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Risk, Media and Drinking Water: An Analysis of the Media's Construction of the Walkerton Risk Event

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**Risk, Media and Drinking Water:
An analysis of the media's construction
of the Walkerton risk event**

Bhavnita Mistry

Thesis submitted to the
Faculty of Graduate and Postdoctoral Studies
In partial fulfillment of the requirements
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Executive Summary

The contamination of the local drinking water supplies in Walkerton, Ontario, in May 2000 was a highly publicized public health risk event, where seven people died and 2,300 other individuals became ill.

The analysis of the media construction of the Walkerton risk event reveals how the media uses important elements of risk to construct this event. The analysis shows how trust and blame issues are used to create this community, by constructing messages about how the community dealt with this risk event. The analysis also reveals how the media concentrate on the negative aspects of the risk, such as the health issues, that aid in framing the stories in a negative tone. Moreover, the analysis illustrates the relative importance of this risk issue on the Canadian media's agenda, for the duration of the study period. These factors may influence public perceptions of risk regarding drinking water.

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Chapter One

Introduction

1.0 Introduction

...As soon as you mention Walkerton, everybody knows what happened. It left an impression on us. Now whether or not it's conscious to the level where we are doing something about our water, it's ingrained in our head. Whenever we hear Walkerton: water crisis...I don't think that we came out of that completely unaffected (London resident, focus group data).

We are a risk society (Brockville resident, focus group data).

The media play an important role as social actors, or gatekeepers of information, in society as they play an important role in defining and shaping issues for the public (Dunwoody and Peters, 1993; Beck, 2000; Kasperson et.al., 2000; Eldridge and Reilly, 2003; Kothari et.al., 2005). As such, the media have the power to influence the public on the issues they are be thinking about (Cohen, 1963; Lupton, 1994a; Frewer, 1999; Kasperson et.al., 2000; Lorimer, 2004; McCombs, 2004) and thus may also influence public perceptions of risk. Catastrophic and dramatic events are often front page news stories (Renn, 2004). The media often covers these stories for a short period of time before the media turns their attention to other events (Braxton et.al., 1999). For the public, this reporting pattern becomes important because the public relies on the media for information about advancements in science and technology, and health and environmental risks

(Dunwoody and Peters, 1993; Singer and Endreny, 1993; Graham and Rhomberg, 1996; Griffin and Dunwoody, 1997; Powell and Leiss, 1997; Frewer, 1999; Cooper and Roter, 2000).

The Walkerton, Ontario, contamination of the local drinking water by the *Escherichia coli* O157:H7 (*E.coli*) bacteria, in May 2000, was a highly publicized risk event captured by the Canadian media over a long period of time. The outbreak was considered the deadliest for this bacterium in Canada (CTV, December 7, 2000). The bacteria killed seven people and made over 2,300 others ill. Almost immediately after the media reports of people dying, the media began to structure and frame the risk event for the public beyond the borders of Walkerton (Parr, 2005). Consequently, the media became one of the primary sources of information for the public. Hrudey and colleagues (2002 and 2003) compare the epidemic in Walkerton to similar outbreaks of waterborne diseases in other developed nations around the world, suggesting the need for attention to the broader issues related to drinking water safety.

The contamination of the drinking water system in Walkerton became more than a passing issue and was recognized as an *event*. Although considered an acute risk issue with many local impacts, the contamination of the community's drinking water caused widespread public concern, demanded institutional attention at the provincial level to call an inquiry and also change legislation to ensure the safety of drinking water in Ontario. The combination of all of these factors elevated this issue to the level of an event. More telling, the Walkerton risk event continues to be used as a reference against which other similar issues are measured.

The contamination of drinking water in the town of Walkerton may have also heightened the public's concerns over the safety of their drinking water. In addition to the physical effects of the contamination with which the residents of the community had to cope, residents also "lost their sense of certainty about good water" (Parr, 2005, p.251). As a result, people began to question the safety of something they had not considered unsafe before. The drinking water risk also caused a change in the community's sense of place by altering their local politics, and the community's sense of trust in their government and neighbour relations (Parr, 2005).

The Walkerton risk event remained a fixture in the Canadian media, despite its competition with other common public health issues such as West Nile Virus, Foot and Mouth Disease, and Mad Cow Disease. A simple search of references to West Nile Virus (97 stories), Foot and Mouth Disease (126 stories) and Mad Cow Disease (202 stories) in the *Globe and Mail*, shows that over this project's 2.5 year study period, these stories did not reach the reporting frequency of the Walkerton risk event for this media outlet.¹

1.1 Goal of the Research

The goal of this research project is to conduct a media analysis of the news construction of the Walkerton risk event to uncover the messages or underlying assumptions that are conveyed to the audience by the Canadian print and televised media. The information gathered from this analysis may aid in understanding how the public may

¹ The searches were done using the database *Factiva* for the time period of May 1, 2000 to December 31, 2002, using the key words above. These stories represent the mention of these public health issues within the media story. As such, no inclusion or exclusion criteria was used to decide which stories would be used here as an example. This example is to show generally how often these common public health concerns appeared in the news media (the *Globe and Mail*) for the same study period as will be used in this research. The number of stories found related to Walkerton risk event can be found in Chapter 4, Tables 4.1 and 4.3.

perceive risks of drinking water. This is accomplished by evaluating one of the public's main sources of information. Although the results of the media analysis will not directly tell what the public thinks; it will highlight the major topic, themes and subject matter the media concentrated on with respect to the Walkerton events that the public may be thinking about. In addition to the topics the media reported on, the academic literature indicates that the way a story is framed greatly influences the public's understanding of the topic (Fleras, 2003; McCombs, 2004).

Another goal of the analysis is to show how the media plays a role in how risks are constructed and presented to the public (Beck, 2000). Thus, both print and broadcast media may influence the way people understand and/or interpret information about an event, by the way the journalist frames the issue and uses other journalistic devices to construct stories (Altheide, 1996; Lopez-Escobar et.al., 1998; Slovic, 2000d). The use of frames in media reporting will be reviewed. With respect to the Walkerton case study, the media were the initial claims-makers as they were the primary source of information for the general public. The media constructed the images and stories of the community for those people residing outside of Walkerton.

Some experts do not feel the media portray risks as they should, and thus feel the public are not receiving all of the information necessary to make informed decisions about whether they are willing to accept certain risks. Therefore, from a risk management and communication perspective, it becomes important to evaluate the media to understand the kind of information to which the public is exposed. This becomes especially important from a public health perspective as health advocates often use the media as a tool to educate the public about certain risks (Cooper and Roter, 2000).

The Walkerton risk event affected the province threefold: Firstly, it shook public trust in the provincial government to protect the safety of their drinking water. Secondly, it raised public awareness regarding the state of both the province's and the country's drinking water system. Thirdly, it brought about legislative changes to secure the safe supply of drinking water for Ontario.

The purpose of this research project is to determine how the Canadian media constructed the events of the *E. coli* contamination of drinking water supplies in Walkerton, in May 2000. To accomplish this, the following research objectives guide this analysis:

1. To understand how the media communicate and legitimate information about drinking water risks that could influence public opinion;
2. To determine how the media represent the community's understanding of the events by following the news construction of the events and examining comments made by Walkerton residents; and
3. To understand the role of values, such as trust, in the construction and reporting of events.

The media provides the public with much of its information regarding environmental hazards, science and technology. As such, Objectives (1) and (3) are designed to understand how the media construct stories and what elements of the issue may influence public perceptions of this risk. The literature indicates that the media construct discourses of reality, rather than passing judgment on the events they are presenting (Gamson et.al., 1992; Singer and Endreny, 1993; Cooper and Roter, 2000). In other words, the public receives a constructed view of the events. The presentation of the message becomes an important element in how the audience receives and interprets that message (Thompson, 1988). Objective (2) is designed to understand public perceptions of risk using the media as a surrogate measure to infer public opinions about risks, by following how the media constructed the residents' perception of the drinking water risk.

The media data used to evaluate these three objectives comes from the *Globe and Mail*, the *National Post*, the *CBC National News* and the *CTV National News*, from May 2000 to December 2002. While analysis of media data generally focuses on using one media type (i.e., print or broadcast), initial analysis of the media data indicates that the print and broadcast news stories tend to cover similar issues, but the print media provides greater details (Driedger, 2007).

The media have the capability to influence, to varying degrees, public opinions on certain issues and therefore influence perceptions of risk. This analysis will argue that the media becomes a useful surrogate to gauge public perceptions when it is not feasible to speak directly to them. Analyzing the media messages regarding the Walkerton risk event will highlight how the media construct stories around a risk event by looking closely at the subject matter the media highlights and how the tone they use to construct their stories. This combination creates stories that focus on some elements of the risk event while steering attention away from other aspects. In the end, the resulting presentation of the risk may influence how the public perceives that risk, and may also indicate how the public may react to similar risks in the future.

1.2 Summary of Thesis Chapters

The current chapter, Chapter One, lays out the objectives and purpose of this research project. The objectives and the data are briefly introduced, and will be developed later in the thesis.

Chapter Two provides the context for the case study of the Walkerton risk event. It offers an overview of the factors that lead up to the contamination in this small community.

The purpose of the Walkerton Inquiry is discussed, as well as, some of the key figures at the centre of this risk event (including those who testified at the Inquiry). Chapter Two also briefly outlines some of the major recommendations outlined by Justice O'Connor at the conclusion of the Walkerton Inquiry.

Chapter Three provides a review of the literature relevant to this study. This chapter develops the idea of how the media construct risks and how these media constructions may influence public perceptions of risk. Several media concepts, such as agenda-setting and framing are discussed with respect to their influence on the media's construction of a risk event and the broader influences on public perceptions of risk.

The specific methods used to analyze the media data are detailed in Chapter Four. Both quantitative and qualitative methods used in the analysis are described. In particular, the step-by-step coding process and operational definitions for some of the codes investigated in this analysis are outlined. The challenges that arose during the analysis process and how they were addressed are also discussed.

Chapter Five details the results of the analysis. It is important to note here that although over 100 codes were used in the analysis of the media data, only those codes relevant to the research will be highlighted in this chapter. Broadly, the results of the analysis will be broken down into a general overview, the quantitative results, and results of the qualitative thematic analysis. The major themes of illness and death (health issues), blame, trust and how the media constructed the community of Walkerton are analyzed.

Chapter Six discusses the results of the analysis in more detail, particularly those developed in Chapter Three that concentrated on the concepts of risk and media. The Social Amplification of Risk framework, as well as, the themes of blame and trust in how they

create a community is discussed in this chapter. Also explored is the relevance of this risk event in the Canadian context, as noted by its presence in the national media.

Chapter Seven provides an overall conclusion to the thesis, the contribution of this research to the literature on risk and media analysis, and areas of future research. It also describes the addition of this literature to the greater understanding of the Walkerton risk event.

Chapter Two

Setting the Context – The Story of Walkerton

Walkerton is a small community of approximately 5,000 people, located in Southern Ontario three hours north of Toronto along the banks of the Saugeen River. Noted as a friendly farming community (Bourette, 2000a), Walkerton is a town where “stores sell bridal gowns and ‘floral designs’ next to farm supplies and almost everything shuts down by 5p.m.” (Wong, 2000, R9). Many of the residents make their living in the local businesses that serve the local farming community (Brown and Hussain, 2003). It is a town where everyone knows everyone, where “mayors and councils are essentially glorified part-time volunteer positions held by the civic-minded” (Bourette, 2000b, A8) and where if nothing else, the environment is pure (CBC, May 24, 2000). It was a peaceful community that many people did not know about, until the events of May 2000.

Once the news of the drinking water contamination and subsequent illnesses reached the media, Walkerton became one of the best known towns in Canada (CBC, May 7, 2001). Media reports relayed the day by day timeline of events, detailing not only what lead to the contamination, but also the physical, emotional and economic impact on the residents of this sleepy town. Seven people lost their lives to this contamination and another 2,300 people became ill.

To determine the circumstances that lead to the contamination of Walkerton's drinking water supplies, the Premier of Ontario at the time, Michael Harris, ordered an inquiry into the events (O'Connor, 2002a). Lead by Justice Dennis O'Connor, the Inquiry, which began on October 16th, 2000 and ran through to August 27th, 2001, examined what was necessary to ensure the safety of drinking water in all of Ontario. Among the individuals and groups asked to testify were residents, several municipal leaders, and individuals who looked after the safety of Walkerton's water. Moreover, several members of the provincial government, including the Premier and Ministers of the Environment, participated in the Inquiry process. Individuals in the fields of water safety, such as engineering, were also called on for their expert opinions about what happened and what is required for a safer drinking water supply. By the end of the nine month process, the Inquiry heard from 114 witnesses (O'Connor, 2002a).

