

Making Sense of the Walkerton Crisis

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Drawing on analysis of the Walkerton (Ontario) contaminated water crisis of 2000, this paper explores the viability of Weick's sensemaking approach to organizational crises. The paper begins by showing how a sensemaking approach is a useful heuristic for revealing the complexity of organizational disasters that often rely on simplistic blaming of individuals. It goes on to explore the limitations of a sensemaking account that downplays the role of power and individual responsibility. The paper concludes by suggesting further theoretical developments of sensemaking to include Foucauldian notions of discourse and Sartrean notions of existential responsibility.

Key words: Sensemaking; Organizational crisis

'[Mistake], mishap, and disaster are socially organized and systematically produced by social structures' (Vaughan, 1996: xiv).

INTRODUCTION

In May 2000 the town of Walkerton (Ontario, Canada) experienced a water contamination crisis, in which seven people died and more than 2300 people fell ill. A government inquiry, into what has been described as 'Canada's deadliest *E. coli* outbreak, blamed two inept brothers in charge of the town's water supply and the cost-cutting programme of the Ontario government' (Perkel, 2002).

The Canadian Broadcasting Corporation (CBC) aired a made-for-television film based on the Walkerton tragedy on 17 March 2003. The film was described in the Halifax Chronicle-Herald as 'Emotional but disappointing. A missed opportunity. Oversimplified. Doesn't reflect the complexity of what happened' (Crosby, 2003). This criticism of the *film* can also be applied to the often superficial way in which events surrounding an organisational crisis are made sense of by external parties after the crisis has unfolded. As we shall argue, awareness about the complexity of the sensemaking environment in which members of an organization 'act' is necessary to be better able to understand the processes that enable events to escalate into a crisis. Here Weick's (1995) notion of 'sensemaking' provides a heuristic with which to explore the actions and behaviours involved in the events leading up to the Walkerton crisis, thereby making sense of a senseless tragedy.

Organizational crisis is an issue that has received considerable attention from many scholars over the past two decades (Nelkin, 1988; Perrow, 1984; Roberts, 1990; Shrivastava *et al.*,

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1988; Snook, 2001). Research has focused on such contributing factors as human error (Beatty, 1995), breakdown in communication (K. E. Weick, 1990), technological failures (Perrow, 1984), and organizational policy failures (Johnson, 1964). Yet, the 'invisible and unacknowledged [aspects] tend to remain undiagnosed and therefore elude remedy' (Vaughan, 1996: xv).

Blame is often the organizing principle for accident research. Investigators are interested in who or what is to blame as they seek out cause and effect. The *Challenger* space shuttle disaster is an exemplar of this type of approach (McConnell, 1987; Trento, 1987). On some occasions blame is attached to an individual or individuals (Hoffman and Stetzer, 1988) who are cited for carelessness, error, or some level of criminal intent. On other occasions blame may accrue to a class of individuals where the cause of the accident is attributed to their pursuit of specific ends such as profits (O'Connell and Mills, 2003; Shrivastava, 1987). In Snook's (2001) discussion of the friendly fire incident in Iraq 2004, where pilots shot down two friendly helicopters, he suggests that individuals tend to ask why the pilots 'decided' to shoot and that we make sense of senseless tragedies by assuming that 'bad people made poor decisions' (pp. 206–207). Alternatively, Snook discusses how he came to the realization that the pilots did not 'decide' to shoot, rather, these senseless tragedies 'are good people struggling to make sense' (pp. 206–207). The work of Karl Weick, however, exemplifies an alternative way of viewing accidents and disasters, drawing attention away from rationalist explanations and narratives of cause, effect and blame through examination of organizational sensemaking (1995; K. E. Weick, 1988, 1990, 1993).

Weick (1988) suggests that organizational crises defy interpretations and impose severe demands on an individual's ability to make sense of how events are allowed to escalate to the crisis point. Weick's (1993: 663) notion of sensemaking suggests that 'reality is an ongoing accomplishment that emerges from efforts to create order and make retrospective sense of what occurs'. Furthermore, sensemaking is the process through which individuals 'generate what they interpret' in an attempt to reduce equivocality. By understanding how sensemaking is enactive through retrospection, ongoing understandings, social interaction, identity construction, cues, and plausible action we have a useful framework to understand the relationship between accidents and sensemaking (Weick, 1995).

