The curse of the #1 carmaker: Toyota’s crisis

Nobuyuki Chikudate
Hiroshima University, Hiroshima, Japan, and

Can M. Alpaslan
California State University Northridge, Northridge, California, USA

Abstract

Purpose – Using as many perspectives as possible to understand large-scale industrial crises can be a daunting task. This paper aims to demonstrate a reasonably complex yet systemic, analytical and critical approach to analyzing what causes crises.

Design/methodology/approach – The authors use a multi-perspective methodology within which each perspective uses a substantially different ontology and epistemology, offering a deeper understanding of the causes of large-scale crises. The methodology utilizes extant theory and findings, archival data from English and Japanese sources, including narratives of focal people such as Toyota President Akio Toyoda.

Findings – The analysis suggests that what caused Toyota’s crisis was not just Toyota’s failure to solve its technical problems. It was Toyota’s collective myopia, interactively complex new technologies and misunderstanding of corporate citizenship.

Practical implications – The authors argue that crises are complex situations best understood from multiple perspectives and that easily observable aspects of crises are often not the most significant causes of crises. In most cases, causes of crises are hidden and taken-for-granted assumptions of managers. Thus, managers must view crises critically from multiple yet distinct viewpoints.

Originality/value – The authors use Alpaslan and Mitroff’s multi-disciplinary methodology to outline several critical perspectives on Toyota’s messy recall crisis.

Keywords Critical thinking, Culture, Complex systems, Crisis management, Toyota recall, Multi-disciplinary inquiry

Paper type Viewpoint

In recent years, the global automobile industry has witnessed many large-scale crises such as Toyota’s sudden unintended acceleration problems, General Motors’ (GM) faulty ignition switches and Volkswagen’s (VW) manipulation of emissions. Curiously, these carmakers experienced these crises right around the time when they became the World’s No. 1 Carmaker. These crises left hundreds of people dead or injured, the shareholders of these companies lost billions of dollars (Liker, 2015). It is imperative that we understand how large-scale crises occur in complex systems such as the global automobile industry and how we can prevent such events.

Crisis are “messy” situations best understood from the perspectives of multiple disciplines (Kovoor, 1991; Mitroff et al., 1988; Pearson and Clair, 1998; Staw et al., 1981). Despite the scholarly work on the need to use multiple perspectives to understand large-scale crises, the general public and the media focus often on a small subset of causes such as technical problems and operator errors. Crises, however, are rarely caused by technical problems or operator errors alone (Dekker, 2011; Mitroff and Linstone, 1995). Consider, for
instance, NASA’s Challenger Space Shuttle disaster in 1986. The technical problem of faulty O-rings that sealed the joints of the shuttle’s solid rocket boosters was not the only or even the primary cause of the explosion of the shuttle (Starbuck and Milliken, 1988). Similarly, in 2003, Columbia disintegrated upon entry into the earth’s atmosphere not only or primarily because during lift-off, a large chunk of foam had hit the thermal tiles on the underside of the shuttle’s wings. The causes of these disasters were also organizational, structural and cultural (Starbuck and Farjoun, 2005; Vaughan, 1996).

Studying and understanding crises from as many perspectives as possible is obviously a daunting task. Many scholars and practitioners with different backgrounds and expertise have looked at Toyota’s recall crisis and provided valuable but partial explanations informed by their own perspectives (Andrews et al., 2011; Camuffo and Weber, 2011; Camuffo and Wilhelm, 2016; Chowdhury, 2014; Cole, 2011; Liker and Ogden, 2011; MacDuffie and Fujimoto, 2010; NHTSA, 2011; Ohmae, 2010). It is, however, useful and necessary to provide a larger framework within which these various perspectives can be integrated. This article uses Alpaslan and Mitroff’s (2011) multi-perspective methodology to clarify and draw lessons from the messy and interacting causes of Toyota’s recall of millions of cars in 2010. Alpaslan and Mitroff’s (2011) methodology for studying “messy” situations is fundamentally a systemic, analytical and critical approach that may help scholars organize the daunting task of viewing crises from many perspectives.

A “messy” approach to studying the causes of large-scale crises

The basic motivation for Alpaslan and Mitroff’s (2011) multi-perspective methodology to study large-scale crises stems from the following systems principle: scholars need every known discipline, profession and field of inquiry to understand and deal with the interdependent causes of large-scale crises such as Toyota’s recall crisis, GM’s ignition switch crisis in 2014 and VW’s systemic cheating crisis in 2015. Incorporating every known discipline or field of inquiry into one’s quest to understand the causes of a crisis is of course an ideal that is impossible to achieve. Therefore, Alpaslan and Mitroff (2011) suggest that scholars consider at least four fundamentally different perspectives. Table I presents four critical perspectives that scholars may use to start putting together a plausible and actionable explanation of the causes of any crisis (Table I).

Perspective 1 focuses on impersonal, observable and relatively more measurable technical aspects of crises such as malfunctions, failures, breakdowns and faulty designs. Examples include the aerodynamic properties of the foam that hit the underside of Space Shuttle Columbia’s left wing in 2003, weather conditions during Challenger’s liftoff in 1986, engineering specifications of the drilling fluid used in BP’s deep ocean drilling rig in 2010 and design specifications of Air France 447’s malfunctioning pitot tubes in 2009.