Although several factors were listed to have contributed to the contamination, the main causes of the deaths and illnesses in Walkerton were two specific bacteria: *E.coli* O157:H7 and *Campylobacter jejuni*¹ (O'Connor, 2002a; Schuster et. al., 2005). Both bacteria live in the gut and intestines of cattle and are found commonly in cattle manure (O'Connor, 2002a). These bacteria are also able to live in the environment for long periods of time. Although found to be safe inside the cattle, the *E.coli* bacteria was found to cause such adverse health impacts as bloody diarrhea, severe abdominal pain, hemolytic uremic syndrome, acute kidney failure, and in some cases, death (O'Connor, 2002a; Richards, 2005).

¹ The bacterium that is most commonly referred to in the media reports is the *E.coli* O157:H7 bacteria. For this reason, the bacteria that will be discussed in this thesis will be the *E.coli* O157:H7 bacteria. From here forward, this bacterium will be referred to as *E.coli*.

The direct causes of the health risks were more easily determined than the source of the contamination. Justice O'Connor determined that the causes of contamination were multifold and could not be directed at one individual or a specific event. A combination of human error, government neglect, and other physical and natural factors all contributed to the contamination of Walkerton's drinking water supplies.

The following is an account of the factors that lead to the contamination and illnesses, taken from O'Connor (2002a) and are the final results of the Inquiry. Figure 2.1 at the end of this chapter, provides a brief timeline of some of the major events that took place during the 2.5 year study period.

The town of Walkerton amalgamated with two area townships to form the municipality of Brockton, only 18 months before the events of May 2000 (Freeze et.al., 2000; Barber, 2001). The Public Utilities Commission (PUC) is the municipal department that cares for the water of Walkerton. Three wells supply the drinking water for the community of Walkerton. Well 5, the well found to be the cause of the contamination, is a shallow well that draws its water from a highly fractured area of bedrock, thus making it susceptible to surface bacterial contamination (O'Connor, 2002a). This well was the primary source of water for the community during the period of May 9th to May 15th. Well 6 was cycled on and off and Well 7 was not in operation during this time period. Well 5 is also situated a few metres from a farmer's field, on which manure was spread correctly in late April, 2000 (Perkel, 2000; O'Connor, 2002a). Together with heavy rainfall from May 8 to 12th, which created flood like conditions (Brown and Hussain, 2003), the proximity of the well to the field and the shallowness of the well, O'Connor concluded the *E.coli* could have survived the application of manure and thus found its way into Well 5. Moreover, a

backflow valve failed to keep surface water from entering the well (Brown and Hussain, 2003).

On May 13th, Frank Koebel conducted routine checks at the operating wells. However, the chlorine residuals were not checked, a common practice of the PUC. It was at this time the *E.coli* bacteria was most likely overwhelming the system and entering into the distribution system. O'Connor (2002a) concluded that had the residuals at the operating wells been checked at this time, Mr. Koebel would have been alerted of the potential problem of contamination. No chlorine residuals would have been found which would have meant that bacteria had overwhelmed the chlorine that was added to the system.

On May 15th, Well 5 was turned off and Stan Koebel turned on Well 7, which had been off since May 9th. Shortly thereafter, he realized that the new chlorinator had not been installed on Well 7. It was pumping untreated water directly into the distribution system until a new chlorinator was installed on May 19th.

The testimony of the PUC's foreman, Frank Koebel, and general manager, Stan Koebel, uncovered the normal procedures for conducting tests of the system, which included not measuring the chlorine residuals and falsifying records of the residuals in the log books. Water samples taken from the system on May 15 and forwarded to A&L Canada Laboratories for testing on May 16, tested positive for *E.coli* and total coliforms. Although Stan Koebel was notified of these results by the lab, they were not forwarded to the Ministry of the Environment (MOE). As a result, the local health unit in Walkerton was also not notified of the adverse samples until May 23; they instead initiated their own investigation based on the number of illnesses being reported.

By May 18th, many residents were reporting illnesses and also contacting the PUC to question the water. They were all assured the water was safe. The equally concerned local health unit also contacted Stan Koebel and was given the same information the following day. The results from the lab were not disclosed at this time. On May 19th, Dr. Kristen Hallet, a pediatrician in Owen Sound, suspected *E.coli* was the cause of the illnesses of two children admitted into the hospital. She contacted the local health unit, which consequently began an investigation, speaking to area hospitals, schools, a retirement home in Walkerton, and Stan Koebel.

After speaking to the health unit and assuring them the water was fine, Stan Koebel began flushing and super-chlorinating the water system on May 19th. He continued to do this for several days until the chlorine residuals had increased in the system. The health unit, again, contacted Stan to inquire about the water. He still neglected to inform them about the adverse water samples, and consequently the health unit assured the public the water was safe.

On the afternoon of May 21st, a laboratory confirmed the presence of *E.coli* in a stool sample taken from one of the infected patients. On May 21st, a second test confirmed the presence of *E.coli* in the stool sample. With this sample, the health unit issued a boil water advisory that was broadcast on the radio. Dr. Murray McQuigge, the local Medical Officer of Health, also contacted the Brockton mayor regarding the situation. At this time, Dr. McQuigge did not ask the Mayor to take any action, nor did the Mayor take additional steps to notify his community. Throughout the day, the health unit continued their own investigation, which included taking their own samples of the water. Upon the urgings of the health unit, the MOE began their own investigation.

On May 22nd, the MOE contacted Stan Koebel. At this time, Stan Koebel indicated that Well 6 was not running since the weekend of May 13th; however, he neglected to tell them that Well 7 was running without a chlorinator, from May 15th to May 19th. More importantly, he did not tell them about the adverse test results until the MOE asked for documents. At this time, Stan Koebel revealed the test results, along with the daily operating sheets for Well 5 and 6. Those for Well 7 were not handed over until Frank Koebel revised them on May 23, the day when the health unit was notified of the water sample.

During this time, several patients in the local hospital had to be airlifted to London for treatment. Many people became seriously ill, several contracting hemolytic uremic syndrome (HUS). Seven people died as a result of the contamination. The first death occurred on May 22, 66-year old part time librarian, Lenore Marie Al died at the London Health Sciences Hospital (Southworth, 2000). The following day, a 2-year old girl died just as Dr. McQuigge declared this outbreak the worst *E.coli* outbreak in Canadian history (Southworth, 2000). On May 26th, as the community and officials grappled with the impact of the contamination, a class action lawsuit was filed on behalf of the families whose members became ill or died as a result of the contamination.

Although the provincial government initially did not want to proceed with a public inquiry, an inquiry into the contamination was called due to pressure from the public and opposition parties. The mandate of the Walkerton Inquiry was twofold: 1) determine the causes of the contamination, which included, if any, government policies, practices or procedures; and 2) provide recommendations to ensure the safety of Ontario's drinking water (O'Connor, 2002b). The Inquiry began on October 16th, 2000 and heard from over

100 witnesses, ranging from local residents, town officials, senior level civil servants and the Premier of Ontario, Mike Harris.

The testimony from these witnesses helped piece together the factors that led up to the contamination of Walkerton's drinking water system. O'Connor sites several reasons why the contamination occurred: 1) Well 5 was the source of the contamination, although the owner of the nearby farm was not at fault for following proper practices in spreading manure; 2) the outbreak would have been prevented by checking and continuously monitoring the residual and turbidity at Well 5; 3) although the PUC operators lacked the training and expertise to identify the vulnerability at Well 5, the MOE was at fault for not using continuous monitors at Well 5. Moreover, they were at fault for not detecting the improper practices of the Walkerton PUC; 4) the PUC operators were at fault for their years of improper management and operating practice, specifically for not measuring chlorine residuals, especially during the critical period when *E.coli* found its way into the Well 5. O'Connor suggests the outbreak would have been substantially less had residuals been checked; 5) the PUC commissioners were found to be at fault for not acting on a report from the MOE from 1998 about their concerns over water quality and operating deficiencies; 6) Stan Koebel was at fault for not disclosing the adverse water sample results to the local health unit, which may have lead to 300 to 400 fewer illnesses; 7) the health unit was criticized for not broadcasting the boil water advisory broadly enough, as some residents were unaware of it; 8) the provincial government's budget reductions lead to the discontinuation of government testing of water for municipalities. O'Connor suggests the government should have enacted regulations to ensure testing laboratories notify the MOE and Medical Officer of Health directly with adverse results. He indicates had the

government enacted these regulations, a boil water advisory would have been issued on May 19th, rather than May 21st; and 9) the provincial government's cutback of independent water investigators made it less likely that the MOE would have identified the need for continuous monitoring at Well 5 and have uncovered the improper monitoring practices at the Walkerton PUC.

To ensure that such a contamination not occur again, O'Connor's second report (2002b) offers a comprehensive series of recommendations to protect drinking water. It is divided into source water protection, effective standards and technology, recommendations to municipal water providers, provincial oversight, and special cases. Of particular importance is the recommendation to the provincial government to enact a *Safe Drinking Water Act*. This recommendation pulls together all legislation and regulations under one umbrella to ensure the safety of drinking water supplies, ensures proper training of individuals who oversee the monitoring of drinking water, and requires testing laboratories to contact the MOE with adverse test results. The events of Walkerton helped redefine 'good water', not just for Walkerton, but also for the rest of the country (Parr, 2005).

Once the final reports of the Walkerton Inquiry were released, the community and its residents were able to try to return to some degree of normalcy. Despite the arrival of the media and the creation of a small 'artificial' economy in the town, businesses were still financially hurt by the contamination; locals were afraid to come out of their homes for fear of being questioned by the media and tourists were afraid to visit. Local businesses, which were negatively affected by the contamination, were left with the task of getting back to normal and the community overall was left to deal with their tarnished image.

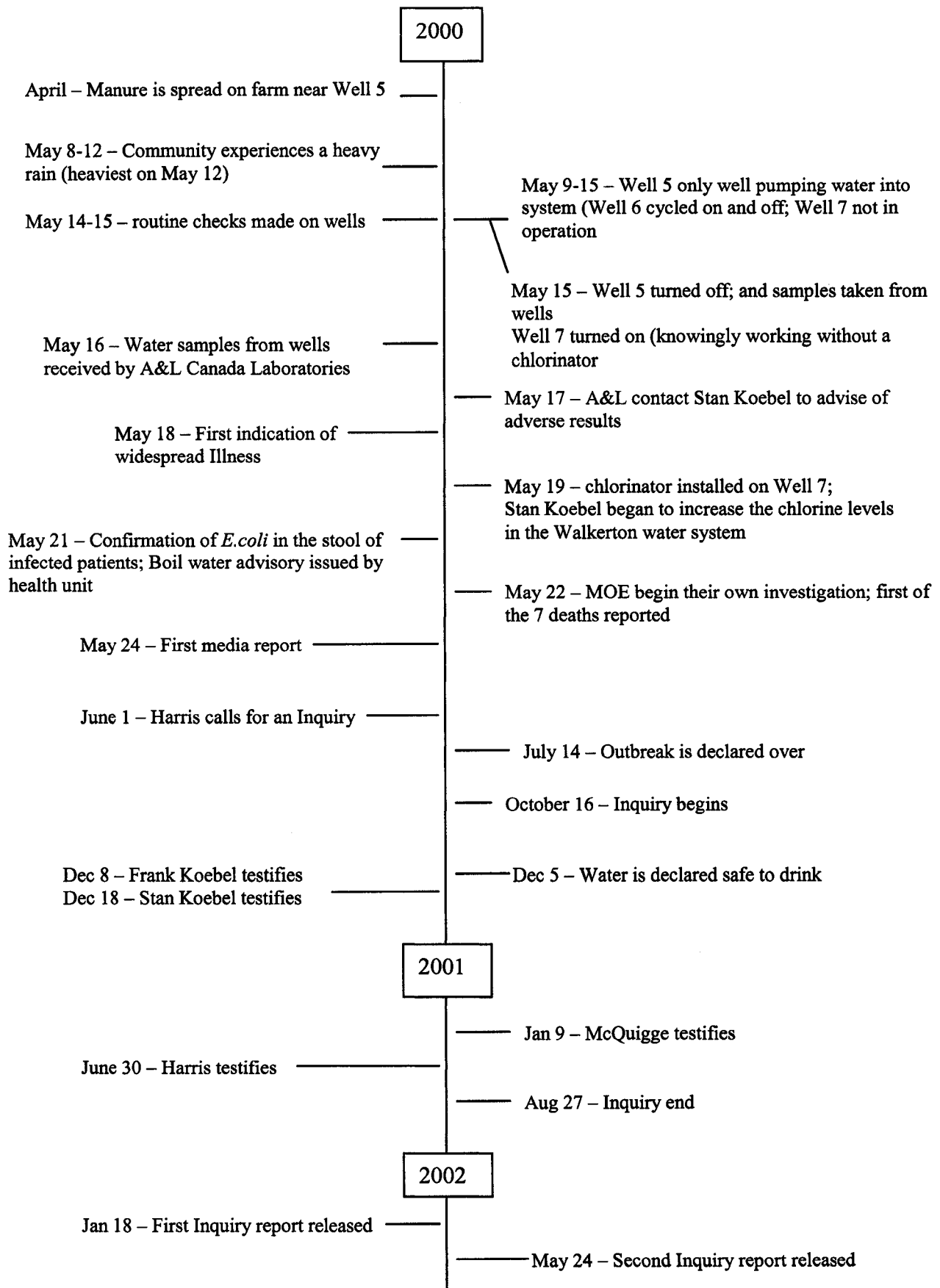


Figure 2.1: Timeline of the Walkerton risk event. The timelines provides a brief overview of some of the major events that took place from May 2000 to December 2002.