Drawing on Weick's (1988, 1990, 1993) sensemaking approach to explanations of accidents, we analyse the Walkerton (Ontario, Canada) water contamination crisis of May 2000. The paper shows how the public account found a relatively simple answer in the actions of a corrupt individual Stan Koebel, who had falsified documents, yet failed to account for those actions and how those actions were allowed to develop. Charges were laid against the Koebel brothers for public endangerment, forgery of documents, and breach of trust. Indeed in the fall of 2004 the Koebel brothers agreed to plead guilty to public endangerment for their role in the outbreak (Reinhart, 2004). However, analysis of the sensemaking environment in which the Koebel brothers operated reveals a complex set of actions that contributed to the fatal outcome, requiring a broader understanding that goes beyond, but not ignoring, individual blame. In the words of one town resident, the Koebels' falsification of log entries and mislabelling of samples 'are the easiest targets compared to the politicians, bureaucrats and simple forces of nature cited as factors by a public enquiry' (Reinhart, 2004).

None the less, while a Weickian sensemaking approach provides important clues to the relationship between accidents and the production of social structures it is relatively limited in dealing with issues of power (Helms Mills, 2003) and 'corruption'. To that end the paper explores the strengths and limitations of organizational sensemaking for understanding the role of the individual responsibility in organizational crisis.

PUBLIC ACCOUNT OF THE CONTAMINATION OF WALKERTON PUBLIC WATER SUPPLY: TRIGGERING EVENTS OF THE CRISIS

The Walkerton crisis was the result of many events that had compounding effects and steadily escalated over several decades. Characteristic of many organizational crises (e.g. *Challenger* disaster, Bhopal crisis, Westray Mine explosion), the Walkerton Public Utilities Commission and the local community did not endure the worst consequences until days after the water contamination occurred. In fact, crises tend to unravel in complex ways and the worst effects often occur long after the triggering events or causes have been identified (Shrivastava *et al.*, 1988). Triggering events refer to the 'specific events identifiable according to place, time and agents and traceable to specific man-made causes' (*sic*) (Paul Shrivastava, 1987, p.8). For example, in an analysis of the Bhopal crisis where large quantities of MIC were released into the environment, Weick (1988) identified the 'failure to insert a slip blind into a pipe being cleaned' as the triggering event. Thus, triggered events are moments when action or inaction can have an effect. Furthermore, these events involve judgement, which often deteriorates under high-pressure situations (Staw *et al.*, 1981). Under such circumstances, events can quickly escalate into crisis situations (Weick, 1988) in organizations. We will now examine several triggering events that lead to the Walkerton crisis.

At the time of the crisis there were three wells supplying the town of Walkerton with water. Problems that jeopardized the safety of the water supply from one of these wells were identified during the initial construction. This particular well was built to serve as a temporary solution to problems the water commission was facing at the time; however, the well remained as a long-term water supply despite safety risks. The well was shallow and very close to surface water in agricultural land, therefore there was the possibility of contamination. It was recommended by the Ministry of Environment that Stan Koebel, the general manager of the water commission, establish a water protection zone around the well, and take necessary precautions to control the use of surrounding agricultural land to minimize risks of contamination. These recommendations were never implemented.

A second well constructed in 1982 was approximately 250 feet deep and provided the town with 52% of the water supply. Surface water from nearby agricultural land had stopped flowing and an investigation identified that there was an extremely high risk of contamination. Recommendations to 'case' the well were made; however, these recommendations were not implemented. In 1987 a third well was constructed in close proximity to the second well. This well also interfered with surrounding agricultural land, thus, providing warnings of possible contamination.

Inspection of the water system in the mid-1990s revealed many problems with the manner in which the system was being managed. Among such problems included the failure to maintain proper records and non-compliance with regulations. Furthermore, Stan Koebel was not properly trained in effectively operating the water system. Therefore, Koebel lacked the knowledge, skills and abilities that were necessary for ensuring a safe water supply. Investigations into the crisis showed that Koebel failed to chlorinate the well water properly, and in some instances failed to chlorinate the water at all. What is most staggering about this crisis is that Koebel kept crucial information about the operation of the waterworks from officials. Following an inspection by the Ministry of Environment in 1998, a letter was sent to Koebel outlining several problems that were identified, such as under-chlorinated wells, failure to sample water and maintain proper records, adverse water quality reports and presence of *E. coli* in two of the wells. Koebel replied and falsely assured the Ministry that the issues would be addressed and corrected.

Days before the crisis erupted, the town of Walkerton experienced a heavy rainfall that created runoff water contaminated with *E. coli* from farms surrounding the wells. It was

suspected that runoff from the agricultural land was the likely contaminant that seeped into the well water. There were several triggering events that took place after this heavy rainfall that eventually led to the death and illness of many members of the community. First, management failed to properly monitor the chlorine levels of the wells following the rainfall and proceeded to record fictitious entries in the logbook. Second, a new chlorinator was not installed in one of the wells, which resulted in the supply of unchlorinated water to the residents of Walkerton. Despite knowledge of this, Koebel allowed the well to continue supplying the community with water for several days until the chlorinator was eventually installed.