Perspective 2 focuses on structural factors. These factors are also visible and measurable, but they are more systemic such as the level of interdependence among different organizational processes (production, safety, quality control, etc.), the amount of slack and buffer zones in subsystems and the level of differentiation and integration between different units. Consider the bureaucratic structure of NASA (Vaughan, 1996), the tightly coupled structure of Chernobyl and Three Mile Island nuclear power plants (Perrow,

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<th>Perspective 1 Technical</th>
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Source: Alpaslan and Mitroff (2011)
and the interactively complex structure of Wall Street’s derivative financial products (Taleb, 2010).

Perspectives 3 and 4 focus on emotional, value-laden aspects of crises, which are relatively harder to measure. Perspective 3 focuses on cultural factors such as the dysfunctional culture of Wall Street (Ho, 2009) and the crisis-prone culture of BP in contrast to the safety-focused cultures of high reliability organizations such as aircraft carriers (Roberts and Bea, 2001). Finally, Perspective 4 focuses on individual factors such as cognitive biases and defense mechanisms that may contribute to a crisis. Consider CEO James Burke’s leadership during Johnson & Johnson’s Tylenol recall crisis in 1982 (Mitroff and Anagnos, 2001), CEO Tony Hayward’s apathetic comments that almost destroyed BP’s already weakened public image after the oil spill in the Gulf of Mexico in 2010 and the psychological self defense mechanisms such as denial and rationalization observed in virtually all crises (Pearson and Mitroff, 1993).

The strength of Alpaslan and Mitroff’s (2011) approach is that the four perspectives they have suggested are often ontologically and epistemologically distinct (Mitroff and Linstone, 1995). Each perspective is grounded in a substantially different set of beliefs and assumptions regarding what critical factors contributed to a crisis and how we can know these factors. Alpaslan and Mitroff (2011) argue that each perspective provides a different insight into a crisis, and failing to include any one perspective will render an incomplete explanation of the causes of the crisis.

An analysis of the Toyota recall crisis

In the following sections, these four general perspectives will guide our discussion of Toyota’s recall crisis (Figure 1).

The technical and structural causes of crises will be discussed first. These aspects of a crisis are often easier to observe because they are close to the surface. Such problems, however, are almost always manifestations of deep-seated problems with long incubation periods (Turner, 1978). Below the surface are cultural factors that shape fundamentally the ways managers make sense of their environments and themselves. This section’s focus will be on some of the dysfunctional aspects of Toyota’s culture. While managers can easily find and fix technical problems, it is harder for them to recognize and acknowledge cultural
problems because such problems are much closer to who these managers are and what they identify with. The final sections will include implications and recommendations of a number of crisis management strategies informed by our analyses.

**Bad designs and bad drivers**
From a technical perspective, critics have hypothesized that sudden unintended accelerations of Toyota cars were caused by one or more of the following problems: sticky gas pedals, improperly installed floor mats, software problems and electro-magnetic interference. The National Highway Traffic Safety Administration (NHTSA), in its February 2011 report, identified two main technical causes of unintended accelerations: sticky pedals and pedal entrapment by floor mats (NHTSA, 2011, p. 7). The stickiness of gas pedals was due to bad technical design and Toyota engineers tried to develop a fix for it. The entrapments of gas pedals were often attributed to “bad” drivers who mistakenly used the wrong-sized floor mats. Other critics, however, pointed out that pedal entrapments could have been avoided if Toyota had used a different pedal design. Pedal entrapment by floor mats was also a technical design flaw (Camuffo and Weber, 2011).

**Electromagnetic interference and system accidents**
NHTSA also reported that the probability of Toyota cars’ having electronic problems or software problems related to their throttle control system was theoretically possible but extremely small. In fact, they found no evidence of a cause–effect relationship between the failure of Toyota’s throttle control system and the performance of their braking system.

Critics who looked at the issue from a structural perspective argued that an important cause of such crises was the increasing complexity of new technologies and the unexpected interactions they created (Cole, 2011). MacDuffie and Fujimoto (2010) pinpointed the increasing complexity of interactions among Toyota’s worldwide activities. They argued that several factors such as the number of different production lines and facilities, the number and variety of models sold in different markets, the growing complexity of technologies used in modern automobiles and the increasing complexity of consumer and societal expectations combined to expand very quickly the workload for managing quality problems (MacDuffie and Fujimoto, 2010). For example, brake pedals in older models used a simple mechanical system to stop the car but brake pedals in newer models used a more complex electronic system, which not only stopped the car but also charged batteries, creating even more complexity. The dual function of brakes also changed the “feel” of the brake pedal, confusing drivers and creating conditions that would facilitate “driver error”. In short, this new source of complexity overwhelmed Toyota’s concept of kaizen or continuous improvements (Ohmae, 2010).

System accidents are “normal” under two conditions:

1. when system components interact in unfamiliar, unplanned and unexpected ways;
2. when the interdependence of system components causes the failure of one component to affect other components quickly (Perrow, 1999).