Chapter Three

The Media Construction of Risk – A Literature Review

3.0 Introduction

Look at what happened in Walkerton. It caused a death before it actually even hit the media...All those people were sick for how long? Anything you heard about it was just slight blurbs. And so finally someone died and as soon as someone dies, suddenly it's front page news. It's the leading story on the local news, that type of thing. I think it is just like anything else, until a death is caused, the media doesn't really cover anything, until it's catastrophic. I'd say that's more...more the world we live in today. Until the collapse of the twin towers, terrorism once again, it was something that was mentioned upon here and there, but never really any in-depth was gone in to it. I think that's just the world we live in: until death is caused, I don't think that many people are standing up and taking too much notice of anything. (Kitchener-Waterloo resident, focus group data).

The relationship between the media's construction of risk and resulting public perceptions and behaviour is complex (Braxton et.al., 1999). The media play an important role in the portrayal of risks – in their presentation of risks and their uncertainties (Beck, 2000; Slovic, 2000a; Kasperson et.al., 2001; Berry, 2004). As frontline risk articulators, the media take the necessary scientific information from the risk assessors and make it accessible for the public (Kasperson et.al., 2000). Though, as Kingdon (2003, p.60) indicates the “...[M]edia can help shape an issue and help structure it, but they can't create an issue”. This suggests that the media reflect the present social and political issues. However, as the quote from a resident of Kitchener-Waterloo illustrates, some members of the public feel the

media only report on dramatic events where death (or similar tragedies) occur. Kasperson and colleagues (2000) argue the news media become the battleground where participants vie for attention so that *their* issues become news stories. An example is seen in health advocates who become skilled in packaging their issues to be noticed (Cooper and Roter, 2000), often leading to public health risks being front page news stories (Renn, 2004).

The public is readily confronted with information regarding health and environmental risks on a daily basis (Graham and Rhomberg, 1996; Cooper and Roter, 2000), often moments after it occurs (Slovic, 2000d). Much of the public's understanding of advancements in science and technology, in addition to health and environmental risks comes from the media (Dunwoody and Peters, 1993; Singer and Endreny, 1993; Griffin and Dunwoody, 1997; Powell and Leiss, 1997). Powell and Leiss (1997) argue the media also encourage political and social dialogue by the issues they choose to report. This is not to say people only discuss those issues in the media or that the general public relies on the media as a primary information source.

Generally speaking, over the past 20 to 30 years, researchers have found an increase in the range and diversity of risks (Berry, 2004), many of which are 'uncontrollable' (see Beck, 2000). When a risk occurs, the media serve as the initial, if not the only, claims-makers broadcasting information to the public about the risk event. Claims-making, Best (1995) argues, "is an act of communication" (p.13), where the claims-makers want to persuade their audience of a problem. In Walkerton, the media, acting as claims-makers, wished to communicate to the general public the problems occurring in this small community. The initial media reports helped frame the event to establish a mental image,

whereby subsequent reports are assessed according to these initial reports (Frewer et.al., 1998), and possibly influencing perceptions of drinking water risks.

The media's construction of the events of Walkerton structured and framed "what the public beyond Walkerton would know about the event" (Parr, 2005, p.253). The media focused on the risk itself (drinking water), the health of the community members, and the community, more broadly. Very quickly, the media became one of the primary sources of information for the public, constructing images of Walkerton to those outside its borders.

The focus of this chapter is on media constructions of risk in the news and how media discourses may influence public understanding of risk issues. Discussions will be confined to the Walkerton *E.coli* risk event. Additionally, media constructions of place will be examined against Edelstein's concept of a contaminated community and Agnew's idea of sense of place.

3.1 Risk Research Perspectives

Risks are not static as they are part of a constantly changing network of social interaction (Lupton, 1999) and considered a multidimensional concept (Holzheu and Wiedemann, 1993), making it difficult to discuss risk separately from perceptions of risk. The literature (Shrader-Frechette, 1991; Slovic, 1992; Kunreuther and Slovic, 1996; Slovic, 2000a; Rosa, 2003) suggests that risk can be inherently subjective, based on the person's understanding of the event or issue. However, to understand how researchers have defined risk from a variety of perspectives, the definition and evolution of risk research needs to be explored.

Defined simply, risk involves the probability of occurrence and the possibility of injury, damage or loss (Renn, 1992; Cutter, 1993; Leiss and Chociolko, 1994; Kunreuther and Slovic, 1996), suggesting danger and possibly fear associated with risks. Although some use risk and danger interchangeably, they have different and distinct meanings. Danger relates to something that is likely to cause harm (Rosa, 2003), whereas risk refers to the measure of exposure or impact of that harm and the resulting likelihood of loss or injury (Leiss and Chociolko, 1994; Garland, 2004) to human health and the environment. Risk impacts are most often measured. Risk managers are primarily concerned with minimizing risk probabilities, while the general public is more concerned about long-term effects of risk, equity, fairness and issues around personal control (Renn, 2004). Quantitative measures of risk rarely take into consideration other factors such as voluntariness, controllability, catastrophic events, and possible threats to future generations (Sjöberg, 2000; Slovic et.al., 2000).

Contemporary risk research began during the development of the nuclear industry, during the 1950s (Strydom, 2002). The focus of that research was in the area of safety and control, due to the nature of concerns related to the nuclear industry (i.e., weapons and energy use). As such, those experts involved in assessing risk were in the fields of engineering, planning, economics and psychology (Strydom, 2002); fields that suggest the use of scientific methods to objectively measure risk (Smith (2004). Garland (2004) suggests that even as recent as ten or fifteen years ago the notion of risk did not play a strong role in social or cultural commentary.

By the 1970s, a new approach to assess risk provided quantitative measures of psychological, social and cultural factors into a new framework (Lupton, 1999; Slovic,

2000b; Strydom, 2002). This new theoretical framework, the psychometric paradigm, assumes the individual is influenced by several social and cultural factors, such that risk means different things to different people (Slovic, 2000a). Psychometric studies, among the most frequently cited in the risk literature (Golding, 1992; Frewer, 1999), focus on the expected loss of life or expected monetary damages (Gregory and Mendelsohn, 1993; Slovic, 2000b). Some of the more general questions to come out of these studies revolved around the public's willingness to accept such risks (Slovic 2000a), signaling the need for deeper examination of what influences public perceptions of risk. With this shift, researchers studied how risks are conceptualized to whom they affect and how blame is ascribed, as factors that play a role in assessing risk (Lupton, 1999). Despite this movement towards a broader social structure for the assessment of risk, the psychometric research work still dominates (Golding, 1992).

Geographical research is sensitive to the incorporation of cultural and social factors into a risk framework (Slovic, 2000b). The geography of hazards support the understanding of the interaction between technology and society, the impacts of these technologies on society and the environment, along with how society is able to cope or adapt to these impacts (Cutter, 1993). Understanding human behaviour with respect to hazards were often quantifiable measures.

Social constructionism focuses on the social processes that influence how people react to an event or problem. It does not try to determine what is right and what is wrong, but rather how different interpretations of reality are constructed that could influence public perceptions of risk (Lupton, 1999). For this reason, 'risk' is also considered a social construction, as perceptions of risk depend on the social or cultural categories of those who

define it (Douglas and Wildavsky, 1982; Fox, 1999). People generally construct their own reality and evaluate risks according to their own subjective perceptions (Renn, 2004), while their acceptance of these risks are based on their social values (Douglas and Wildavsky, 1982). The social constructionist position provides valuable insight into how people perceive risk and what is required to manage risks effectively (Slovic, 2000c).

The media's construction of risk falls under the broader theoretical umbrella of social constructionism. Fleras (2003) argues that media constructions reinforce dominant ideologies, and can draw attention to some aspects of reality and away from others. The media help to define a problem, or risk event, by bringing it to the attention of the public. As a result, the media can help to shape public discourses and possibly influence perceptions of that risk by the extent of coverage on a particular issue as compared to other issues. Gamson and Modigliani state that "...[m]edia discourse can be conceived of as a set of interpretive packages that give meaning to an issue. At its core is a central organizing idea or frame suggesting what is an issue" (Durrant et.al., 2003, p.75). The way in which the issue is framed helps to define that issue, while the way in which the packages (the stories) are put together also provides meaning to that issue. Packaging stories that focus on the more damaging aspects of the risk tends to bring a negative tone or frame to the overall story. By continuing to concentrate on the more negative factors of the risk, in subsequent media reports, the public may begin to associate those negative aspects with the risk.

Frames are a way of "packaging and positioning an issue so that it conveys a certain meaning" (Menashe and Siegel, 1998, p310). Leiss (2001) describes the dioxin controversy as one where the initial framing of the chemical affected how people continued to perceived it. When the dioxin risk controversy first emerged in the American media in 1972, the

connection was immediately made with exposure to Agent Orange and severe health defects in Veterans exposed to this chemical. By 1976, the press stories began framing the substance as a toxic chemical, and by 1978, it was defined as deadlier than nerve gas. From this point forward, the stigma was heightened by the toxins found in Love Canal, in New York State, as well as, by veterans pressing for recognition of their pain and suffering. In the late 1980s, the Canadian media using similar frames in which dioxins were a deadly substance picked up the dioxin controversy.

3.1.1 Risk Reporting – The Role of the Media

Media reports of environmental issues often incorporate the category of risk in their stories (Dunwoody and Peters, 1992), as do reports of health issues (Anderson, 1997). When combined, environment and health stories often appear as front-page news (Renn, 2004), receiving more visual focus as important risk issues.

The media tends to promote ‘newsworthiness’ by concentrating on the rare or dramatic hazards that are seen as more sensational (Dunwoody, 1992; Dunwoody and Peters, 1993, Kasperson et.al., 2000 and 2001) rather than by reporting more common (and more often serious) risk events (Kasperson et.al., 2001). Consequently, the media are often accused of presenting biased, sensationalized information to grab public attention, rather than educating the public (Dunwoody and Peters, 1993). This sensationalism is used to entertain the public, as well as, sell newspapers and pleases advertisers as they hold the financial power (Lupton, 1994b). Researchers trying to communicate risk information also indicate that the media tend to distort risk issues and treat these issues emotionally (Dunwoody and Peters, 1992; Anderson, 1997). Dunwoody (1993) uncovered two distinct

patterns during an analysis of media coverage of risk research. First, media coverage does not reflect research into risk events, and second, available stories often contain very little information about the risk itself. Given these patterns, public understanding of risk, if based exclusively on the media, is incomplete.

Several reasons are offered for why biased and sometimes attention grabbing stories are printed and broadcasted. The first reason shows how Donsbach (2004) indicates that the media is tuned to *institutional objectives*, that is, the media do not exist as an island unto themselves, nor are they the only source of risk information (Bennett, 1999). Institutional objectives are a consequence of the journalist's "employment status" (Donsbach, 2004, p.134). While reporters have some degree of autonomy, they are influenced by the broader objectives of the editors, producers and media outlet that have a vested interest in promoting a particular story angle (Dunwoody, 1992; Fleras, 2003; Lorimer and Gasher, 2004). Also, a second reason for this type of reporting is to show how the reports and those affected by the issue themselves may influence how the reporters look at an issue. In the case of Walkerton, how residents were affected by the contamination, or how government officials indirectly played a role in the contamination of the drinking water supplies in Walkerton, may have influenced the media coverage. Another reason these stories are used is to show how the journalist's own familiarity or understanding of the events may also influence story construction. Despite the influence the media has on the public, they too may exercise agency in the take-up of media messages.