A little over a week after the heavy rainfall, members of the community were beginning to show signs of severe illness with symptoms such as vomiting, diarrhoea, and fever. When contacted by the local health unit to inquire about the water quality, Koebel withheld information about the water sample test results and ensured the health unit that the water was fine. Despite his own reassurance, Koebel proceeded to flush and highly chlorinate the waterworks. Even after a member of the health unit took the initiative to order a boil order, Koebel still denied that the water was contaminated. Finally, when the Ministry of Environment began an investigation, Koebel did not provide the information about the adverse samples that were identified after the heavy rainfall and altered documents showing that a well had been operating without a proper chlorinator.

At first glance this public account provides a relatively straightforward explanation for the actions of a corrupt individual who falsified documents and demonstrated negligence in the management of the public utilities commission. In hindsight, many of the outcomes of these events were foreseeable and it seems appropriate that the general manager should have been held accountable for his actions. However, the public account fails to provide answers about how these actions were allowed to occur. We argue that an analysis of the sensemaking environment will provide important clues to the relationship between the crisis and the production of social structures that support such actions. An explanation of this relationship will enable us to understand how the general manager became a 'victim'¹ of a failing sensemaking environment, rather than being a case of blaming a corrupt individual.

SENSEMAKING: A FRAMEWORK FOR UNDERSTANDING THE WALKERTON CRISIS

The basic concept of sensemaking is that 'reality is an ongoing accomplishment that emerges from efforts to create order and make retrospective sense of what occurs' (Weick, 1993: 633). Weick (1995: xi) argues that sensemaking is simply 'a developing set of ideas with explanatory possibilities'. He portrays the uniqueness of sensemaking by clearly distinguishing the concept from interpretation, understanding or attribution. For example, Weick (1995: 7) suggests that interpretation, which is a part of sensemaking, is focused on text; 'a rendering in which one word is explained by another'. In contrast, sensemaking is the process in which individuals 'generate what they interpret' in an attempt to reduce equivocality or multiple meanings in the information they use in the organization.

Properties of Sensemaking

Sensemaking is an ongoing process composed of seven key properties, which incorporate both action and context in a loosely structured sequence (Weick, 1995: 18). The sensemaking process is characterized as being (1) grounded identity construction, (2) retrospective, (3) enactive, (4) social, (5) ongoing, (6) focused on and by extracted cues, (7) driven by plausibility rather than accuracy (Weick, 1995: 17). Weick (1995: 18) maintains that the properties

serve as a 'rough guideline for inquiry into sensemaking in the sense that they suggest what sensemaking is, how it works, and where it can fail'. Each property is related to one another and they do not necessarily attain equal relevance when applying the framework to understand organizational crises. Thus, for the purpose of understanding how the Koebel became a victim of the sensemaking environment, identity construction, enactment and plausibility will be addressed.

Identity Construction. 'Sensemaking processes derive from the need within individuals to have a sense of identity—that is, a general orientation to situations that maintain esteem and consistency of one's self-conceptions' (Weick, 1995: 22). Weick argues that the establishment of identity is a 'core preoccupation in sensemaking' and that people experience a need for self-enhancement, self-efficacy or to be perceived as competent, as well as the need for self-consistency. When negative events or images challenge an individual's self-representation, they may alter the sense they make of those images, even if it means redefining identity (Weick, 1995: 21). Sensemaking, therefore, occurs during the process of maintaining one's self-conception and when confronted with confirming one's sense of self. Furthermore, Weick (1995: 23) suggests that an individual becomes aware of their identity by 'projecting into the environment and observing the consequences'. It is through this process that individuals 'simultaneously try to shape and react to the environment they face' by taking the 'cue for their identity from the conduct of others', but also by making an 'active effort to influence this conduct to begin with'. Most importantly, Weick (1995) suggests that sensemaking is 'self-referential' in that it is the self, rather than the environment that should be interpreted (p. 23). Weick (1995: 24) poses such questions and statements as 'What implications do these events have for who I will be?' and 'The identity that an individual assumes to deal with a situation will then determine what the situation means to them'. The choice of identity that is chosen by an individual to deal with a situation is affected by what is happening. This suggests that we draw upon the appropriate self when determining what a situation means and to a much lesser degree on what is occurring in the environment.