Toyota’s just-in-time (JIT) production ensures that Toyota produces high-quality, highly reliable cars, but when the company began to grow quickly to surpass GM as the largest automaker in the world, Toyota’s JIT system became an interactively complex and tightly coupled system. Note that “system” refers not only to Toyota’s assembly line operations but also to all of Toyota’s activities making JIT production possible. Toyota, of course, was
aware of the dangers of interactive complexity and tight coupling and had designed initially a less complex and more loosely coupled system. However, particularly in the context of increasing complexity mentioned above and the general tendency of organizations to become over time more tightly coupled (Snook, 2000) and drift into failure (Dekker, 2011), it may be fair to say that Toyota’s production system lost its capability to find and solve technical problems when system components interacted and failed in unexpected or unfamiliar ways.

The factors mentioned above explain some aspects of the crisis, but they do not explain completely what was wrong with Toyota and why it suffered a big crisis. Scholars pointed out that complexity was more than just a Toyota problem. It was an industry problem. The world’s attention seemed to have been on Toyota because they were the World’s No. 1 Carmaker, manufacturing more models than any other carmaker in the world (Ohmae, 2010).

**Toyota’s organizational structure and its slow response to the crisis**

The systemic and technical problems mentioned above interacted with Toyota’s organizational structure to cause more problems for the company in its recognizing and handling of the crisis. Toyota’s hierarchical organizational structure and the geographical layout of its suppliers enable its lean and efficient production system, particularly the JIT delivery of parts and supplies. Toyota is surrounded by its suppliers of different “levels”. Level 1 suppliers provide components that are assembled in Toyota’s factories. Such components may include headlights, stoplights, seats and mirrors. Many Level 2 suppliers do not have direct relationships with Toyota. They provide components to Toyota’s Level 1 suppliers. For example, if a Level 1 supplier delivers headlights to Toyota, a Level 2 supplier may supply light bulbs to this Level 1 supplier. For some components, Toyota may have up to Levels 4 or 5 of suppliers. When suppliers receive their orders from the Toyota HQs, they deliver their parts and supplies by any means (Kurokawa, 2008).

Toyota uses information technology systems to institutionalize a strictly top-down mode of communication with its suppliers to manage efficiently its large network of suppliers (Kurokawa, 2008). Toyota, who has long been proud of these concurrent or simultaneous engineering systems (Kurokawa, 2008), is at the top of this hierarchical structure and expects Level 1 suppliers to deliver components “JIT”, who in turn, expect the same from Level 2 suppliers and other suppliers (NHK Special, 2012). As efficient as it is, this layout has at least three negative consequences all of which might have contributed to Toyota’s recall crisis.

First, if faulty parts, either due to design or manufacturing errors, are undetected by Toyota’s suppliers, which happens albeit rarely, then those parts can make their way into the final product. The organizational structure of Toyota magnifies the rare but tightly coupled and complex problems of Toyota’s manufacturing system. Second, Toyota’s hierarchical structure and layout create a set of problems such as slow communications, particularly between Toyota’s HQs in Japan and its subsidiaries in the USA (Wu et al., 2010). James Lentz, VP of US Sales, testified that Americans were not empowered to authorize any recall decisions in the USA, authorization had to come from Japan (NHK News 9, 2010). Such communication problems contributed to Toyota’s failure to empower its US subsidiaries to make timely and critical decisions. Note that this is not just a Toyota problem because, in general, when making decisions such as responding to environmental threats, Japanese corporations favor slow, time-consuming consensual processes over fast, top-down directives (Seeger, 2010), and Toyota is one of these typical Japanese corporations. Finally, Toyota’s organizational structure created a buffer between Toyota and its environment,
insulated Toyota’s Japanese executives and gave them a false sense of security. Akio Toyoda admitted that Toyota’s crucial mistake was its failure to recognize the crisis:

There was a gap between the time that our US colleagues realized that there was an urgent situation and the time that we realized here in Japan that there was an urgent situation going on in the US. It took three months for us to recognize that this had turned into a crisis. In Japan, unfortunately, until the middle of January we did not think that this was really a crisis (Liker and Ogden, 2011, p. 128).

Toyota loses its “way”

Toyota’s decisions to grow and globalize as fast as possible changed the way it managed its lean manufacturing processes. Toyota made choices that “distorted the complementarities among central elements of the Toyota Way” and created an organizational misfit (Camuffo and Wilhelm, 2016). For instance, Toyota changed its human resource selection and promotion systems. It reintroduced team leaders in 2008 but promoted them too quickly to be effective. It replaced its kaizen based gradual cost-cutting programs with radical cost-cutting programs. Making such choices were inconsistent with Toyota’s lean management system and eventually hurt the quality of Toyota cars. For instance, Consumer Reports stopped approving Toyota’s new models and JD Power stopped giving an excellence award to Toyota’s plant in Kentucky (Liker and Ogden, 2011).