Bennett (1999) describes 9 of the most common triggers that influence the media to report an issue (see Table 3.1).

Table 3.1: Factors influencing how health risks to public health become a major story (adopted from Bennett, 1999)

Media Triggers	
1	Questions of blame
2	Alleged secrets and attempted cover-ups
3	Human interests, through identifiable heroes, villains, etc.
4	Links with existing high-profile issues or personalities
5	Conflict
6	Signal value: the story as a portent of further ills (' <i>What next?</i> ')
7	Many people exposed to the risk, even if at low levels
8	Strong visual impact
9	Links to sex and/or crime

Of these triggers, Bennett (1999) indicates that blame is considered to be the single most important media trigger for whether a story becomes an important event worthy of reporting, and for the length of time that risk issue will be covered. However, a story about a public health risk could have many triggers. For example, the SARS outbreak in Toronto in the spring of 2003, became a major story due to several triggers: blame (over the origin of the virus), signal value (when the illnesses would stop), and visual impact (effect on the daily lives of those who work and live in Toronto). Although blame triggers a risk issue to be deemed newsworthy, it also becomes important when the public is dealing with a risk event. Blame offers some hope that responsibility will be taken, which could help the public to move forward. Hood (2002) suggests that blame is an interactive process consisting of blamers, generally those from the public, and the blame-shifters, broadly noted as the government. Blamers try to steer blame to those directly involved with the event, while the blame-shifters try to avoid the blame. These tensions are often played out in the media. Lupton (1999) argues “every death, every accident and every misfortune is chargeable to someone’s account” (p.45). Someone is always held accountable for the problem regardless of whether or not they are truly responsible.

Slovic (2000d) indicates the public and the media give greater attention to negative stories. Generally, Slovic suggests these stories are trust-destroying news, where the focus is on the negative aspects of the issue, such as those listed in Table 3.1. Although the triggers help to call attention to the risk issue, their use in story framing is misleading (Anderson, 1997).

3.1.2 Reporting a ‘What-a-story’ and Packed Journalism

The Walkerton risk event captured many of the triggers found in Table 3.1, which made it an issue worthy of media attention. The first media stories on May 24th, 2000, contained references to the deaths and illnesses in Walkerton, and classified the risk event as the “worst outbreak of [E]-coli in Canadian history” (CBC, May 24, 2000) and as a “full blown epidemic” (CTV, May 24, 2000). Media stories also detailed concerns from community members and officials about how this contamination could have occurred, who was at fault and when the illnesses would end. The Walkerton risk event was also reported over a long period of time, longer than the common reporting period of about 10 days after which interest in stories start to wane (Frewer et.al., 1998).

The drinking water contamination in Walkerton also became a ‘what-a-story’, an event that is so consequential and dramatic that the media will drop everything else to report on this event (Frank, 2003). Coined by Tuchman in 1973, a ‘what-a-story’ refers to the way in which the news organization responds to big, breaking news (Tuchman, 1973 and 1978; Frank 2003). The ‘what-a-story’ is not merely a local event; when the story breaks, the event is often broadcast throughout the region, state and maybe country. This risk event had everything a satisfying story would require (Parr, 2005): a villain (the Koebel brothers), the

victims (the residents of the community), the hero (Dr. Hallett, who first recognized the health signs of the *E.coli* contamination), and a tragic event. All of these typify a ‘what-a-story’ event, where one can imagine the verbal and nonverbal gestures and excitement that accompany the announcement of a story in a newsroom (Tuchman, 1978).

Hand in hand with the ‘what-a-story’ is ‘pack journalism’ (Frank, 2003). The term ‘pack journalism’ visually fits the public’s perception of the media as they descend on, for example, a community such as Walkerton, en masse when a risk event of this magnitude occurs. As soon as news broke of the deaths in this community, the Canadian media began presenting blanket, on-the-ground news coverage of the events to the country (Parr, 2005), as illustrated by the following quote:

“on the day after that first death, there was nobody on the streets of Walkerton. Except the media...No people, just media. But the media, they were everywhere. The outsiders. Of course, people know about the media now and they expect them to arrive in places like Walkerton, as they expect vultures to arrive in pursuit of carrion. There were television trucks and cars all along the block by the municipal building. It’s entirely possible that a TV truck had never before been on the streets of Walkerton...there were all those reporters” (Gray, 2000, A14).

Frank (2003) provides a likely reason why ‘pack journalism’ occurs. He indicates that editors become quite nervous about printing stories that other outlets do not, and at the same time, also become nervous about printing stories the others also report. The resulting situation is different media outlets printing and/or broadcasting stories on the same or similar issues, thereby increasing their visibility on a public scale (McCombs, 2004). For example, a media analysis of the coverage of Three Mile Island and Love Canal shows that repeated stories about these risk events directed the public’s attention away from competing news stories (Mazur, 1984; Kasperson et.al., 2000). The high volume of media reporting also mobilized fears about that risk (e.g., threats from nuclear power or chemical

contaminants in drinking water) and the possibility of similar risk events occurring more often (Frewer, 1999; Kasperson et.al., 2000). Mazur (1984) indicates that the attention generated from the Three Mile Island accident was far greater than the attention garnered for an airline accident killing 274 people that occurred around the same time. Labeled as the worst airline accident in American history, Mazur (1984) speculates that the relatively low level of media/public attention to this airline accident is due to the novelty and severity of the accident at Three Mile Island.

3.2 Risk Perceptions and the Media Influence

Perceptions are another dimension in the understanding of risk (Smith, 2004). Perception is defined as the “mental processes through which a person takes in, deals with and assesses information from the environment...” (Renn, 2004, p.406) or a process by how *individuals* estimate, evaluate and understand the probabilities and consequences of risk (Krewski et.al., 2004). Perceived risks are defined by Renn (2004, p.406) as a “collection of notions that people form on risk sources relative to the information available to them and their basic common sense”. Pidgeon (1998) adds that perceptions of risk includes beliefs and attitudes, and also encompasses wider cultural and social dispositions, where “[r]isks are perceived in relation to our habits and activities...” (Holzheu and Wiedemann, 1993, p.9). Douglas and Wildavsky (1983) indicate that perceptions of risk are socially constructed and thus influenced by the individual or group’s social surrounding and cultural background. The way in which a person views an event as being risky differs among individuals (Berry, 2004).

Bennett (1999) offers several additional reasons, based on three decades of psychometric research, for why some risks are perceived more risky than others, in Table 3.2.

Table 3.2: Factors that determine why some risks are seen as more risky than others (altered from Bennett, 1999)

Factors affecting perceptions of risk (Fright factors)	
Risks become worrisome if...	
1	they are involuntary rather than voluntary
2	they are inequitably distributed
3	they are inescapable
4	it arises from an unfamiliar source
5	it is man-made , rather than from a natural source
6	it is cause to some hidden or irreversible damage
7	it will pose particular danger to small children, pregnant women or to future generations
8	it will threaten a form of death (or illness/injury) , arousing dread
9	it will damage identifiable rather than anonymous victims
10	it is poorly understood by science
11	it is subject to contradictory statements from responsible sources

Some of the factors (particularly #1 to 4 and 6) listed in Table 3.2 have an uncontrollable aspect associated with the risk, which could contribute to greater fear. Risks with these traits may be less acceptable to the general public. Krewski and colleagues determined, in a 2005 Health Canada study of public perceptions and acceptable levels of risk, that the public fears a risk more when it concerns their own health. Moreover, the public will seek out additional information when there is a possible impact on their health or the health of their family (Cooper and Roter, 2000). Contrary to the general research findings contained in Table 3.1, the participants in the Health Canada study connected their health fears to daily personal behaviours, such as drinking and smoking. Although these behaviours are more controllable, they were viewed as greater risks. Jardine (2006) hypothesizes that while people may understand the health information associated with personal risk behaviours they still engage in risky behaviours. Since the risks are widely known, it may be more acceptable to engage in such behaviours, since they may not cause immediate detriment to their health.

3.2.1 Perceptions of Risk – The Agenda-Setting Influence and Amplification of Risk

“The press may not be successful much of the time in telling people what to think, but it is stunningly successful in telling its readers what to think about” (Cohen, 1963, p.13).

The debate over the media’s influence over the public is not whether they have an influence, but the extent of this influence (Fleras, 2003). The media helps to define what the public is thinking about (Cohen, 1963) by virtue of what the media report (their agenda), the way in which the stories are framed, and with what frequency the stories are reported on (Kasperson et.al., 2001). This influence can be determined, in part, by studying the agenda-setting role of the media. Agenda-setting looks at the relative salience of the issue in the media over time (McCombs, 1981; Rogers, 1993; McCombs, 2004). Public understanding of risk also may be determined by evaluating how the media frame the stories they write. The combination of these two concepts, agenda-setting and framing, could be used as a proxy measure to ascertain what the public is thinking about, based on media presentations of risk.

McCombs (2004) indicates agenda-setting is a two-fold process; where one level focuses on the overall attention the media gives an issue and the other is the way in which an issue is framed. Lippmann (1922) observed that the underlying public opinion about an issue is a result of the mental image created of events. These images, McCombs and Ghanem (2001) suggest, are where framing and agenda-setting converge. As a result, story framing has an influence over the media agenda-setting process, which could affect on public perceptions of risk.

Although causality is difficult to determine, the mass media are considered to be powerful agenda setters and thus have some influence over public opinion (McLeod et.al., 1974; Anderson, 1997; Kingdon, 2003; McCombs, 2004). Agenda-setting is the relative

importance of an issue on the media's¹ agenda, and the evolution of this issue over time (Rogers, 1993; Soroka, 2002), by looking at the frequency by which particular items are mentioned as a measure of "media priorities" (Anderson, 1997, p.25). The frequency at which these items are mentioned in the media has been shown to influence public behaviour. For example, extensive media coverage of crime and violence on a university campus contributed to a significant drop in applications the following year (McCombs, 2004). The media's decision on what to present could also influence what ends up on the public's agenda, by virtue of the salience of these issues within the media (McCombs, 2004). For example, the contamination and subsequent health risk of the toxic contamination of Love Canal, helped to bring changes to the United States National Waste Policy (Lupton, 1994a). McCombs (2004) argues there is a fundamental link between the salience of an issue within the media and the formation of public opinions, attitudes and behaviour. He indicates that news coverage of airplane crashes and skyjacking draws a link between media communication and risk avoidance behaviours. Though much of the literature on agenda-setting concerns political communication (McCombs, 2004), and more specifically on the print media² (Soroka, 2002), the concept of agenda-setting can be used to understand the possible impact of risk issues on public perception. Figure 4.1 illustrates the agenda-setting process.

¹ The media, in this case also refers to the broader editorial boards, producers, etc., who also influence the agenda.

² Soroka (2002) indicates that an index of television news does not exist prior to 1992, in Canada.