What seems key in Weick's description of sensemaking and identity for understanding organizational crises is the notion that the more 'selves that an individual has, the more meanings they should be able to extract and impose in any situations, and the less likely an individual will be surprised by a situation' (p. 24). This idea is illustrated by Weick (1988) in his analysis of the Bhopal disaster where methyl isocyanate gas escaped from a Union Carbide plant resulting in over 2000 deaths (Bowman and Kunreuther, 1988). Weick (1988: 312) states, 'people who come up through the technical ranks have hands-on experience and the requisite knowledge to sense variations in the technological environment they face, whereas, those who administer without a technical background have less requisite expertise and miss more'. In other words, the fewer selves the individual has access to for dealing with crisis situations (e.g. technical experience), the fewer meanings they will be able to extract and impose in that situation. Koebel received his operator licence through a grand-parenting programme. His identity construction included that of being a general manager without the formal training of knowledge and skills necessary to perform the job. Thus, his identity was constructed based on his previous work experiences at Walkerton, most of which appeared to be unsafe work practices adopted from his predecessors (e.g. false recording of chlorine levels, pumping unchlorinated water, etc.). Therefore, when the crisis began to escalate and more individuals were falling ill, Koebel had very few meanings to extract and impose in that situation. The meanings he did have were based on experiences derived from other selves that comprised his identity. For example, after a water boil advisory was issued, he sought advice from a health official about the chlorine residual levels in the water. When asked for

advice, the health official responded that ‘although this was not his area of expertise he thought that the chlorine levels in the system should be increased’ (Walkerton Inquiry, 2002: 84). This is clearly an area of expertise that should be held by the general manager, not the health official. However, since the general manager did not have meaning or experience to draw upon to make sense of the situation, he reverted back to what he knew and to another sense of self prior to being the general manager. Had proper training being part of his identity construction as general manager, he may have had more meaning to draw upon to make sense of the situation, rather than being unsure and confused by it.

When a negative event, such as the event of people falling ill, challenges an individual’s self-representation, they may alter the sense they make of those events (Weick, 1995: 21). Therefore, part of Koebel’s decision to conceal the water test results—apart from the obvious one of corruption—may have been to maintain his identity as a competent manager of the water works and providing the town with safe water. Keeping the information about the adverse water samples secret and away from public scrutiny was a mechanism for the general manager to maintain his sense of self as being a competent individual. Public knowledge of the manager’s activities would jeopardize his public and personal image. Thus, perhaps in order to maintain a consistent sense of self, Koebel altered the manner in which he made sense of the illnesses that were occurring and did not attribute the cause of those illnesses to the bacteria in the water. His actions were not simply uni-dimensional (i.e. simply corrupt) and this is supported by the fact that the general manager continued to drink the water himself as well as fill his daughter’s swimming pool with the water (Walkerton Inquiry, 2002: 72).

Finally, Weick (1995) argues that individuals ‘invent’ particular realities or certain views of how things should be suggesting that the general manager invented his reality of how an ideal water commission should be managed. As the number of illness reports increased, Koebel attempted to make sense of the evidence (e.g. low chlorine levels) of contaminated water. He viewed the evidence as a threat to his notion of the water system being operated by competent personnel who ensured the safety and quality of the water, thus a threat to his sense of identity. Koebel attempted to respond to the problem by flushing the system and adding higher concentrations of chlorine to rid the water of any bacteria. Thus, his decision to solve the problem may well have been informed by his invented sense of how the water system should be managed and how his sense of an ideal manager would respond.

Enactment. Enactment implies the notion that when individuals act, ‘they bring events and structures into existence and set them in motion ... people who act in organizations often produce structures, constraints and opportunities that were not there before they took action’ (Weick, 1998: 306). Enactment is a process whereby individuals act then they think ‘retrospectively’ about their action in order to make sense of what has occurred. There are several elements that are involved in ‘enactment’. These elements include the social process of enactment, as well as a product or the enacted environment (Weick, 1988). Enactment involves a social process whereby certain aspects of an individual’s experience are ‘extracted for closer attention on the basis of preconceptions’. Furthermore, individuals ‘act within the context of these bracketed (singled out) ... elements and often shape these elements in the direction of preconceptions’ (Powers, 1973, cited in Weick, 1988: 307). The enacted environment in turn, is the product of enactment. The enacted environment is ‘an orderly, material, social construction that is subject to multiple interpretations’. However, it is the notion that ‘cognition lies in the path of the action’ that is central to enactment (Weick, 1988: 307).

The enactment perspective is a useful tool for gaining insight into how an individual’s actions can lead to or cause an organizational crisis. Individuals are only able to know what

they have done after they have done it, therefore, their actions rapidly become part of the crisis (Weick, 1988). This suggests that when individuals face a crisis situation they tend to take action without thinking, and only after the action has been carried out are they able to make sense of it. Understanding the process of sensemaking and enactment during crisis situations will shed some light on the events that lead up to the Walkerton crisis.

The public inquiry into the Walkerton disaster identified many unexplainable actions that were carried out by the general manager. For example, the inquiry revealed that Koebel knowingly allowed wells to continue supplying water without chlorinators, records of chlorine levels were inaccurate, water samples were not taken properly, and information concerning adverse water samples was concealed. Furthermore, Koebel lead people to believe that the water was safe despite his knowledge of bacteria being found in the water samples.