As Camuffo and Wilhelm (2016) explain in detail, Toyota almost doubled in just one decade the number of its employees, hired temporary and less-qualified workers and began to operate in geographically dispersed, culturally diverse locations. This unprecedented growth made it hard for Toyota to train its new employees as well as they would like. Indeed, scholars have argued that it was possible to transfer Japanese management practices to other societies – not easily and not entirely but nonetheless successfully (Liker et al., 1999) if the Japanese partner made a concentrated and sustained effort (Kenney and Florida, 1995). Toyota managers failed to do so. Many employees did not understand the Toyota Way, and in many factories, Toyota workers failed to adhere to the basic tenets of the Toyota Way. Hiring lower-quality workers conflicted with Toyota’s desire to decentralize its decision-making system because the new, unqualified workers did not know enough to detect defective processes and pull the Andon cord – a cable that workers pull when they need help or when they want to alert other workers and management about a potential problem. Lower-quality workforce problem put more stress on experienced Toyota employees some of whom left the company as a result of high levels of stress they experienced. Toyota found itself in a vicious cycle of losing experienced employees, hiring unqualified workers, centralizing decision-making processes, putting more pressure on experienced workers (Camuffo and Wilhelm, 2016).

Toyota suppliers did not fare any better. They too had to hire unqualified workers. Toyota began to work with new overseas suppliers who did not know much about the Toyota way (Camuffo and Wilhelm, 2016; Womack cited in Greimel, 2010). However, Toyota was suffering from a shortage of senior engineers and was not able to help its new, overseas suppliers with their manufacturing problems (Camuffo and Wilhelm, 2016; Andrews et al., 2011).

In short, no one pulled the Andon cord on Toyota’s ambition to become the World’s No. 1 Carmaker. The organizational consequences of Toyota’s ambitious decision to grow as quickly as possible destroyed the strong complementarities of the Toyota Way (Camuffo and Wilhelm, 2016). Toyota’s Japanese managers, who should have recognized the negative effects of fast growth and taken corrective action, could not see this because they
were suffering from collective myopia (Chikudate, 2002). In the following sections, we will explore some of the reasons why and how Toyota may have suffered from an episode of collective myopia.

**Toyota’s collective myopia**

Collective myopia is defined as:

> [...] the situation in which members of certain communities or organizations are able to make sense and give sense in each context in which they live but are not able to monitor the emerging order or patterns as a whole created by themselves (Chikudate, 2002, p. 294).

Collective myopia does not develop overnight. It develops over a period of time, going through an incubation period, which in essence is similar to what Turner (1978, p. 395) had in mind when he argued that disaster/crisis provoking events/errors tend to accumulate during incubation periods because of “false assumptions, poor communication, cultural lag and misplaced optimism”. Many of these factors apply to Toyota. For example, in the context of increasingly more complex technologies and fast growth, Toyota assumed falsely that they could still have an excellent production system and their cars would not have significant quality problems. In 2004, years before the 2009 recall, Japanese authorities questioned the quality of Toyota cars and the reluctance of Toyota to recall some of its recreational models that caused five severe accidents. Toyota, however, did not admit responsibility, arguing that there were no engineering problems that warranted a recall (Asahi Shimbun Evening Issue, 2006, 20 July 2006). Toyota has also suffered from a cultural lag in the sense that it failed to notice its internal limits to growth and hence could not maintain its quality and safety standards.

Toyota also suffered from poor communications between its headquarters in Japan and its facilities abroad, failed to adhere to some of its cultural practices and its executives cultivated a sort of misplaced optimism fueled by hubris. Toyota’s three executives or “salarymen”, Hiroshi Okuda, Fujio Cho and Katsuaki Watanabe, shared at least one thing in common: they wanted to grow the company (Chowdhury, 2014). Toyota’s “Global Vision 2010” stated that Toyota had two important goals: “To be the most admired auto company in the world” and to capture 15 per cent of the global market share by 2010 (Liker and Ogden, 2011). Between 2000 and 2007, Toyota built a new US plant every two years (Chowdhury, 2014); Toyota’s 2005 annual report stated on page 1 that Toyota’s focus was on “growth and efficiency”.

Hiroshi Okuda, Fujio Cho and Katsuaki Watanabe put more priority on global expansionism. Okuda bragged about Toyota’s financial achievements and stressed the importance of production-cost reduction and competitiveness in global markets. Katsuaki Watanabe emphasized in an interview that *kakushin* (radical innovation) is more important than *kaizen* (continuous improvement) when the world is changing too fast (Stewart and Raman, 2007). He spoke about “fixing the foundations” of Toyota (Stewart and Raman, 2007). By 2006, four years before the 2010 recall crisis, “Toyota was putting more emphasis on the ‘number’ of cars it sold in global markets than on the safety and quality of its cars”.

That all of these factors have contributed to Toyota’s collective myopia did not go unnoticed. In 2010, after the recall crisis, Akio Toyoda admitted during an interview on TV Asahi Hodo Station that Toyota has not been reflective enough. He said (2 March 2010):

> From now on, we stop judging [potentially problematic] situations by applying our own beliefs that we have accumulated through past experience. Instead, Toyota must go back to its climate of asking everyone around, “Is this OK?” and share information about such situations with everyone. I hereby declare that “Toyota is no longer an omnipotent company”, there is no doubt
that Toyota may be able to revive its culture, and each Toyota employee must admit that they
don’t know everything and they must begin to help each other. I believe that our employees can
do these things and can recreate such a climate.