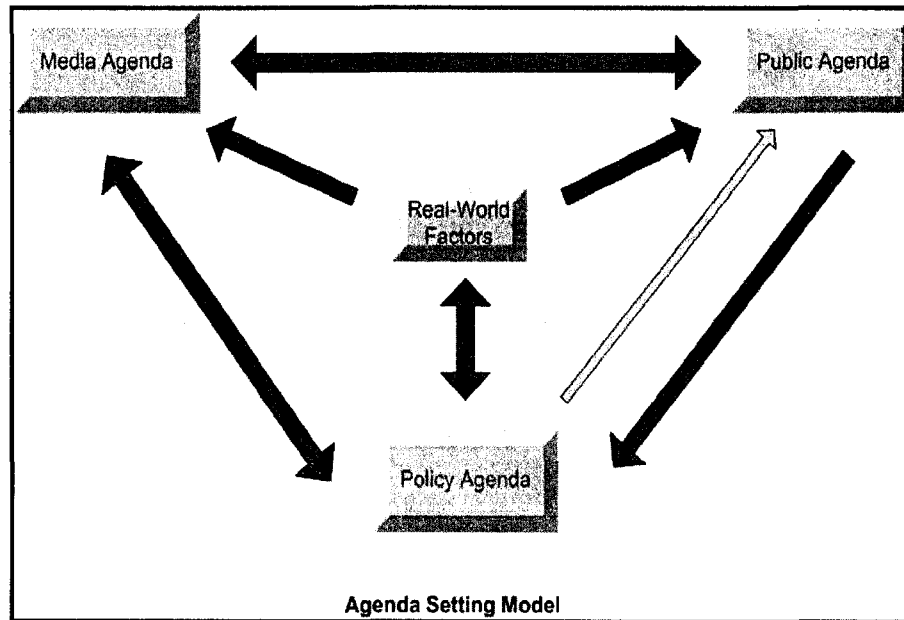


Figure 3.1: The figure illustrates the agenda-setting model, incorporating the media, public and the government (policy). (altered from Soroka, 2002, p.11)

Figure 3.1 illustrates the agenda-setting model that incorporates the media, public and the government, represented as *Policy Agenda*. The ‘*Real-World Factors*’ listed in the middle of the diagram represent the events or situations that occur and affect the other three agendas. The Walkerton case study is one such example of a real-world factor, where the factors surrounding the contamination of the community’s drinking water had some influence over the three different agendas illustrated in Figure 3.1. Note of interest in this diagram is the way each agenda is capable of affecting the others, except for the government’s ability to directly affect the public agenda. Soroka (2002) indicates the government indirectly affects the public agenda via the media. Though a policy affects the public’s agenda, it is not through a direct relationship between the government and the public. However, with the introduction the Internet, the government is in direct touch with the public. Thereby, the public is directly informed on government policy changes without the mediation of the media, illustrated by the faint coloured arrow in Figure 3.1. The public is able to gain access to transcripts of parliamentary debates and to receive legislative texts

of policy changes. Although the empirical data of the number of people that search out such information is not available, one could assume this percentage is very low. To illustrate in the context of the Walkerton research project, the Conservative government at the time made public statements regarding the *E.coli* contamination by using the media to broadcast the steps the government would take to safeguard the drinking water in Ontario. Conversely, due to public pressure surrounding the Walkerton event, the provincial government agreed to hold an inquiry to determine the cause of the contamination.

Watt and colleagues (1993) state that there have been two common questions regarding the influence of media agenda-setting over the reporting period of an issue: 1) “what is the optimal time lag between the appearance of news reports on an issue (or audience exposure to the reports) and subsequent shifts in the public’s perceptions of the importance of the issue? 2) What are the cumulative effects of media over time?” (p.408-409). Thus, the length of time an issue remains in the media could reflect the level of importance the public gives this issue and its relative rank on the public agenda. A chronic risk issue could potentially see more media attention over a longer period of time than an acute issue, influencing how the public perceives its importance. However, as will be demonstrated by the media analysis of the Walkerton events, acute risk issues could also experience longer periods of reporting. With these long periods of reporting come intermittent times of concentrated frequency of reporting, due to the lasting health and political impacts of the issue on the community.

The public’s perception of risk can be influenced by how dependent the public is on the media for information. Kasperson and colleagues (2001) argue that the media act as amplifiers of risk, or ‘stations’, constructing and communicating information about that

particular risk. The media's role in amplifying risks is part of the social amplification of risk framework, first introduced in 1988 by Kasperson and colleagues (Kasperson et.al., 2005). This framework brings together risk perception and risk communication research (Kasperson et.al., 2005). Frewer (2003) suggests the framework can also indicate why small risks, with little physical impact, attract substantial attention. The framework also helps to describe the dynamic social and cultural processes that influence public perceptions of risk and behaviours (Kasperson et.al., 2005). Although quite detailed, the element of interest to this research project is the role of the media. The information the media generates and transmits about a particular risk causes a rippling effect within society (Kasperson et.al., 2000 and 2001). However, Kasperson et.al., (2005) add that extensive media coverage is not always the deciding factor on whether or not a risk is amplified. Trust also plays an important role in perceptions, which will be discussed later in this chapter.

3.2.2 Cognitive Triggers – Affect and Heuristics

The public uptake of information from the media is influenced by three different cognitive responses: affect, availability heuristic and information heuristic. The familiarity of the event and the salience of the issue in the media could affect the ability of the public to retrieve information about this event (Tversky and Kahneman, 1974). For example, Tversky and Kahneman (1974) argue that witnessing a burning house will cause a person to believe this type of accident occurs more often than just reading about it. Slovic (2000b) views this type of cognitive trigger as 'affect' –based on intuitive and experimental thinking that is guided by an emotional and affective process. Slovic defines affect as the “subtle form of emotion, defined as positive (like) or negative (dislike) evaluative feelings toward an

external stimulus” (2000b, p.xxxi). Affective reactions are usually the first and often automatic response when reacting to stimuli, such as a risk event (Finucane et.al., 2000; Slovic, 2000b). Therefore, perceptions of risk could be created in part by affect; thereby, influencing how the public will perceive future risks.

Once a risk event occurs, both print and broadcast media tend to construct a continuous stream of health stories concentrating on the impact of the event (Dake, 1992) on humans. Klaidman (1990, p.122) suggests these health reports tend to focus on the “unpleasant consequences”, rather than overall consequences to human health. Frewer (1999) indicates the first ten days after the risk event occurs becomes a crucial time period for establishing risk perceptions. The public creates a mental image of this event based on these initial reports. After the initial ten day reporting period, the frequency and number of media reports will decline drastically (Frewer et.al., 1998; Braxton et.al., 1999).

The second cognitive trigger, often the result of high frequency of reporting, is an ‘availability heuristic’, which helps to signify situations of potential danger. The availability heuristic will judge how likely or frequently a person would feel a risk event occurs, if they are able to recall that event. When the frequency and number of media reports increases on a risk event, the likeliness of the public to feel this event is important also increases (Frewer et.al., 1998; Frewer, 1999). Moreover, the public feels this risk issue could occur more often even if the probability of occurrence is low.

The third trigger, the ‘information heuristic’, acts as an archival system, where the reader’s base information is retrieved in order to understand new data of information about the risk issue in question (Frewer et.al., 1998). This is often set up after the initial ten day reporting period (Frewer et.al., 1998). All subsequent reports then act as a cognitive trigger,

or heuristic, in which additional or new information about this risk event is understood based on all previous reports. Once this heuristic is established, it is difficult for any new information to be incorporated into this mental image (Frewer et.al., 1998). The challenge for health advocates is to ensure the appropriate health risk information is communicated to the public within this brief 10-day timeframe, so that the public is able assess the risk accurately. Moreover, the task on the part of the health advocate includes having to frame the news stories to appeal to the media “gate keepers” and the public, ensuring their information is printed or broadcast (Cooper and Roter, 2000, p334).

Even after the issue is no longer being reported on, Watt and colleagues (1993) show that the media can continue to influence public perceptions of a past risk event, due to the relative obtrusiveness of that issue. Studies looking at past events have found that over time the public does lose interest with a story, although the initial reports of an event may heighten the public’s attention (Watt et.al., 1993). The relationship between agenda-setting and its effect on the public has been summarized: the obtrusiveness of an issue decreases with time and thus the agenda-setting effect also decreases (Watt et.al., 1993). In conclusion, the public’s interest in an issue decreases with time.

The media’s agenda-setting process is closely linked with public and policy agenda-setting. Generally, the salience of an issue in the media could play an important role in what the public is thinking about. However, the way in which a story is framed could also provide another influence over the public’s perception of risk issues.

Frames are a way of packaging a story so that specific themes or subject matter in that story are emphasized to help define what the issue or story is really about (Menashe and Siegel, 1998). As a consequence, frames serve to create boundaries around an issue to

determine what will (and will not) be highlighted (Miller and Riechert, 2000; Driedger and Eyles, 2003). Framing also plays a role in how stories are interpreted by a public audience (Rogers, 1999). As such, frames act as a powerful agent in manipulating information that is disseminated to the public. Analyzing story frames is one technique to uncover the story's themes. The frame is a "powerful predictor of risk story selection and structuring..." (Dunwoody, 1992, p.76). Although not much is known about how journalists frame their stories, Dunwoody (1992) suggests their "journalistic occupational norms" decide what aspects of a risk story are most relevant to report (p.76). By contrast, Combs and Slovic (1979) found that journalists feel compelled to report on stories that represent sources of societal vulnerability about which the public should be informed. In both of these situations, the use of frames limits the story's meaning, thereby, constraining the analysis of the story by the reader (Potter, 2004). A study conducted by Singer and Endreny (1987) illustrates that a rare hazard is more newsworthy than a common hazard; a new hazard is more newsworthy than an old one; and a dramatic hazard that kills many people mysteriously is more newsworthy than one of chronic or familiar illnesses. Therefore the type of story the media chooses to report on, including the elements of that issue they highlight, may influence the story frames and thus affect the message being sent to the reader or viewer.

Journalists quite often write about risks, although they may not necessarily define their stories by such risks (Dunwoody, 1992). As such, if the story is framed in a particular way, some important aspects of the risk issue are left out. Conversely, if the story contains more information about the risk, the information that is included is based on the journalist's judgment and knowledge of the situation of risk "as a scientific and social construction"

(Dunwoody, 1992, p.79). Thus, it becomes their interpretation of the risk information rather than directly relaying information about the risk as it occurs.

Both Dunwoody (1992) and Potter (2004) suggest several reasons for how journalists frame their stories. Dunwoody (1992) indicates it is not the job of the journalist to educate the public, but rather to inform them about what is happening. During the 19th Century, stories based only on facts provided an assumed truth to the journalist's claims and also validity to the authority being reported on (Iggers, 1999). It was not until the 20th Century where facts were not enough and journalists realized they needed to provide the bigger picture, to "place the facts in context" or to "interpret the news" for public consumption (Iggers, 1999, p94). The implication is that the media's role is now dual: presenter and interpreter (Sheppard and Bawden, 1997).

The influence of media frames over the public's acceptance of information can be illustrated by Kennedy and Bero's (1999) analysis of print media coverage of passive smoking. Although strong scientific evidence existed to support the link between passive smoking and disease, the media's construction of the events that framed and highlighted the research outcomes as controversial, may have interfered with the public's acceptance of the associated health risks. Additionally, in an analysis of the chlorinated disinfection byproduct and cancer debates, Driedger and Eyles (2003, p.1287) found that scientists, regulators and industry representatives framed the issue as "chlorine disinfection saves lives", whereas, the media framed the stories as one where "chlorine is causing cancer". These two examples highlight key points with respect to issue framing. Firstly, evidence points out that expert assessment, is not always communicated to the public through the media. Secondly, media frames do have some impact on public perceptions of that risk.

Frames play an important role in how the public perceives certain risks. Frames will have an influence not only on what the public thinks about the risk, but may also affect the steps the public takes to deal with those risks. Not only do frames help define the problem, but they also help define the possible solution (Menashe and Siegel, 1998; Durrant et.al., 2003).

3.2.3 Values and the Perception of Risk

The public's understanding and assessment of risks is influenced partially by values (Brunk et.al., 1991; Slovic, 2000c).

“Without values, there would be no public concern about risks, no public debate about risks, and probably no public agenda to address them. Values are at the core of all risk issues and should be explicitly accounted for in managing risks” (Keeney, 1996, p.127).

As such, risks cannot exist independently of values. Risk cannot exist independently of social and cultural influences and thus is said to be value-laden (Slovic, 2000b & c). When risks pose a serious threat to personal or societal values, it will provoke strong public reaction against accepting those risks (Kasperson et.al., 2001). Brunk and colleagues (1991) indicate traditional methods of risk analysis leave out important societal values, such as trust, that should ultimately play a key role in the estimations of risk. This has lead to a call for greater sensitivity to how values judgments can be incorporated at every step of a risk assessment, which may influence risk estimates (Brunk et.al., 1991; Cothorn, 1996; Slovic, 2000c).

Trust plays an important role in the management and perception of risk (Berry, 2004). Several factors influence trust, including; fairness, perceived competence, objectivity, goodwill and consistency (Bennett, 1999). It is also argued by Frewer (2003) that there are

two major dimensions in determining public trust: accuracy and competence. The public's acceptance of risks is also related to their level of trust in the institutions that manage the technology, in the source(s) of the information, as well as the risk information itself. An example of this was seen with the British government as they had assured their public for many years that a link did not exist between bovine spongiform encephalopathy (BSE), more commonly known as Mad Cow Disease, and humans. During this time, the government stressed the disease was contained in animals and not transferable to humans. However, once a link was found between the consumption of beef infected with Mad Cow Disease and a transfer to humans, the British beef industry collapsed overnight (Powell and Leiss, 1997). Years of government mishandling of the Mad Cow situation (Powell and Leiss, 1997) caused great distrust of the government and regulators by the British public. Thus, when the debate over the use of genetically modified organisms (GMO) reached Europe, the public became very concerned and apprehensive about these new technologies in genetic manipulation regarding their food supply. The long-term health effects were unknown and the trust the public had in the British government was diminished. As such, the government's reassurances fell on deaf ears.

