: "Until it's all decontaminated, I want to protect the children, so I am collecting proof. Fukushima cannot protect its own children, so I am going out and asking the world for help" (in Ash, 2013).
- Results of hospital tests cannot be trusted; answers from the government are unclear and inconsistent. When the accident occurred, government raised the radiation limit to 5m Sv/h, then to 20m Sv/h for children and adults. (Mothers argued that the upper limit should be 1 millisivert per year.) Tons of contaminated water had leaked from storage tanks in the crippled plant, leading TEPCO to declare a "radiological release incident" (Tabuchi, 2013, p. A8) in August 2013, for the first time since the disaster struck.
- Radiation is so high that insurance companies are tepid about insuring people; radiation is still everywhere, regardless of decontamination.
- Citizens believe the risk to children is nonzero; therefore, everything, including food, playground equipment, and water, is screened. Why should children, the country's treasure, eat Fukushima-produced rice? Thyroglobulin should be between zero and 30, yet girl registered 166.1; some children have "A2" thyroid cysts.
- Children cannot engage in outdoor activities or touch plants and animals.

- Mothers dissuade their children from drinking Fukushima-produced milk at school and request that Fukushima-grown foods be guaranteed safe before being sold nationwide.
- Mothers record, outside school property, radiation readings between 8.0 μSv/h and 11.86 μSv/h, which are inarguably high. As a Japanese mother said, "It's true the levels there at my home are 0.4 or 0.5 μSv/h, but if you take one step outside of my property, what is the level?" (in Ash, 2013).
- Mothers wonder why the government was testing only for cesium. And it was only in August 2013 that government officials admitted that up to 40 trillion becquerels of radioactive tritium, strontium, and cesium have leaked into the Pacific (Nicole, 2013). As a Japanese mother concluded, "[Government officials are] still hiding the truth from us. They have stupid slogans like 'Let's turn back the clock to before March 11'" (in Ash, 2013).
- Schools unclear about health regulations and who should be responsible for radiation's effects.
- Residents displaced from high-radiation zone are still reluctant to return to their communities even when the government gives the return-order (Sekiguchi, 2014). In two such areas—e.g., Namie and Kawauchi, in the Fukushima prefecture—there is about an even split between those who are returning and those who are staying away because of fears of radiation.

Governments' Stance

- Radiation, even in the worst-hit prefectures, does not necessarily affect children.
- Posts have been set up to monitor radiation, which are not only in homes but also in rivers and oceans.
- Doctors tell Fukushima residents that the radiation levels are not a problem, and that whether cancer will be an outcome is not "perfect science" (in Ash, 2013).

The gaps between the positions of institutional authorities and those of citizens are so apparent that bringing both sides to bridge the divides will require an appeal to business ethics and to cultural norms, subjects to which we now turn.

THE ETHICS OF TEPCO'S COMMUNICATION PRACTICES

Klikauer (2010) argues that management practices should be critiqued from the standpoint of ethics, which should not be subservient to management, and proffers ethics councils in which stakeholders can raise business issues and hold business accountable for its actions. Such councils, regardless of their structure within an organization, can engender free discussion and contribute to an ethical assessment of management practices largely because "inside an *ethics council* nobody has a privilege like the managerial prerogative, nobody has the right to disciplinary action, and nobody operates with power and authority" (Klikauer, p. 209). Because the discourses in such councils can never be value-free or value-neutral, at least the following seven ethical theories—six of which emanated from Western values, one from Eastern traditions— can be pivotal in council deliberations.

First, from a utilitarian (that is, macro-teleological) standpoint, to whom does the greatest benefit of the disclosure or nondisclosure of risks associated with the nuclear reactors accrue? Does it go to the corporate shareholder, to municipal governments and prefectures, or to the nation in general? Does nondisclosure ensure the continuing use of nuclear energy for the good of society, even though such use poses major risks for the environment? (Jha, Blake, & Millward, 2014). Such questions should have been raised during ethics council deliberations on taking creative risks by, say, announcing that only residents in areas close to the epicenter of the disaster were clearly at risk of exposure to radiation and by saying that the safety of food and drinking water in areas outside the northeastern region was not in question.