Akio Toyoda diagnosed that Toyota managers and workers failed to think reflexively about
their assumptions and beliefs. Specifically, Toyota did not carefully reflect on the fact that
its management systems and decision-making processes were inconsistent with its goals of
fast growth and global expansion. Here is why: Toyota wanted to globalize its management
systems by creating a unified and standardized set of operating procedures and control
systems (Shim and Steers, 2012, p. 586). Toyota also valued slow, centralized, evolutionary,
consensus-oriented decision-making processes both at strategic and operational levels (Shim
and Steers, 2012, p. 586). Both of these cultural qualities were inconsistent with Toyota’s
ambitious goals. Eventually, Toyota’s denial of these inconsistencies weakened the
effectiveness of Toyota’s legendary problem-solving techniques. Blinded by hubris
(Chowdhury, 2014), Toyota executives could not see the problem because they were too
proud to work for and identify with Toyota, an omnipotent and omniscient corporation.
Toyota managers were not willing or able to critique the validity of their sense-making and
sense-giving practices. Perhaps, most importantly, they could not realize that they were
entrapped by collective myopia.

Normalization at Toyota
Collective myopia operates on perceptions and cognitions of organizational members. Those
who are entrapped by collective myopia are also likely to be under normative control
(Chikudate, 2015). Control means guidance and regulation. Normative control is in effect,
and organizational members are more likely to conform to collective expectations when they
“perceive” that other organizational members are forcing them to behave in certain ways.
Habermas (1988) sees norms as collective expectations of behavior. Organizational members
do not talk about these forces; instead, they internalize them as parts of their intersubjective
lifeworld (Husserl, 1970). Japanese believe that such forces are necessary to maintain wa
[harmony] because they create collaborative and supportive human relations. However,
these perceived forces can be very oppressive. Chikudate (2015) reported that Japanese
workers in some of the ethically bankrupt companies such as former Daiichi-Kangyo Bank
(currently Mizuho Bank), Mitsubishi Motors and Tokyo Electric Power Company called this
phenomenon funiki. One of the downsides of such forces is that they act as disciplinary
powers (Foucault, 1978), forcing organizational members to correct or train other members
who violate or deviate from the existing norms. When this mechanism is operational,
members conforming to the norms are rewarded, and members not conforming to the norms
are punished; as a result, members learn to conform to the norms. The process of correcting
or training other members not to violate the norms is called normalization (Foucault, 1978).

Normalization may be institutionalized in a variety of ways. To institutionalize
normalization at its factories, Toyota used a management technique called Quality Circles
(QC). QC meetings are venues for small work groups at Toyota to discuss quality-related
issues. In theory, these groups were to meet after work, and participation in them was
voluntary. In practice, however, every Toyota employee knew that participation was
mandatory. QCs were a part of Toyota’s performance appraisal system. Toyota promoted
and held in high regard those who participated actively in QC meetings (Asahi Shimbun
Morning Issue, 2008, 14 May 2008, p. 29) and severely disciplined those who failed to do so
because they violated the norms. Toyota managers utilized this management technique to
cut labor costs because Toyota did not have to pay for the extra hours that its employees put

in to participate “voluntarily” in QC activities, at least until 2007. Toyota workers did not even keep track of the time they put in QC activities.

Although QCs increased the quality and lowered the cost of Toyota cars, they also harmed Toyota employees. One extreme example is about a 30-year old quality control engineer who sacrificed himself and died around 4 a.m. in a Toyota factory due to karoshi, death caused by extreme fatigue (Asahi Shimbun Morning Issue, 2008, 14 May 2008, p. 29). According to the court records, he had put in 106 h and 45 min in overtime before he died. His wife claimed that because his husband was a discussion leader in QC meetings, he had to work 50 extra hours, sometimes at home on the weekends, to prepare his presentations at his QC meetings. He had to work extremely hard because unless his QC presentations looked a certain way in the eyes of other participants, he would never be evaluated favorably (Asahi Shimbun Morning Issue, 2008, 14 May 2008, p. 29). In other words, his participation was mandatory. He was “normalized” by Toyota.

The level of “mutual surveillance” (Foucault, 1978) was so strong that when the dead engineer’s wife needed some help and information from her husband’s former colleagues at Toyota, only a few helped her because they were afraid that they would be retaliated (Asahi Shimbun Morning Issue, 2007, 1 December 2007, p. 31). The father of the dead engineer, a former Toyota employee himself, accepted the death of his own son as fate and self-sacrifice for Toyota. He said that for Toyota employees, “active participation is a necessity” (Asahi Shimbun Morning Issue, 2007, 1 December 2007, p. 31). In other words, the true reason why Toyota employees work long hours is that they feel it is necessary for them to train themselves and voluntarily initiate QC activities in tacit ways (Nonaka in Nonaka and Katayama, 2009). The death of the engineer sheds some light on Toyota’s success in cutting production costs, maintaining quality, expanding production capacities and engaging in innovation. Toyota’s success seems to have heavily depended on gaman and sinbou [patience and endurance] of factory workers of Toyota.