Values and trust are closely linked concepts. "Who is telling me this, and can I trust them" becomes a very important factor in how risks are judged (Bennett, 1999, p4). Public perceptions of risk, in part, seem to be affected by managerial (in)competence (Frewer, 2003) and the trust, or lack thereof, with respect to community managers (Kasperson et.al., 2001). The extent to which the public trusts those in these positions will determine their acceptance of risk information provided (Frewer, 2003). Moreover, Frewer (2003) argues that the extent of media influence over the amplification of risk is due, in part, to how the

public trusts the information source in addition to the information itself. In this trust-amplification relationship, greater trust in the source can intensify belief about the nature of risk; whereas, less trust in the source can attenuate the belief about the hazard. If trust is not apparent, with respect to the source of information (i.e., the media), the risk message will be ignored (Berry, 2004).

Trust is easy to destroy and once lost, it is difficult to re-build (Luhman, 1979; Freudenburg, 1996; Bennett, 1999; Lupton, 1999; Slovic, 2000a and d). Once distrust sets in, there is a tendency to perpetuate this distrust (Luhman, 1979; Slovic, 2000d; Berry 2004). Trust is grounded in a familiar world, where the individual or group is able to depend on past experiences to trust or not (Luhman, 1979). Situations of high competence coupled with care most often lead to trust (Berry, 2004). This not only relates to sources of information, such as the media, but also with respect to the public's relationship with the government. In a study of public perceptions of risk, Krewski and colleagues (2005) found the public did not always trust the medical establishment and relied on personal experience and experiences of friends and family, when presented with risk information. The general consensus on trustworthy information is "it depends on where it comes from" (Krewski, et.al., 2005, p.ix).

It is difficult sometimes for the public to trust the information they receive about the risk as they may be influenced by the mental image or heuristic the public previously developed. The Walkerton risk event is special as the community is small and it was suggested by the media that the contamination of drinking water in Walkerton placed this community on the map. Walkerton had been a small town, unknown by the public beyond the borders of its own community. Thus, general public knowledge of Walkerton became

based on the media's construction of this place. The following section will discuss the media's construction of a place, particularly looking at the influence of this risk event on the definition of a community.

3.3 Mediating Place – Constructing a community

Gamson et.al., (1992, p.374) indicate that “[w]e walk around with media-generated images of the world”, where the public's view is through the constructed news lens of the journalist. Walkerton was a virtually unknown community until the contamination was discovered, at which time it became the most newsworthy town in Canada. The media created, through their stories, this place of Walkerton. However, it was not until people died before did the media became attracted to this risk event.

Traditional geographical work related to health research has focused on the mapping of diseases (Brown, 1995; Burra et.al., 2002; Jerrett et.al., 2003; Fung et.al., 2005; Kandala, 2006) and the spatial distribution of health care (Anderson and Rosenberg, 1990; Cloutier-Fisher and Joseph, 2000; Williams, 2006). These studies explore why certain diseases are found in specific areas and what factors influence this, as well as, looking at the accessibility of health care resources. Health geography has also branched into exploring the changing meaning of place and space for those with disabilities (Dyck, 1995; Dyck and O'Brien, 2003; Driedger et.al., 2004). For example, Dyck and O'Brien (2003) discovered how the meaning of space changed for a man living with HIV/AIDS, as the disease progressed. As his medical and physical needs evolved, these were reflected with modifications in his private space (renovations to his home to accommodate his physical disabilities) and his

public space (moving to be closer to medical services). Consequently, health and place are closely linked in defining and redefining a place or space for those that interact with it.

Place, as defined by Agnew (1993), became redefined for the residents of Walkerton. The concept of place is a combination of three elements: locale, location and sense of place (Agnew, 1993), of which the idea of sense of place or the “subjective feelings associated with a place” (Cresswell, 2005, p. 485) is important. Cresswell (2005) suggests these feeling are evoked not only for those that live in the area, but also for those who visit. The media’s construction of Walkerton could also invoke feelings for the broader public about what it is like to be in this community as the events unfold. Once a vibrant productive community, it is now overcome by the events surrounding the contamination. There was a shift in the local economy due to the presence of the media and others involved in the Inquiry, who remained in the community for months: “Well, there’s going to be a vacuum, definitely, because we have an artificial economy right now with everybody that’s here, and you can see it” (CBC, Aug.27, 2001).

The contamination of the local drinking water system in Walkerton altered the definition of place, from creating a new micro economy to creating what Edelstein (2004) describes as a ‘contaminated community’. A contaminated community is “any residential area located within or proximate to the identified boundaries for a known exposure to pollution”, where an explicit link exists between the released pollutant and the inhabitants of the area (Edelstein, 2004, p.9). Though Edelstein (2004) refers to toxicological contaminant(s), the microbiological contamination experienced in Walkerton can also be used to describe this community. Once that explicit link was determined between the released pollutant and exposure to humans, boundaries were drawn to delineate affected

areas (i.e., those on the well water distribution system) being defined as contaminated, affecting it at the social, political, cultural and economic levels.

Being defined as a contaminated community also defines the *E.coli* as a risk. The bacteria itself is not considered harmful unless it comes into contact with humans, at which point problems including fatigue, diarrhea, kidney failure, and in severe cases, death. Thus, in Walkerton, the drinking water did not become a risk until the *E.coli* entered the ground water supply serving the community and this contaminated water was then consumed by the residents of this community.

The contamination changed the community's sense of place. Referred to as a "structure of feeling" (Agnew, 1993, p.263), sense of place augments the public's experience with the environment around them (Relph, 1997; Cosgrove, 2000). Once defined as a contaminated community, there is a risk perception shadow that is cast over the entire community, or that which is bounded by the contamination (Edelstein, 2004). This changes the relationship community members have with one another, especially with those they trust. It also changes their social relationships outside of the community, where they feel victimized. Cresswell (1996) suggests places are also constructed and defended based on the understanding of what does (in-place) and does not (out-of-place) belong.³ In the past, Walkerton was defined as a rural community, thought to be far from sources of contamination. The presence of *E.coli* changed how others outside of the community viewed Walkerton, and defined the struggle residents now faced. Issues of this type related to another common area of research in geography, social justice. Social justice research has examined issues surrounding homelessness (Cloke et.al., 2000; Klodawsky et.al., 2002) to

³ For example, the *E.coli* in the drinking water helped to define this place of Walkerton, though it was an intrusion into the community; thus something that did not belong.

perceptions of industrial facilities on human health (Luginaah et.al., 2002a and b; Elliot et.al., 2004; Masuda and Garvin, 2006), as well as, coping mechanisms for living in currently polluted areas (Haalboom et.al., 2006).

Agnew (1993) argues that locale, location and sense of place are elements of place that cannot be discussed separately, that they together help to define place. Although the media's construction of the locale and location help to construct the image of Walkerton, the community members' altered sense of place may influence the broader perceptions of risk with respect to drinking water through the media's representation of the residents' comments. Everyone within this community, no matter their previous socioeconomic status or political views, now shares a new common identity, defined by the presence of this contaminant, even long after its removal. This new common identity, a characteristic of a contaminated community (Edelstein, 2004), is also marred by stigma. Kasperson and colleagues (2001) indicate that stigma often denotes disgrace and discredits or devalues people, places and technology. A 'mark' is left on the community, which involves selecting a particular element of the community and highlighting it as a problem (Kasperson et.al., 2001). The marking leads to stigmatization, as the public may feel exposed to the *E.coli* as a result of being in the community or being in contact with an individual(s) from the contaminated community. Stigma is related to hazards and also involves fear on the part of the beholder and "blemishes or taints the possessor" (Kasperson et.al., 2001, p.14). It creates a very lasting and damming impact on those being stigmatized that need not be a physical marking on the community members (e.g., a visible deformity). Those associated with these contaminated or stigmatized areas are also 'marked' as negative by association (Edelstein, 2001). By covering only those risk events that are rare or dramatic, the media could

influence if and how communities or individuals become stigmatized (Kasperson et.al., 2001).

3.4 Conclusion

The media have been found to have some influence over how the public perceives risks, and how the public may alter their behaviour based on this risk information. The media's construction of a risk issue may influence what people are thinking about, by the way they construct their stories. Although more dramatic risk events attract media attention, focusing on these types of issues may cause the public to feel these occur more often, as they are more easily recalled, due to the frequency of media reporting on this issue. However, it is important to note that a journalist is influenced by many internal (institutional objectives) and external (such as the individuals they are reporting on) factors. Hence, the dominant ideologies influencing the journalists are not always their own.

On the receiving end, the general public does not always accept the information provided by the media as the absolute truth. They are influenced by factors such as social and cultural values, in interpreting risks, which may result in behavioural changes.

Trust not only plays an important role in whether the public will accept the new construction of an event, but it also became essential in understanding how the Walkerton community dealt with the contamination. Not only was trust lost in those people or institutions in charge of keeping them safe, but trust, coupled with blame, shows how a community overcomes and deals with such a risk event. Being part of a contaminated community often results in a changed relationship of the community members with their surroundings, often leading to stigmatization. This new identity becomes how the

community and those from the community, or associated with the community, are defined. Therefore, although the physical contamination is geographically isolated, the emotional affects are not.

The reporting of an acute risk event, where a large number of stories are presented within a concentrated period of time, establishes a heuristic or mental image, of the event. This reporting pattern becomes an issue for health risk communicators, as they must communicate the necessary information to the public, in a short period of time, so as the public can assess these risks based on this early information. Therefore, the initial media construction of a risk event may play an important role in the overall perception of that risk by the public.

Chapter Four

Analyzing Media Data: Quantitative Content Analysis and Qualitative Thematic Analysis

4.0 Introduction

To explore the agenda-setting role of the media, with respect to the Walkerton event, and the way in which the media framed the event, a combined quantitative content analysis and qualitative thematic analysis were used. A content analysis focuses on measuring the frequency of symbols, images and messages from the data, to understand the content and the meaning of these messages (Altheide, 1996; Newman, 2000; Buddenbaum and Novak, 2001; Patton, 2002). The greater the number of mentions of a particular topic or subject matter could indicate its comparative importance in relation to other issues (McCombs, 2004). The qualitative thematic analysis allowed for a deeper interpretation for why certain elements appear in the media data more often than others and how this adds to the news construction of a media story.

Krippendorff (2004) defines content analysis as a technique used for “making replicable and valid inferences from texts...to the contexts of their use” (p.18), where all material within a chosen sample be submitted to the same set of categories and analysis procedure (Deacon et.al., 1999). This method provides a systematic and somewhat objective approach (Neuman, 2000; Buddenbaum and Novak, 2001) in textual analysis. This approach

assumes that the researcher's own prejudices, assumptions and ideas will not cloud the process of analysis (Deacon et.al., 1999). However, it should be noted that the process cannot be completely objective due to the inferences or decisions that must be made as to which symbols, ideas or themes, are analyzed in the data, in addition to the methods used to accomplish this. Although a small amount of subjectivity will always be involved in the analysis, a systematic approach will add rigor and credibility to the research.

A quantitative content analysis technique is used to measure, rather than to describe the text (Shapiro and Markoff, 1997). Originating in a more positivistic approach, Altheide (1996) sees quantitative content analysis as an objective way of obtaining data to measure frequency, rather than their meanings: "Content analysis translates frequency of occurrence of certain symbols into summary judgments and comparisons of content of the discourse..." (p.15). A quantitative analysis is also better equipped in dealing with more obvious or literal meanings of messages (Buddenbaum and Novak, 2001). When dealing with large amounts of data, a quantitative content analysis will provide frequency counts of exposure to issues (Durrant et.al., 2003). Defining a unit of analysis to manage the large volume of data is necessary.

The quantitative content analysis will also allow for a consistent and systematic application of the same procedural methods to each textual unit being analyzed. For example, every mention of illnesses and/or deaths that are mentioned in the media reports will be coded, so that a frequency count can be made later on. The repeated mentions of a specific subject matter could also have an impact on how stories are framed; and thus, also influence how the public may be manipulated by these repetitions in subject matter and frames. Although critics of this approach argue that too much emphasis is put on frequency

counts (Riffe et.al., 1998), it does provide an effective way to deal with a substantial amount of textual information. Nonetheless, for a deeper analysis of the text, a more qualitative approach is required.