How could Koebel have carried out such seemingly 'corrupt' actions? Weick (1988: 306) suggests that an individual 'can not know what he is facing until he faces it, and then looks back over the episode to sort out what happened, a sequence that involves retrospective sensemaking'. Furthermore, 'an individual can only understand the problem they face only after they have faced it and only after their actions have become inextricably wound into it' (Weick, 1988: 306). Therefore, this implies that the general manager could not have completely understood the problem until he acted and then retrospectively made sense of his action by making sense of the situation. Once Koebel it was too late to reverse the action thus the consequences are of his own making. Individuals 'often don't know what the appropriate action is until they take some sort of action and see what happens' (Weick, 1988: 306). This is especially relevant in the case of the general manager who did not receive proper job training. Consequently, Koebel's actions determined the events that followed. Obviously, the fact that the wells contained *E. coli* bacteria or that chlorine levels were below the acceptable standard were no doubt significant contributors to the crisis. However, another significant contributor to the crisis is the fact that these events were acted upon in some way and incorporated retrospectively into situations that became uncontrollable. Weick (1988: 309) argues that the problems and constraints people face are a consequence in part of their actions:

From the standpoint of enactment, initial responses do more than set the tone; they determine the trajectory of the crisis. Since people know what they have done only after they do it, people and their actions rapidly become part of the crisis. That is unavoidable. To become part of the problem means that people enact some of the environment they face. Had they not acted or had they acted differently, they would face a different set of problems.

Had Koebel acted differently when he became aware of low levels of chlorine, the events following these actions could have been much different. Koebel's actions began to make the situation worse and create new problems associated with the water supply. The effects of failing to install proper equipment, not ensuring adequate chlorination of the water, and failing to report adverse samples to officials were all triggering events or points in time where interventions could have had an effect and lead to less serious outcomes (Weick, 1988).

Commitment to the Action. Weick (1988) suggests that when people act, and those actions are public and hard to undo, explanations for such action are less causal than if the action can be undone or disowned. Under such public actions, 'explanations that are developed retrospectively to justify committed actions are often stronger than beliefs developed under other, less involving conditions' (Weick, 1988: 310). Furthermore, a 'tenacious justification can produce selective attention, confident action and self-confirmation' (ibid.). Commitment to one's actions therefore helps us to understand how the general manager made sense of the events. For example, when questioned about why he didn't have the chlorinator installed in the well, Koebel replied that he 'believed the unchlorinated water was

safe because it was from a deep well' (Walkerton Inquiry, 2002: 58). It is very probable that the general manager had already developed very strong beliefs about the safety of the water, which justified his commitment to the action to not install the chlorinator. Factors such as acting without necessary training, his previous experiences, and lack of knowledge about contaminants and bacteria all contributed to how the general manager made sense of his actions. Therefore, when questioned about his actions the response is more about sensemaking rather than his conscious rationalization of his actions (i.e. because he was being called to account for actions that led to deaths).

Weick (1988: 310) also discusses the idea that an individual's commitment to actions may also produce blind spots, such that 'once a person becomes committed to an action, and then builds an explanation that justifies that action, the explanation tends to persist and become transformed into an assumption that is taken for granted'. Furthermore, Weick maintains that it is very unlikely that the individual will contribute the assumption as partly causing the crisis once this transformation has occurred.

An example that illustrates how the commitment to action contributed to the crisis in Walkerton relates to the justification made for leaving the chlorine concentration below acceptable levels. Despite directly violating the Ministry of Environment's guidelines and recommendations to increase chlorine levels in the water, the general manager continued to under-chlorinate the water supply and maintain false records about chlorine levels. This decision to under-chlorinate the water was justified by Koebel as a means to satisfy complaints from community members that the high chlorine levels were making the water taste bad (Burke, 2001). Koebel had become increasingly committed to this action as a means to satisfy community members. Eventually, it became a taken-for-granted assumption that providing the community with good tasting water was more important than ensuring proper chlorine levels. Koebel's commitment to under-chlorinate the water was therefore strengthened and justified by his desire to provide the community with pleasant tasting water.

It appears as though once an individual becomes committed to an action it, becomes much more difficult to undo that particular action. Furthermore, since we make sense of events in retrospect, it is difficult to know the consequences of such choices or decisions before actually acting them out. Therefore, it is probable that once Koebel acted, he was under greater pressure to justify his behaviour due to the public, irrevocable nature of the action (Weick, 1988). After making sense of the event, it was much more difficult to abandon his decision, thus making it harder to publicly admit wrongdoing, despite his efforts to remedy the problem (flushing the system and increasing chlorine levels).