It may be generally true that many Japanese workers are “trained” (Foucault, 1978) as “unbeatable” corporate soldiers who obey orders and put too much value on self-sacrifice that benefit their organizations (Chikudate, 2015). Toyota workers in Japan learned not to complain about labor conditions at Toyota. According to the father of the dead engineer mentioned above, Toyota employees believed that the virtues of unlimited patience and endurance are integral parts of what it means to be a Toyota employee (Chikudate, 2009), and they were indoctrinated to believe that such virtues are cultivated only. However, Toyota could not easily export or transfer this kind “work ethic” to many of its plants outside of Japan (Pardi, 2007). Toyota’s non-Japanese employees, particularly the “undisciplined” temporary workers with no training, neither were interested in self-sacrifice or working overtime without getting paid nor value patience and endurance as much as Toyota workers in Japan did. American trade unions did not trust Toyota’s new form of organization because they thought that not only it was insensitive to workers’ needs but also it could be used to exploit workers (Mehri, 2006). In short, achieving high quality was costlier and harder for Toyota in its plants outside of Japan. Akio Toyoda admitted during his testimony before the US Congress that to expand and grow rapidly, Toyota compromised quality for quantity and thereby sacrificed the safety of its cars.

Toyota executives’ collective myopia did not impact only its employees and the safety of its cars. It also influenced the way Toyota treated and communicated with its stakeholders, particularly its customers, dealers and regulators in different countries. Specifically, it prevented the Japanese executives in Toyota’s HQs from understanding what it means to be a good corporate citizen and from doing quickly the right thing during the recall crisis.
When it comes to corporate social responsibility and corporate citizenship, Toyota’s mindset is radically different from that of many Western corporations. Akio Toyoda was reflective when he said:

I learned many things from this crisis. Since Toyota is a company that was born and raised in Japan, we have aimed to serve Japan. However, the actual operations of Toyota have extended to many countries. Toyota has strived to become a good corporate citizen in each country and region. […] [After the crisis] We [painfully] learned that different cultures have different definitions of transparency and we need to show the right amount of transparency when we communicate with them (TV Asahi Hodo Station, 2 March 2010).

In Western countries, corporations are considered citizens who are expected to act and speak in socially responsible manners (Heath, 1992). For Toyota in Japan, however, this is not the case. Toyota’s Japanese executives may have assumed falsely that they could operate in the USA and treat the US media in the same way they have been treating the Japanese media. For instance, in Japan, corporations prefer to deal with powerful stakeholders but not with the general public (Seeger, 2010). Toyota executives may have also believed that the US public and organizations such as NHTSA would not accuse Toyota in any way because Toyota was one of the largest employers in the USA and the largest automotive company in the world. Toyota acted as if the 2010 US recall was a replay of Toyota’s massive recall from 2005 to 2006 in Japan (Shukan Toyo Keizai, 2006). For Toyota, the average driver and, by the same token, the average American citizen did not have the power or even the right to complain and express their opinions against Toyota. For example, on February 3, 2010, talking about the loss of function or delaying of brake action in the Prius, Shinichi Sasaki, executive vice president, readily dismissed the issue by saying, “[There is no mechanical problem with the Prius], it is a matter of [the driver’s] feeling […] Since Toyota drivers have gotten used to the feeling of older Toyota models, they may feel that when they are driving the newer models something is different” (Asahi Shimbun Morning Issue, 2010, 4 February 2010, p. 2). In other words, Toyota believed that it was legitimate to expect from its drivers to get used to the new feeling of the new Prius models because there was nothing wrong with them mechanically.

Toyota’s Japanese executives also could not imagine that the American media companies such as ABC News who had been receiving their fair share of Toyota’s more than a billion dollar advertising budget would chastise and criticize Toyota. During Toyota’s recall in 2010, the Japanese media rarely criticized Toyota. Some Japanese journalists even defended Toyota and said Toyota has been the target of Japan bashing in the USA (Saito, 2012). In fact, they glorified Toyota’s cutting-edge technologies and worldwide successes. The first Japanese news organization that broadcast Akio Toyoda’s comments on Toyota’s recall crisis was not a for-profit news corporation. It was NHK, the nationally owned news organization in Japan. ABC News broadcast the same interview on January 29, 2010 in the USA (ABC News, 2010a).

There is no doubt that Toyota has been contributing to the economy of the USA by hiring many American workers, purchasing from American suppliers, paying corporate taxes and engaging in philanthropic activities (Wokutch, 1990). They may have, however, overestimated their power and influence over the US Congress. Toyota’s misunderstanding of the way corporate citizenship is practiced in the USA became obvious when they first decided to send to the public hearing in January 2010, not Akio Toyoda but Yoshifumi Inaba, Head of Toyota’s US operations. Because Japanese CEOs are symbolic leaders with distant visibility (Shim and Steers, 2012, p. 586), it was hard for Toyota to understand or accept that in the USA, it is considered a CEO’s duty to speak to the public (USA Today,
As a result, the public’s criticisms of Toyota intensified, resulting eventually in Akio Toyoda’s public apology at a congressional hearing.