Boyatzes (1998, p.4) defines a thematic analysis as “a process for encoding qualitative information”. The qualitative thematic analysis not only allows for specific terms to be coded for, but it also permits for the coding of discussions or text that is related to a topic, though not using a specific term.

Qualitative thematic analysis reveals the more ‘below-the-surface’ meanings of the messages the media constructs, rather than the more obvious meanings uncovered by a quantitative analysis (Buddenbaum and Novak, 2001). To add to the validity of the qualitative interpretation, two forms of thematic analysis will be used: modified discourse analysis and ethnographic content analysis.

Discourse analysis, used more often by social constructionists, focuses on the structure and function of a message and/or the ways in which people use language and interact with one another and their world (Anderson, 1997; Buddenbaum and Novak, 2001; Krippendorff, 2004). Language, Green and Thorogood (2004) insist, is one of the essential elements of qualitative research. Although what is being said is important, the authority and the social context of the person speaking also becomes an essential element in the power of language (Bourdieu, 1991). Lupton (1994a) also argues the choice of words is vital to how journalists place themselves within a particular issue. A discourse analysis addresses how emotions are conceptualized, how facts are constructed, and to explore changing notions of self (Krippendorff, 2004).

Alternatively, an ethnographic content analysis allows for a more reflexive analysis of documents (Altheide, 1996) that is not common to quantitative analysis. It does not discourage against the use of traditional quantitative methods of content analysis, although it opposes the sequential nature of these methods. Instead, it encourages combining the traditional ethnographic methods to gain a better picture of textual analysis. Ethnographic analysts suggest flexibility into including new concepts that emerge out of text as they are analyzed (Altheide, 1996; Krippendorff, 2004). Ethnographic content analysis follows a “recursive and reflexive movement between concept development-sampling-data, collection-data, coding-data, and analysis-interpretation” (Altheide, 1996, p.16). Variables to be coded can be altered or amended to include those that emerge from the analysis. Both, the discourse (Lupton, 1994a) and the ethnographic analysis require some degree of reflexivity, which is required in the analysis conducted for this thesis.

4.1 Data: Story Selection for Analysis

To answer the research objectives, this research analyzed two major national newspapers and two national broadcast news services: the *Globe and Mail*, the *National Post*, the *CBC National News* and the *CTV National News*, respectively¹. The national media were used for this analysis for several reasons. First, the media reports from these outlets were easily accessible in electronic format for the 2.5 year study period. Since databases were used to access the stories, there was a greater of confidence in ensuring all relevant

¹ Officially, the national news coverage on the CBC is titled *The National*. The national news coverage on CTV is called *CTV News*. However, they will be termed the *CBC National News* and the *CTV National News* in this research to keep the focus on national news coverage and the specific broadcaster. In Canada, there is also another national news broadcaster: Global TV (which broadcast the *Global National News*). However, the databases used in this analysis did not archive news stories for this broadcaster and thus were excluded from this analysis.

stories were downloaded. Second, although these media outlets are national in scope, they provided a local perspective of the Walkerton risk event by speaking and presenting the comments from local residents of the community. Moreover, the national coverage included provincial impacts, giving the issue broader scope. Third, local media reports were not accessible electronically. Conducting manual searches of microfiche files are less reliable than keyword driven searches of electronic databases. Finally, media analyses generally tend to focus on either print or broadcast media reports. This analysis includes a spectrum of both types of media.

The print stories were downloaded from the *Factiva* database, whereas the broadcast media stories were downloaded from the *Canadian Business and Current Affairs (CBCA) Current Events* database. Broadcast media stories refer to the written transcript of an aired broadcast. In the case of both print and broadcast stories, no accompanying visuals are captured by these databases. All stories were collected using the keyword “Walkerton” for the dates May 2000 to December 2002, against a series of selection criteria. The study period used incorporates the brief period before the national media sources began reporting on the events to the end of the year of when the final reports of the Walkerton Inquiry were released. Accordingly, this period captured all of the larger events that surrounded the contamination of drinking water supplies of Walkerton.

Table 4.1, on the following page, shows the total number of stories downloaded for each media outlet by year.

Table 4.1: Initial story breakdown per year, prior to analysis (n=1436)

Media Outlet	Year	Story Count	Total
CBC National News (broadcast)	2000	57	114
	2001	41	
	2002	16	
CTV National News (broadcast)	2000	45	84
	2001	28	
	2002	11	
National Post (print)	2000	205	502
	2001	184	
	2002	113	
Globe and Mail (print)	2000	358	736
	2001	230	
	2002	148	

The questions listed in Table 4.2, were developed to guide the inclusion/exclusion criteria for deciding which media stories would be kept for analysis. This part of the analysis was conducted by two researchers: the project supervisor, S.M. Driedger and myself.

Table 4.2: Story Selection Criteria

	Questions	Action	
1.	Is the story reflective of the Walkerton drinking water tragedy?	If Yes – save	If No – go to question 2
2.	If no, does the story use Walkerton as an example of what their community wants to avoid; or use Walkerton as an example of the type of concerns they have?	If Yes – save	If No – go to question 3
3.	If no, is the story about a government response/(in)action to the Walkerton event?	If Yes – save	If No – go to question 4
4.	If no, is Walkerton only mentioned as a passing event, but not really the focus of the story?	If yes – cut	

After reviewing a story, the questions from Table 4.2 were asked of each story to determine if it was to remain as part of the data set. Stories for each media outlet that were kept were placed in a file that was labeled as “KEEP”. Those that were rejected were placed in a file labeled “CUT”. Periodically, questions arose on whether to keep the story or to discard it, and those were put into an “UNSURE” file, for discussion between the project supervisor and myself. These discussions resulted in a decision to either keep or cut the story. Instances arose where the exact same stories were repeated within the media data. In this case, one of the duplicate stories was cut from the data set. Table 4.3, shows the breakdown of stories per media outlet, and further displays a division by year. This occurred after the inclusion and exclusion criterion was used. A total of 819 stories are used in this analysis.

Table 4.3: Story breakdown per year, for each media outlet. (n=819)

Media Outlet	Year	Story Count	Total
CBC National News (broadcast)	2000	44	87
	2001	31	
	2002	12	
CTV National News (broadcast)	2000	42	80
	2001	27	
	2002	11	
National Post (print)	2000	109	242
	2001	89	
	2002	44	
Globe and Mail (print)	2000	230	410
	2001	121	
	2002	59	

Miles and Huberman (1994) indicate that check-coding or inter-coder reliability helps to ensure that the definitions created to determine whether or not to include a story, is clear and understandable to all coders. Disagreements indicate the definitions are not clear or broad enough and must be changed. Miles and Huberman (1994) offer the following formula for calculating reliability and argue that researchers should look for 90% reliability:

$$\text{reliability} = \frac{\text{number of agreements}}{(\text{total number of agreements} + \text{disagreements})}$$

To ensure the accuracy and consistency of story selection, two coders evaluated the media reports, using the questions in Table 4.2, to make certain the same criteria were being used to assess the news reports. Through this process, a 97% agreement, or inter-coder reliability, was achieved for story selection.

The unit of analysis for the broadcast news is one news item segment and for print media it is a single story. The collected stories were divided by year, and then by month. This type of organization allowed for greater ease in analysis and to allow for monthly trends in media coverage to be more easily uncovered. This is based on the major events that occurred in Walkerton and during the Inquiry. The stories were then saved as *Rich Text Format (RTF)* documents in Microsoft Word, a format needed for later importation into *NVivo*, a qualitative software program designed to facilitate the analysis of text.

4.2 Coding Scheme

The coding scheme helps to draw out the major themes that were present in the media data, and also helps to keep track of what is being reported. The coding scheme is made up of a series of codes, or nodes as they are referred to in *NVivo*, that store the ideas and data that has been analyzed (Richards, 1999). In *NVivo*, each code contains information

from the media data about a specific theme or subject matter. Every reference made of this theme, a single word to phrases or even lengthier passages, will be found within this code. Thus for example, every mention of illnesses and death as a result of the Walkerton event will be found in a code labeled as *Ill/Dead*. Also, the information in these codes remains connected to the original document and when necessary the researcher is able to refer back to the original document.

The development of this initial coding scheme began by listing general themes or subject matter found within the media data. This earlier stage is termed free-coding, where codes are developed, but not put into any type of structure. Neuman (2000) suggests the researcher should tailor this coding structure based on the information they are seeking and to the type of medium they are analyzing. To this degree, the final structure was not imposed on the media data, but rather came out from this free coding method. The modified discourse and ethnographic content analysis facilitates such a reflexive coding by accommodating new ideas that emerged from the media data. The hierarchical coding structure that was developed followed a modified essay type format, where each story consisted of an introduction, body and a conclusion. Also, each story offered a *tag* or *marker* at the beginning of the story that summarized the title, or headline, author, and media outlet. Although some of the media reports offered additional information, only these three were deemed important to this research.

The introduction of the story, or the lead-in, consisted of the first paragraph of the broadcast report, or the first two paragraphs of the print media stories. Two paragraphs, rather than one, were coded for the print media stories as it was discovered during the free-coding process that it usually takes two paragraphs to introduce the story. Lorimer and

Gasher (2004) indicate the first two paragraphs play an important role in setting the context for the rest of the story; whereas, a broadcast story is able to do this in one. In a print story, the first paragraph serves to grab the reader's attention by providing the five 'W's (i.e., who, what, where, when and why) and the second paragraph "exploits the curiosity of the reader established by an introductory delay" (Lorimer and Gasher, 2004, p.94).

The body of the story consists of the remainder of the story, until what is defined as the conclusion. The conclusion is the last two paragraphs of the print story, and the last paragraph of the broadcast news story. However, instances arose where the operational definition of "conclusion" was varied for broadcast stories. In most cases during a broadcast story, the last paragraph is the reporter concluding his or her story. However, there are times where the reporter and announcer engage in a conversation to highlight important details of the events being covered or to emphasize something that was not covered in the broadcast. In this situation, the entire banter was coded as the conclusion.

If there was data that seemed important to the research objectives but did not fit into the coding structure, they were coded into *Free Nodes*. These nodes are not part of the tree structure but are a listing of individual nodes. Several free nodes were created throughout the coding process to capture data that would be important to understand the construction of the Walkerton events.

Once the coding structure was determined, the stories from the year 2000 for *Globe and Mail* and the *National Post*, were reviewed to determine if additional codes should be added to this scheme before the coding of all the media data began. Only minor changes were made, an example of which was the change of the operational definition for some of the themes. In an initial analysis of the print and broadcast media data for this project,

Driedger (2007, in press) concluded that the print and broadcast media tend to cover similar topics when looking at the same event, although the print media provide more detailed accounts of the event. As such, it was not necessary to go through all 819 stories to finalize the coding scheme. Moreover, the use of the modified ethnographic content analysis facilitated the inclusion of any additional changes, such as new themes or subject matter that emerged. Any earlier data that was coded, prior to the addition of a new theme, was reviewed to ensure comprehensiveness. The final coding scheme used for the analysis is found in Appendix A.

4.2.1 Coding the Media Data

The media reports were analyzed using the qualitative data management software program *NVivo*. Richards (1999) indicates that *NVivo* allows “rich text [to] stay rich, and rich documents [to] develop as ideas do. As analysis proceeds, researchers can expand data from summaries to detailed descriptions. As interpretation changes, they can reject and add, revise and rethink data, interweaving data and commentary” (p.414). Therefore, like ethnographic content analysis, *NVivo* allows for the analysis to change as the interpretation of the data changes, thus encouraging reflexivity.

Miles and Huberman (1994) indicate the act of coding involves dissecting the data in a meaningful way, without disturbing the relationship between the individual parts of this data. This becomes important during the qualitative portion of the analysis, as the structure of the story, as well as the language used, play an important part in the construction of the news story.

The coding process for this project maintained a systematic approach. Due to the national impact of the events of Walkerton, many post-event stories mentioned Walkerton as a comparison because of specific water issues in a community or issues surrounding the regulation of water safety. Although the overall subject matter is not specifically about Walkerton, the story clearly shows that the Walkerton risk event had an impact. For this project, only those parts of the stories referring to Walkerton were coded

The following is an account of how the coding of each story took place. It is important to note that some words and passages were coded multiple times throughout the story. The definitions of each of the codes, seen in italics below, in the coding scheme can be found in Appendix A.