Influence of Capacity of Enactment. Weick (1988: 312) argues that 'capacity can also affect crisis potential through staffing decisions that affect the diversity of acts that are available—enactment is labour-intensive, which means understaffing has serious effects'. After the amalgamation of three towns wells under one municipality, the workload significantly increased for the employees at the Public Utilities Commission. In particular, Koebel stated that he was so busy working on other ongoing projects that he was only able to devote five per cent of his time to the water operation. He further stated, 'There were too many ongoing projects that I wasn't getting a handle on, and being away too often for the amalgamation talks with the electricity side, not spending enough time on our own utility. I felt like I was losing it' (Walkerton Inquiry, 2002: 209).

The general manager was faced with too many ongoing projects that each demanded his attention. Weick (1988: 312) suggests that if 'action is the means to understanding, then the number of quality actors available to do the acting and interpretation become crucial variables'.

Plausibility. ‘The sensible need not be sensible’ (Weick, 1995: 55). This statement made by Weick illustrates that sensemaking does not necessarily have to be accurate, rather, sensemaking is about plausibility, coherence, and reasonableness (Weick, 1995: 61). Weick (1995: 57) discusses several reasons why accuracy is only secondary in the process of sensemaking. First, ‘individuals need to distort and filter to separate signal from noise’. Second, ‘sensemaking is about the embellishment and elaboration of a single point of reference or extracted cue’. Third, ‘speed often reduces the necessity for accuracy in the sense that quick responses shape events before they have become crystallized into a single meaning’. Fourth, ‘if accuracy does become an issue, it does so for short periods of time and with respect to specific questions’. Fifth, ‘sensemaking is influenced by the “interpersonal, interactive, and interdependent quality of organizational life”’. Sixth, ‘accuracy is defined by instrumentality’. Seventh, ‘stimuli that are filtered out are often those that detract from an energetic, confident, motivated response’. The eighth and final reason why accuracy is secondary to plausibility is that ‘it is almost impossible to tell at, the time of perception, whether the perceptions will prove accurate or not’.

Weick (1995: 60–1) simply describes the criteria that are necessary for sensemaking as being,

something that preserves plausibility and coherence, something that is reasonable and memorable, something that embodies past experience and expectations, something that resonates with other people, something that can be constructed retrospectively but can also be used prospectively, something that captures both feeling and thought, something that allows for embellishment to fit current oddities, something that is fun to construct—in short, what is necessary is a good story.

Influence of Plausibility. Plausibility is about a story that is socially acceptable and credible. How, then, did the general manager create a story that convinced both himself and others that recording false chlorine levels and failing to chlorinate the town water supply was acceptable? Drawing on Weick (1995), the answer to such questions lies partially in the fact that accuracy was only an issue for the general manager for a short period of time. Recommendations were made to establish a water protection zone around the well, as well as take necessary precautions to control the use of surrounding agricultural land to minimize risks of contamination. In other words, recommendations were made that accurately reflected the potential consequences of not managing the water system properly. However, these recommendations were never properly followed-up to ensure that they were implemented. Thus, to Koebel, these problems were only an issue for the short period of time in which he received pressure to address them. After such pressure subsided, the issues were simply put aside by the general manager due to other job responsibilities that demanded attention. During this time, individual sensemaking involves past experiences and expectations (Weick, 1995). Therefore, putting aside what was perceived by Koebel as temporary problems, allowed him to continue making sense of the situation through the generation of what seemed like a more ‘plausible’ account of what was happening with the water system. Firstly, it was plausible, rather than accurate, for him to assume that the water was safe since the wells had been operated under such conditions for years. Secondly, it was plausible to assume that the water was fine since the water appeared and tasted clean. Thirdly, Koebel was able to convince himself that the water was safe because he drank it and he did not become ill. It becomes clear how this story could be generated and seems plausible, especially given that Koebel lacked the necessary training for managing the waterworks.

SENSEMAKING, POWER, AND THE INDIVIDUAL

Weick’s (1995) sensemaking model serves as a useful analytical method for beginning to understand the behaviours of the actors that contributed to the Walkerton crisis. The model

provides a way to understand how the construction of social realities through ‘enactment’ were influenced by the ‘ongoing’ nature of sensemaking (e.g. what counted as knowledge and acceptable behaviour in the normal flow of things), the ‘enacted cues’ that people use to build sensible stories around (e.g. making people believe that the water system was functioning properly), the situational and ‘social’ contexts (e.g. reactions of people to the daily work) in which ‘retrospective’ understandings (e.g. the operation of the water system worked in the past) occur, the ‘need for plausibility’ in story construction (e.g. if it seemed right it was right), and the impact of sensemaking on identity construction (e.g. how individuals balanced a sense of self with shortcuts). The sensemaking approach allows us to contextualise the problem and reveals how the system functioned, allowing irresponsible action to occur.