Despite having operated in the USA for decades, Toyota failed to appreciate fully what it meant to be a corporate citizen in the way it is understood in the US. Intoxicated with their successful global expansion, overly confident in their abilities to solve all engineering problems and defending their identities rather than becoming global corporate citizens with legal and ethical responsibilities (Banerjee, 2014), Toyota also failed to self-diagnose the root causes of its inadequate corporate citizenship practices and did not respond to the crisis in a socially responsible way. In the end, trying to mitigate the criticisms of the US public, Toyota ended up paying a higher price.

**Conclusion**

The causal accounts of Toyota’s recall crisis exhibited a typical pattern that occurs after every crisis. Some of these accounts focused initially and mostly on the easily visible technical causes of the crisis, often treating such causes independently of others. These causal accounts were as correct as they were partial and they only scratched the surface. In this article, we aimed to dig deeper to interpret what caused Toyota’s blunder and why Toyota responded inadequately to the criticisms of the US public. We highlighted the importance of using a multi-perspective approach to take into account the multi-factorial nature of the causes of crises and that each sufficient cause may be viewed in terms of at least four epistemologically and ontologically distinct mechanisms, causes and/or components. We went beyond the commonly accepted and mainly technical explanations of the crisis such as wrong sized floor mats, sticky gas pedals and bad drivers and pointed to some of the larger forces at play such as the interactive complexity of Toyota’s new technologies as well as some of the structural, organizational and cultural problems surrounding Toyota. For instance, it became plausible that what turned Toyota’s recall into a messy crisis was not only Toyota’s failure to find and eliminate its production and engineering related problem but also Toyota managers’ unawareness of their taken-for-granted assumptions that led to their negligent and slow response to the American public’s criticisms of Toyota. As such, our critical analysis at the very least increased awareness of the many dimensions of the mess Toyota was in and created opportunities to ask the right questions about a complex phenomenon such as a large-scale crisis.

**Practical implications**

Everyone knows that Toyota’s legendary problem-solving skills are excellent for dealing with well-structured technical problems such as continuously improving productivity and efficiency in factories. “Well-structured” technical problems, however, were not the only problems, particularly during the initial phases of Toyota’s recall crisis. In fact, Sasaki (2010, p. 151) acknowledged, “Toyota has always had the ability to immediately improve problems if they were obvious. However, in this case, we could not discover and recognize the [fundamental] problems”. Toyota initially chose to focus solely on the technical problems because of at least two reasons. First, Toyota had always put more priority on engineering, manufacturing and business economics and was overly confident in its abilities to solve technical problems (Sasaki, 2010). Second, dealing only with technical problems was psychologically safer for Toyota’s Japanese executives, allowing them to avoid the hard task of questioning their own values, beliefs and assumptions such as those about corporate citizenship and ultimately, their identities as Toyota’s unbeatable corporate soldiers. As a result, Toyota’s Japanese executives ended up treating the symptoms and not the root causes of the crisis.
Our analysis has several lessons and implications for those dealing with crises. First of all, the Toyota recall crisis suggests that eliminating technical causes such as defective gas pedals may not be as effective as eliminating problematic cultural mechanisms such as collective myopia. Specifically, if Toyota had fixed its defective gas pedals but not resolved its problems of collective myopia, then it is plausible that another defective technical component might have eventually triggered a crisis. The extant crisis literature already provides some support for the hypothesis that Toyota could have resolved not all but some of its potential problems if it had addressed first its collective myopia problem. For instance, the two Space Shuttle accidents, about two decades apart, were triggered by two different technical causes: defective O-rings in the Challenger disaster and foam strikes on the underside of the wings in the Columbia disaster, yet “normalization of deviance”, a cultural mechanism through which organizations slowly get used to small deviations from the norms, contributed to both disasters (CAIB, 2003). In other words, although the technical causes were different in the two Space Shuttle disasters, the underlying cultural cause was the same (Vaughan, 1996, 2005). The hypothesis, that cultural causes may be more significant than technical causes, of course, needs to be tested empirically in future research studies.

Our analysis also offers clues as to why Toyota, a role model for manufacturing companies, could not prevent its recall crisis: developing human resources is harder than scaling up technology. More specifically, building plants all around the world is a much more tractable and straightforward task than hiring the right people that will work in those plants and training them properly. The former is more or less a linear, technical task, the latter is always a complex, social one that interferes with and constrains the former. Akio Toyoda acknowledged this problem in his testimony before US Congress, “We pursued growth over the speed at which we were able to develop our people and our organization” (CBS News, 2010, 24 February 2010).

Another important lesson is that not all causes of crises are as easily observable and fixable as others. In many cases, most significant causes of crises are hidden and taken-for-granted aspects of a corporation. One can observe a relatively recent example of this problem in GM’s ignition switch crisis in 2014. A former GM manager said, “[...] the culture had gone completely off the rails [...] the ignition is the tip of the iceberg” (CNN Money, 2014, 28 June 2014). Our analysis of Toyota’s crisis may offer clues as to why GM in 2014 and VW in 2015 suffered from large-scale crises. It is plausible that collective myopia was the culprit in both cases.