Second, from a deontological (that is, macro-deontological) perspective, whose duty or obligation is being fulfilled and by whose rules, laws, principles or maxims? Are the appeals to nuclear- energy use as safe morally appropriate, quite apart from the consequences of such appeals? TEPCO has a fiduciary responsibility to its investors to ensure higher value of their stocks and shares, and to protect their liquidity, based on the universal maxim that a commercial enterprise is in the business of manufacturing and marketing a product and of making a profit. It also has a duty to the government of Japan, acting as partners in sustaining the economy and the lifestyle of a nation and in protecting the environment. On May 29, 2011, in a testimony to a parliamentary panel investigating Japan government's response to the nuclear crisis, former Prime Minister Naoto Kan charged that TEPCO had hijacked the nation's energy policy for its own benefit (Fackler, 2012). In other words, the company's duty was not necessarily to the public interest but to that of its shareholders.

Third, from the notion of (organizational) virtue ethics, to what extent does TEPCO demonstrate universal traits (or character) such as integrity, courage, temperance, compassion, honesty, and justice against which an evaluation of its practices leads to the conclusion that the institution's disposition to the community is morally defective or morally upright? If it were committed to those traits, to what degree did the company's close association with the media and with the authorities undermine TEPCO's commitment to them?

Fourth, how disposed is TEPCO to benevolence or beneficence? In a time of crisis, TEPCO assisted in the evacuation of residents close to the center of the crisis. The then-mayor of Dale City did not order evacuation from his city. But that benevolence seems in question in light of the six-month wait after the onset of the disaster to start processing claims for some 60,000 evacuated households.

Fifth, can the conduct of the company be morally justified on grounds of universal ethical egoism (or the self-interest criterion), in which the industry's best interest dominates the ethical decision-making process? To the degree that TEPCO continues to seek nuanced ways to downplay the risks associated with its product and service, to downplay the clinical effects of its crippled nuclear plant, and to parlay the economic

benefits of its product line, its business rationale, at bottom, points to organizational, not national, interest.

Sixth, situation ethics or ethical relativism, as espoused by Protestant theologian Joseph Fletcher as a variant of utilitarian theory, posits the absence of an ethical universal or of the adherence to ethical rules or principles; rather, the doer (e.g., TEPCO) expresses in its own way sensitivity (or the lack thereof) toward a particular situation. TEPCO's responses to or its actions in a major crisis is being justified by the specific situation of the involved principals. Absent a precedent, the company had to wait for the results of a situation analysis before making any definitive public statements. Christians, Ferré, & Fackler (1993) write: "Ethical relativism is the belief that because moral judgments vary across cultures and historical periods, all moral systems are equally good, even if they are antithetical" (p. 59). That is a longstanding issue that threatens organizational or business ethics. A challenge to classical ethical theory is the endearing appeal of moral relativism couched within the frameworks of cultural diversity and of cultural relativism. It has been argued that Japan's emphasis on group harmony (*wa*) has resulted in the popularity of situation ethics and in the elimination of absolute values and individual responsibility (Chung, Eichenseher, & Taniguchi, 2008). TEPCO's communication practices, by which it obfuscated the deleterious environmental effects of the crippled plant, could be culturally justified, making such cultural relativism (read: situation ethics) appropriately decoupled from universalism in ethics.

Finally, Confucian values place a high premium on consensual and harmonious—not discordant—communication (Berkowitz & Lee, 2004; Cooper-Chen & Tanaka, 2008; Kim & Kim, 2010; Park, 2001). Confucian principles apply to ethical self-regulation in management in Confucius-oriented East Asian countries such as Japan (Woods & Lamond, 2011). What could have been the benefits to TEPCO and to its stakeholders of having its practices closely hewn to the Confucian ideals of loyalty and harmony? TEPCO could have re-engineered the importance of its loyalty to its customer as an appropriate step toward ensuring harmony (not discord) with them. Even though differences among the four nations of Confucian cultural heritage—China, Japan, Korea and Vietnam—underscore the nonmonolithic approach to Confucian discourses and practices (Elman, Duncan, & Ooms, 2002; Tamai & Lee, 2002), overarching streams of ethical ideals tend to pervade their corporate hierarchies. To wit, the principle that prescribes dealing with others with absolute sincerity, cultivating oneself by overcoming one's own shortcomings, showing reverence to one's family members, and practicing self-restraint (*jishu-kisei*); the principle that encourages practicing proper etiquette or exhibiting polite behavior toward others, thereby fostering a strong sense of community (*kyoudoutai-ishiki*); and the principle of virtuousness (*kouketsu*). If all of these ideals had guided corporate and governmental actions during inauspicious circumstances, the outcomes of this environmental disaster and the impact—real and perceived—of the ensuing risks would have been much less contentious and far less socially divisive.