While analysis of the sensemaking environment provides important clues to the relationship between accidents and the production of social structures, it is relatively limited in dealing with issues of organizational culture, power (Helms Mills, 2003) ‘corruption’, and, ironically, individual agency. Furthermore, sensemaking theory fails to explain how individuals come to reproduce existing structures. Helms Mills (2003) suggests that the sensemaking theory does not consider underlying formative contexts (Unger, 1987), or how discursive practices (Foucault, 1980) influence the sensemaking process. Thus, despite the many strengths of sensemaking as an analytical tool, we will now focus on the limitations of the approach for understanding the Walkerton crisis and how these limitations may be overcome.

Organizational Culture

In the available sensemaking literature there is a lack of attention given to the role that cultural background of the ‘sensemakers’ play in the sensemaking processes (Milliken and Morrison, 2000). Organizational culture encompasses issues such as an organization’s structure, hierarchical relationships, goals and motivators, and its interaction with the external environment including regulatory authorities, and customer interaction (the entire Walkerton community).

An issue for future research is the exploration of contrasts between the culture-based attitudes of decision-makers and employees in different corporate cultures towards action or ‘responding’. Sensemaking during non-routine situations, i.e. crisis situations, often involves relatively complicated courses of action (following scanning and interpretation) that are likely to have been determined at least in part by the cultural orientation of the ‘sensemakers’. What is considered by culturally diverse populations to be ‘action’ varies, for example, whether acts of communication are categorized as action or not. How to relate thinking to action also differs according to the culture of the sensemaker, for example, deciding what actions are an appropriate response in different situations is often based on reflection (retrospection) of past information and experiences (evidence). However, the weight of different types of evidence used when deciding how to act—theory, data, personal feeling, moral or religious conviction—is culture bound. Also of importance is studying the role of cultural orientation (corporate culture) in determining why people act and exploring the effect that a proactive versus a fatalistic orientation to events has on sensemaking.

Three further issues need to be explored to gain a better understanding of the extent to which the application of current sensemaking theory is culture bound: (i) the extent of idealism versus pragmatism in a corporate culture in determining what information is relevant for action and how it should be utilised; (ii) contrasting the sensemaking process in affective cultures (the idea that including feelings in the decision making process is positive) versus neutral cultures (feelings should be separated from actions); and (iii) the prevalence of different types of rules, i.e. ‘changeable rules’, ‘mechanic rules’, and ‘oppressive rules’ (Usunier, 1996), and rule-related behaviour in a given culture and the effect that

these rules (Mills, 1988), their design, and enforcement have on the sensemaking process in diverse cultures.

Power

The issue of power is an area that is downplayed in the sensemaking theory. For example, in the case of Walkerton, sensemaking does not enable us to account for how one man used his power regardless of what the sense of the situation prescribed or explain how he had such a strong impact on the enactment of a sensible environment. Weick's theory implies that some voices will be heard more clearly than others; however, he does not explain why this may be the case (Helms Mills, 2003). Second, was power so diffuse that no one had the ability or the authority to step in until it was too late? Finally, the theory does not explain other forms of action that are contrary to the common sense of a situation. For example, when an individual understands the sense of a situation, but fear (or laziness) encourages the person to go against the grain.

Sensemaking theory does go so far as to explain that 'power privileges some meanings over others' (Weick, 1995: 38), or in other words it explains how a sense of things are created and how power is achieved through notions of cues and plausibility. Thus, sensemaking is a social aspect that is ongoing, but Weick fails to explain the background factors that shape sensemaking or where ideas are created. We suggest that this limitation may be overcome by incorporating Foucault's (1980) notion of power and the creation of knowledge. As Helms Mills and Mills (2000: 65) describe it, 'the notion of discourse, the empowering of certain ideas through their appearance as "knowledge", helps to explain how certain rules become accepted by those involved'. The powerful discourse of ideas surrounding the notion that the context in which water systems operate are safe and managed by competent individuals and governing bodies has seemingly been accepted and unquestioned by many, that is, until the Walkerton crisis. For many of us it has become almost a given that the water we are provided with has undergone appropriate testing to ensure it's safety and quality. It is even probable that the general manager of the water system failed to challenge the powerful discourse leading him to always, in the back of his mind, believe that the water would always be safe. It was not until several deaths occurred that all this knowledge was challenged causing the discourse of safe water system operation to be weakened. The idea that water systems are being operated properly and safely, as a result, has lost considerable power. Through the analysis of discursive practices, we are able to further understand why the general manager did not manage the water system as dictated by the policies and guidelines. It explains why he may have falsified records and not taken the task of properly chlorinating the water seriously. In addition to his lack of technical training, he too was a victim of a powerful discourse that the water would always be safe and it is likely that it was not necessary for him to follow the set guidelines for ensuring safe drinking water. Certainly the Provincial Government's decision to cut back on water inspections contributed to the notion that existing procedures need not be so vigorously followed (Walkerton Inquiry, 2002). Combined with sensemaking, Foucault's (1980) notion of discursive practices and the creation of knowledge add another dimension to understanding how the Walkerton crisis was allowed to happen.