Given that GM, VW and Toyota, three of the largest multi-national car manufacturers have experienced large-scale crises at least partly due to some sort of collective myopia, it is natural for managers to ask whether complex multinational organizations are likely to develop collective myopia. Managers need to understand that no organization is immune to collective myopia; in fact, all groups and organizations suffer from collective myopia to some extent. That is why it is imperative that managers in all organizations must, like archeologists, dig progressively deeper to bring to light layer by layer the hidden and taken-for-granted aspects of the inner workings of their collective consciousness. This is easier said than done because collective myopia has a self-reinforcing property: it is both cause and effect. To increase the chances of detecting and mitigating collective myopia, managers may need to view their organizations from multiple yet distinct perspectives and try not to favor any one perspective over another.

In principle, multinationals are better positioned to embrace “multiple voices and perspectives” because they operate at diverse locations, hire diverse employees and deal with diverse customers, suppliers and regulators. To the extent that multinational
organizations do embrace multiple perspectives in a fair way, they may be able to detect and mitigate collective myopia. Detecting and mitigating collective myopia, however, particularly in multinationals, is not a straightforward task. Toyota was a multinational with potential access to multiple voices and perspectives but it could not mitigate collective myopia for various reasons. For example, Toyota has a favored communication style that is extremely effective in finding “concrete” solutions to “concrete” or well-structured technical problems. Akio Toyoda referred to Toyota’s obsession with speaking and behaving in concrete manners as “genchi-genbutsu shugi” (TV Asahi Hodo Station, 2010). Because of Toyota’s obsession with the “concrete”, many ill-structured yet important problems such as those that relate to ethics, job satisfaction, compliance and harassment were either ignored or not given high priority. Consequently, employees were not welcome to criticize Toyota’s policies or workplace conditions. If a problem was not clearly defined, it did not exist at Toyota until, of course, the problem could no longer be ignored, such as the sexual harassment accusation that forced Hideaki Otaka, Japanese CEO of Toyota USA to step down (Chunichi Shimbun Evening Issue, 2006, 9 May 2006). In addition to its obsession with “speaking and behaving in concrete manners”, Toyota also tried to surround itself with media, politicians and management scholars who tended to talk positively about Toyota, subjecting the company to little criticism. In the end, Toyota became “the Emperor who wore no clothes”.

In sum, neither Toyota’s obsession with this particular communication style nor its attempt to surround itself with people who failed to question Toyota were conducive to fostering an ideal speech situation (Habermas, 2001) in which there is no coercion and no topic is taboo. Genchi-genbutsu shugi did not help Toyota executives, managers and employees articulate and question their assumptions and beliefs freely, ask the right questions and solve the right problems. To understand why, one may contrast genchi-genbutsu shugi with the multi-perspective approach we use in this article. The former constrains the range of questions that one could ask, as well as the range of answers one could give. In other words, technical questions require technical answers, and technical problems require technical solutions. The multi-perspective approach, however, broadens and deepens the scope of one’s questions and answers and problems and solutions.

Toyota’s recall crisis also teaches us that collective myopia may result from factors that depend not only on the idiosyncrasies of a focal organization but also on the socio-cultural background of its home country. Toyota’s collective myopia was related to a number of fundamental qualities deeply ingrained in the Japanese society, qualities such as patience, unlimited endurance and the idea of the unbeatable corporate soldier who will self-sacrifice himself or herself for the collective. In other societies, collective myopia may be caused by significantly different socio-cultural backgrounds (Chikudate, 2015). Therefore, managers must be willing to dig deeper to get to the sources of collective myopia in their own organizations and socio-cultural backgrounds. Managers also need all the help they can get. For example, training programs that highlight the effects of culture both as a way of seeing and not seeing can be useful.

We must caution the reader that this study has at least two limitations. First, we use secondary data such as archival data from English and Japanese sources and narratives of focal people. Second, this study is mainly explorative. We utilize the extant literature in a variety of disciplines to formulate a useful, multi-perspective approach to our understanding of large-scale crises in general but our conclusions, particularly those specific to Toyota, may not be generalizable. For example, the hypothesis that collective myopia in its various forms may be a causal mechanism observed in different types of crises needs to be tested.
empirically in future research studies. We hope that this article will trigger future research on collective myopia and its relationship to large-scale crises.

In sum, our analysis helps managers dig beyond the commonly observed technical causes of crises and gain insights from a variety of disciplines. Specifically, it helps managers appreciate not only the organizational and structural causes of crises but also how socio-cultural conditions can suspend managers in their self-spun webs of beliefs and assumptions about the world (Green et al., 2009). In essence, this article demonstrates a reasonably complex yet systemic, analytical and critical approach that helps practitioners view a crisis from multiple viewpoints, take a step back from the easily observable and measurable, see the bigger picture, be self-reflexive and question critically their beliefs and assumptions.

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**Corresponding author**
Nobuyuki Chikudate can be contacted at: cikudate@hiroshima-u.ac.jp

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