ETHICAL IMPLICATIONS: LESSONS LEARNED

TEPCO's communications management presents ethical lessons on incorporating crisis management, business ethics, risk communication, and risk management. The significance of March 11, a day that aroused the raw emotions and the bewilderment of the Japanese, should be placed in its proper context. The carnage, scourge, and disease that crippled Hiroshima and Nagasaki in 1945 were all human-induced. But the extent of the infrastructural damage from natural forces in the present crisis is unprecedented, as is its impact on a country whose nearly two decades of deflation have led to a slowdown in economic growth, whose population is aging, and whose leadership is constrained by bickering within the ruling Liberal Democratic Party. Even though, initially, the "Japanese government actually responded quite well to the crisis" and the pace of the nation's rebuilding efforts was "extraordinary" ("Ian Bremmer," 2011,) TEPCO's response leaves a lot to be desired.

TEPCO could have demonstrated publicly its acknowledgment of the importance of risk management, grounded in both risk communication and image-restoration theories. Rather, it withheld critical information from the public at a precarious time, even as it sought to nurture an excellent media relations program and to sustain partnerships with prominent politicians. For example, groundwater samples TEPCO collected in July 2013 at the Fukushima plant had a record 5 million becquerels per liter of radioactive strontium-90; however, the company did not release those data for nearly seven months, claiming it was waiting to verify their accuracy ("Tepco Hid," 2014). TEPCO had full control over how much it could share with or withhold from its publics—a situation that provided it control over its stakeholders. Bok (1989) views such nondisclosure of information as a power dynamic—that is, as a shield invoked for exercising the duty of professional confidentiality in controlling secrecy and openness and for protecting collective practices of wrongdoing. She writes:

> Conflicts over secrecy...are conflicts over power: the power that comes through controlling the flow of information. To be able to hold back some information about oneself or to channel it and thus influence how one is seen by others gives power. (p. 19)

TEPCO's communications department had not been forthright with key constituents, an indication of an organizational culture whose tactics are inimical to the interests of its constituents. Its public relations' goal was to make the Japanese people believe the nuclear power plant was safe, which, for the most part, it was; however, the risks of that product or service and the response of the company to those risks have been cavalier at best and misleading at worst. If the company had been palpably open with its stakeholders, its long-nurtured reputation and credibility would not only have been protected from a public onslaught but such an outcry would not have morphed into a formidable element in its business landscape.

TEPCO was not a stranger to scandals, having weathered a major one in 2002 and

having been exposed on its withholding from the government information about accidents on its plants. And the communication department, particularly the public relations section, had not adopted practices to which it was privy and to which it had avowed knowledge. The popular image of a well-managed, profitable enterprise has been besmirched. Even though there had been scandals about nuclear plants, the company's public relations section was inflexible; it stuck to a scripted process of handling the incident and sought to project an image of a safe FDNPP, even as that image had been tainted, post-March 11.

TEPCO's response to the disaster raised ethical and management questions because it deliberately—at least initially—withheld key information from its stakeholders. Such a practice is inimical to stakeholder interest, more so as it had been found that the company hid from government regulators a seven-and-half-hour accident in 1978, as well as those that occurred in 2004 and 2007, and in 1979, 1984, 1989, 1993, and 1999 (Arora, 2011a, b). TEPCO could have promptly admitted or confessed wrongdoing and begged for forgiveness in its attempt toward ensuring mortification.

The company's relationships with the mass media, critical to its media relations program, and its association with Japanese politicians, stoke ethical questions. Even as the Japanese public is much more knowledgeable about nuclear power, TEPCO needs to consider disseminating critical risk information that would be useful to the public in reaching informed decisions. Such information will be consistent with its publicly expressed environmental social responsibility and compliance system. Additionally, it is also important that ethics councils be established as a channel for strengthening relationships with stakeholders who will now have a stronger sense of shared governance.