Insights into the background factors that shape sensemaking may also be drawn from Unger's (1987) notion of formative contexts (broad normative contexts that are established over time and influence how actors develop behavioural routines (cited in Blackler, 1992: 284). Blackler's (1992) work focuses on activity systems, in which activity is defined as 'a sociocultural interpretation imposed on the context by the participants themselves' (p. 289). For example, the general manager and employees of the waterworks system responded to the events of the water contamination by referencing a broader socio-cultural context that was

imposed on the situation. Thus, sensemaking took place within a broader context that affected how the general manager made sense of the events. Weick discusses 'action' that individuals perform. However, 'action' does not explain the origin of sense that people impose on an action. For example, the general manager, as a social actor, makes sense of an activity by drawing upon knowledge established through a broader context of what it means to be a general manager. Weick explains that we invent actions that are already familiar to us; however, it does not explain how such actions have become familiar to begin with. According to Unger's notion of formative contexts, this familiarity stems from broader normative patterns of behaviour that shapes how we make sense of situations. This would explain why the general manager engaged in such activities such as improperly testing water samples and failing to properly chlorinate the water. His sensemaking was shaped through broader normative contexts that dictate how the general manager performs his job. The general manager performed his job the same way that his father had performed the job when he was general manager of the water system. The way he performed various job activities was in line with the way the job was always performed, which created a formative context that shaped unquestioned behavioural routines. Thus, 'Unger's notion of formative contexts links activity at the local level with dominant social assumptions about the character of social life and helps to explain how people come to reproduce existing practices' (Helms Mills, 2003: 312).

Existentialism

Despite the importance of power and contextual factors it would not be completely accurate to assume that the general manager was solely a victim of his sensemaking environment. To ignore the fact that he did try to conceal the water sample test results for as long as possible to buy time in order to make a last attempt to kill the bacteria in the water system would be naive. Stan Koebel had choice and this suggests to us that there is a need for further exploration of the role of existentialism within sensemaking frameworks. Weick (1995) strongly suggests that the individual sensemaker is at the core of sensemaking activities. Yet it is an individualism that is overly subject to contextual factors. We need to exercise further caution when adopting a sensemaking approach, a caution that we do not, yet again, lose sight of the individual, of individual agency, in the development of sensemaking events (Nord and Fox, 1996). We began this paper with a rejection of the simplistic notion of blame and the individual. However, we want to end with a reflective note on the need to account for the individual's action within a sensemaking framework. Unlike a purely reactive approach that lays blame at the feet of the individual actor, we argue that sensemaking draws attention to the contextual factors within which decisions and enactment occur. Unlike a purely contextual approach which shifts the blame away from the individual actor, we argue that the ultimate value of a sensemaking approach lies in its potential to make the individual actor aware of her or his sensemaking influences, so that s/he can act accordingly. In short, we contend that there is need to fuse existentialism and sensemaking theory.

CONCLUDING REMARKS

Weick (1995) provides a framework that has enabled us to improve our understanding of the Walkerton crisis. First, it has helped to improve our understanding how an individual's identity construction influences enactment and sensemaking in organizational crises. Sensemaking also enables us to see how an individual's past experiences come to be plausible stories explaining what has happened in the surrounding environment rather than providing an accurate account. Finally, sensemaking provides an explanation for how an individual's

commitment to an action can escalate a crisis. Most importantly, however, understanding the sensemaking process requires that we pay attention to contextual factors that influence the actions of individuals. Understanding how contextual factors influence the way an individual makes sense of the situations they experience enables us to see how the individual can quickly become a victim of the sensemaking environment. In the case of Walkerton crisis the general manager was a victim of the failing sensemaking environment since the analysis showed a number of contextual influences outside of his control that each contributed to the crisis. Factors such as lack of training, lack of technical knowledge, and lack of proper regulation all influenced how the victim made sense of his actions. The coupling of all of these factors lead to the creation of a plausible account that the water supply was safe.

Sensemaking theory as an organizational crisis analytical tool is not without limitations. As was shown, Weick's theory does not explain the background factors that shape sensemaking or how ideas are created. We suggested that this limitation may be overcome by further exploration of organizational culture theory, existentialism, Foucauldian notions of power and knowledge, and Unger's notion of formative contexts (1987) which provides a link to broader contexts of sensemaking.

NOTE

1. Justice Dennis O'Connor, who chaired the Walkerton Inquiry, argued that manager Stan Koebel and his brother Frank 'were also victims of a gutted Environment Ministry', adding that 'It is simply wrong to say ... that Stan Koebel or the Walkerton PUC were solely responsible for the outbreak or that they were the only ones who could have prevented it' (quoted in Perkel, 2002).

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