In the thick of the crisis, segments of the Japanese public were in the dark. The mainstream Japanese media had been showing positive and safe images of nuclear power plants. The Japanese public believed nuclear energy was safe—but that was before the explosion (Uesugi, 2011). Even after that explosion, TEPCO still concealed critical information or made it ambiguous publicly.

Even though there was a lot of information on nuclear power plants on the Internet, its accuracy was difficult to ascertain. TEPCO, the Japanese government, and the Japanese media, on the one hand, reassured the public that all would be well; on the other, they reduced information flow to a trickle (Tanaka, 2011b). Much of the reliable information was disseminated by freelance journalists who were not on the payroll of either the government or the mainstream media. For the most part, such journalists called the shots as they saw fit.

Japanese freelance journalists, as well as independent filmmakers, also reported many demonstrations against nuclear power plants in many major cities in Japan (Tanaka, 2011b). But major news media in Japan downplayed the reporting of those demonstrations because of the cozy relationships they had with TEPCO. However, the Japanese public received more critical information from alternative news sources and

took action to ensure a safe environment. One woman said: "I'm ashamed of my lack of knowledge about nuclear power plant. Now, I have some knowledge and it is time to take action" (Tanaka, 2011b). That action was a public protest against TEPCO's taciturnity (*ishin denshin*) and obfuscation (*konwaku*), both of which violated its own "Corporate system and climate of individual responsibility and initiative" (Arora, 2011a, b). Additionally, it was a dismissal of the tenets of Confucianism, which emphasizes integrity and virtuousness.

CONCLUSION

This disaster holds ethical lessons for besieged TEPCO, for the Japanese government and public, and for risk communication managers. First, TEPCO's communications department had been among the most active in Japan, had been at the forefront of professionalizing corporate communications management in Japan, and had been a major contributor to environmental safety in Japan. But during one of the most disastrous periods in Japan's modern history, the nuclear-energy icon's management practices were being questioned on ethical grounds, in that they created divides between the company and its stakeholders, and between the latter and government agencies, both local and national. The Japanese public realizes that some of the information TEPCO provided and reported in the local media may not always be complete or accurate—in contradistinction to the ethical theories of, say, utilitarianism (whose interests were being protected?), deontology (was the public being treated as an object or was TEPCO's response one that it would like others to adopt?), and virtue (did TEPCO have the courage to respond forthrightly to public concerns about health risks associated with the meltdown?). And, perhaps equally troubling was that a company that had been at the forefront of institutionalizing professionalism in communication had not only failed to share with its stakeholders complete and accurate information, but had also ignored a key element in Benoit's (1995, 1997) image-restoration theory: mortification. It is important, therefore,

> for Tepco to be more up front and honest in explaining the situation at the plant. This is perhaps the only way that it might be able to begin rebuilding some degree of trust with the public. This trust is vital for differentiating between risks. (Hobson, 2014)

Second, the possibility that a new organization communication culture may be emerging in Japan—one that acknowledges both the importance of full, complete and accurate disclosure of corporate developments and the dangers of nondisclosure. Disclosure, on the one hand, facilitates power symmetry and enables companies to meet demands for and expectations of corporate environmental disclosure by multiple stakeholders by increasing perceived legitimacy of corporate action and motivating companies to demonstrate social responsibility (Alnajjar, 2000; Bewley & Li, 2000; Bok, 1989; Cormier, Gordon, & Magnan, 2004; Huang & Kung, 2010). Nondisclosure, on the other, nourishes "the desire to gain control, to feel superior to those not in possession of the secrets, and the longing for the sheer enjoyment and intimacy that learning secrets can bring" (Bok, p. 34). She illuminates that view by concluding that "[c]ontrol over secrecy

and openness gives power: it influences what others know, and thus what they choose to do. Power, in turn, often helps to increase such control…" (p. 282).

And, finally, codifying ethics principles is not enough of a deterrent to unethical management conduct, making an ethics council in which the customer can participate critical to institutionalizing ethics-driven management practices. We all remember that U.S. energy giant, Enron, codified its ethics in a 64-page guide to help employees and management "to work with customers and prospects openly, honestly and sincerely" ("Enron Code," 2000, p. 4.) Even with that tome in hand, company officials falsified financial information in violation of the principles that they had enunciated publicly.

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