- 1) Stories were loaded into *NVivo2* month by month. This helped to ensure that each story was coded and that data was not skipped in coding.
- 2) The manual coding began by keeping a record of the stories and their subject matter on paper. Prior to any electronic coding of a story, the date and reporter covering the story was written on paper. At the end of the story, the major subject matter of the story was then manually recorded next to this.
- 3) The electronic coding of each story began by coding for the *Media Data Information*. This included the date, headline and the reporter and/or announcer that are reporting on the story. By coding this section for each story, another count of all stories could also be made as every story was coded for this information. The *Media Data Information* that was coded for each of these differed for each of the media outlets, can be found in Table 4.4, on the following page:

Table 4.4: Coding procedure for the *Media Data Information* for each media outlet.

Code	<i>CBC National News</i>	<i>CTV National News</i>	<i>Globe and Mail</i>	<i>National Post</i>
Date	Code everything from the headline/title to the date	Code everything from the headline/title to the date	Code everything from the headline/title to the name of the media outlet *in some cases, code everything from headline/title to the <i>Globe and Mail</i>	Code everything from the headline/title to the date *in some cases, code everything from headline/title to <i>National Post</i>
Headline	Code the headline/title only	Code the headline/title only	Code the headline/title only	Code the headline/title only
Reporter/ Announcer/ Journalist	Code the name of the Host and the Reporter	Code the name of the Host and the Reporter	Code the name of the reporter or <i>Canadian Press</i> , when reporter name not available	Code the name of the reporter or <i>Canadian Press</i> , when reporter name not available

- 4) The introduction of each story was coded. The major subject matter, for example, references to trust, was coded followed by the overall tone of the introduction under the parent node *Language of Reporter/Announcer/Journalist*. If the introduction provided information without any type of emotional language, it would be coded as *Neutral*. If the tone of the introduction carried emotion (e.g. “the tragic deaths...”), it was coded as *Emotional*.
- 5) The body of the story was then coded. The larger subject matter that was coded within the body that aided in the news construction of the events of Walkerton included the following: issues surrounding *Blame*, the *Inquiry and Testimony*, issues surrounding *Trust*, the *Individuals and Groups* referred to in the stories, *Evidence* of the sequence of events as well as the health impacts on the community, how the media defines the *Community*, *General statements made by officials*, *Additional Concerns by the Citizens*, and the general *Impact of Walkerton* on the community, the government and others.

- 6) The conclusion was coded next. The subject matter of the conclusion was not coded, but rather the type of statements that were made. If the conclusion was summarizing the story without any new information, the entire conclusion was coded as *Go over facts*. If new information was provided in the conclusion, this was coded as *Stating new information*. Following this, the tone or language of the reporter/announcer was coded as *Neutral* or *Emotional*.
- 7) Throughout the coding process, subject matter would arise that could be present in the introduction, the body and the conclusion, which did not fit the organizational structure of the tree-nodes. Instead, these instances were treated as free nodes. The subject matter coded for these nodes appear anywhere in the story and are also important to the overall news construction of the events of Walkerton. The free nodes used in this analysis were: *Hazard Sequence*, *Citizen Comments*, *Media* and *Metaphors*. The descriptions of each of these nodes can be found in Appendix A.
- 8) Finally, the overall frame of the story was coded as *Positive*, *Balanced (more positive)*, *Balanced (more negative)* or *Negative*. The overall frame of the story was captured by coding the entire story tag or marker, found at the beginning of the story. The coding of the story frame was based on the overall assessment of the story tone and was determined after reading the entire story.

Several of the codes used in the analysis warrant operational definitions; see Table. 4.5.

These codes serve as the focus points in subsequent chapters. These code categories also involved greater interpretation.

Table 4.5: Operational definitions for codes

Themes/ Subject Matter	Child Nodes	Definitions
Health Themes	Ill/Dead (Introduction)	References to any human health related impacts of the contamination. Examples: mentions of the number of people who died, became ill, or the psychological trauma felt as a result of the contamination. Reference to deadly or tainted water, or references that implied a potential or actual health impact were coded.
	Health – Victim Stories	References coded for were specific mentions of an individual(s) by name, in the body of the stories, who were impacted in some health related manner by the contamination.
	Health – All Others	References coded for were any health related mentions in the body of the story. These references often included the general number of people who died or became ill as a direct result of the contamination. References also included the number of people taken to the hospital and/or were released. All references to the general health impacts of <i>E.coli</i> (not specific to this particular contamination) from the medical establishment (including doctors, nurses, medical administrators, etc.), medical journals and/or scientific data
Blame	Citizens	References coded are from the citizens (residents) of Walkerton only, and their point of view of who is to blame. In many cases, the individual is referred to by name and/or it is implied that the person is from Walkerton. Health officials (Medical Officer of Health), local government officials (mayor, MPPs, councilors, etc.), members of the Public Utilities Commission or lawyers were not coded in this section. These coded references also speak of blame generally, even if the residents are not specifically blaming anyone or the word 'blame' is not used. Generalizations on how the citizens feel by the media are coded for here.
	Government	The codes for the government are broken down by three levels (municipal, provincial, federal). These references include mentions of who government officials are blaming or general references of blame (whether the actual word is used or not). Those coded for under this heading are elected officials and not those who work for different government departments (i.e., Health Canada or the Ministry of the Environment). Only current elected officials are coded. Speculations by the media on how blame will be expressed by the government are not coded here.
Trust	Citizens	References coded are from the citizens (residents) of Walkerton only and their point of view of all aspects of trust. In many cases, the individual is referred to by name and/or it is implied that the person is from Walkerton. Health officials (Medical Officer of Health), local government officials (mayor, MPPs, councilors, etc.), members of the Public Utilities Commission or lawyers were not coded in this section. These coded references also speak of trust generally, even if the word 'trust' is not used. Generalizations on how the citizens feel, with respect to trust, by the media is coded for here.
Community Definition	Pre-events and Post-events	References coded regarding the Community Definitions are the descriptions of the community. They fall into either the Pre or Post event categories. References to what the community was like before the contamination is coded for under <i>Pre-events</i> . These descriptions include explicit references of the community before the contamination, which includes the resulting health and physical impacts on the community. Descriptions about the community specifically after the contamination was discovered, is coded for

		under <i>Post-events</i>. These descriptions include explicit references of the community after the contamination, which includes the resulting health and physical impacts on the community. The media reports also include general descriptions of the community that do not fall within the two codes above. These descriptions are of the physical (farming community), the geographical location (located in southwestern Ontario), and other descriptions (populations, the physical beauty) of the Walkerton event, which does not change as a result of the contamination. As such, these are coded under the parent node of <i>Community Definition</i>. All of these descriptions could be the media's construction of the events or comments from any other individual about the community of Walkerton.
	Situations of Stigmatization	References of stigmatization include comments on how anyone, community member or otherwise, feels the contamination has lead to the community being stigmatized. For example, one resident feels others, outside of Walkerton, see Walkerton residents as 'lepers'.
Introduction – Language of Reporter/ Announcer/ Journalist	Neutral	Neutral introductions provide the necessary information to introduce the rest of the story, without being overly descriptive in language choice.
	Emotional	Emotional introductions use very descriptive language to introduce the story. Also, information the media decides to present in the introduction could also impact the emotional tone in the introduction. Thus, the language, choice of information and the way the introduction is constructed affects the overall tone of introduction. For example, when describing the contamination and health impacts, these stories regularly refer to the “deadly” bacteria, “devastation” caused by the contamination and often refers to the contamination as the worst <i>E.coli</i> outbreak in Canadian history.
Frames	Negative	Negatively framed stories have an overriding emphasis on the negative aspects of the contamination. These stories have an emphasis on death and destruction caused by the contamination, which also includes the socio-economic impacts on the community. By the end of the media report, the story leaves the audience with an overly negative tone.
	Positive	Positively framed stories focus on hope that prevails out of this risk event. These stories include such things as the water being declared safe to drink or Walkerton children are finally able to return to their schools. The story leaves the audience with a recognizably positive tone.
	Balanced – More Negative	This type of frame is not overly negative or positive, but has a slight lean towards the negative frame. An example of such a story is when students are allowed back to school, many are happy that they are able to get back to some sort of normalcy; however, they are not allowed to drink the water at school, taps are taped shut as a reminder of what happened and there is an overwhelming smell of bleach in the school.
	Balanced – More Positive	This type of frame is not overly negative or positive, but has a slight lean towards the positive frame. One such example is a story about a child who is recovering from the health impacts of the contamination and is able to finally come home from the hospital. However, due to the illness, it is not clear how long it will take for him to become well again.

If the print story was more than 200 words or if the broadcast was longer than just the announcer reporting a short blurb on the events, the process indicated above was followed. If the story was less than 200 words or a short blurb from the announcer, only the major subject matter and overall tone of the story was coded. During the free-coding process, it was found that stories under the 200 word limit generally did not go into great detail about the events of Walkerton. These stories tended to bring forth only one important aspect of the tragedy, for instance, who will testify in the coming days.

Coding of the stories continued until all of the media reports were coded. In situations where an additional code was added to the coding scheme, the time period in which this was reported was noted and re-coding of the media reports from the other outlets began.

Once the coding of all 819 stories was completed, a Coding Summary Report was printed from *NVivo7*. The coding report provides a breakdown for each document used in the project analysis; of the nodes coded for in that document, as well as, the number of coded references for those nodes. The Coding Summary Report also acts as another measure of the number of stories analyzed for this project that could be checked against the paper recording. Any discrepancies were easily corrected by going into the specific document and double checking the coded text.

Since a modified ethnographic thematic analysis was used, there was an ongoing reflection of the themes and subject matter that pertained to the research objectives. As such, the possible themes that would be later analyzed were picked out during the coding process.

4.3 Troubleshooting

Although a content analysis is supposed to provide a systematic and objective approach to analyzing data (Buddenbaum and Novack, 2001), problems arose during the analysis. The following section will outline the challenges that arose and the solutions used to correct them.

To capture the problems or challenges that arose during the coding process, a *Memo* was created in *NVivo*. This document details the thought process during coding, to ensure consistency and reliability. Once the coding process was completed, any changes that were needed were referenced against the memo.

After the coding scheme was developed, it was found that the criteria used for the 'conclusion' of the story did not always fit with the print stories, although they consistently fit with the broadcast reports. In some cases, the conclusions offered new information that added to the story, but did not summarize the main ideas of the news report. However, to be consistent, they were coded as the conclusion since they do leave the reader with the lasting impression of the news report.

It was also found that some of the codes that were created as part of the 'Body' of the coding structure seemed more appropriate to be left as free nodes since data in the introduction and conclusion could be coded using these nodes. It was during the coding process that decisions were made regarding the possibility of moving these nodes into a free node were noted in the memo-document, and the final decision to move them was made at the end of the coding process.

A problem was found with the qualitative software package itself. *NVivo2* does not have a project size capacity that similar programs, such as *N6*, have. However, *NVivo2* is a

more user-friendly program to analyze the media reports. Unfortunately, the project capacity was reached early in the process. To overcome this problem, *NVivo7* was used to analyze the remainder of the stories. *NVivo7* does not have the limitations of *NVivo2*. However, the new format took some time to familiarize and as a result slowed down the coding process.

In making the switch to *NVivo7*, problems also arose in importing the media documents into the program for analysis. In order to solve this problem, documents had to be saved as Microsoft Word Documents (.doc) before being loaded into the program. Although the program indicates RTF documents can be used in *NVivo7*, this was not found to be the case.

Chapter Five Results

5.0 Introduction

In this chapter, the results of the media analysis will be discussed and presented in two larger sections: (1) a quantitative section, focusing on frequency counts and (2) a qualitative section, which will look at the language and discourse of the media data in the construction of their stories. Although a total of 131 nodes were used to analyze the 819 media reports, not all of the thematic categories, or nodes, will be discussed here. Only those themes that pertain to the research objectives will be explored.

The total number of stories, broken down by year and media outlet, that were used for this analysis can be found in Table 4.3, on page 55. Table 5.1, on the following page, provides additional context based on three major event periods during the Walkerton crisis, spanning a 2.5 year time frame. The *Pre-Inquiry* phase, from May 24, 2000 through to October 15, 2000, covers the time from the first media report to the day prior to the start of the Inquiry into the events of Walkerton. The *Inquiry*¹ phase, runs from October 16, 2000 to August 27, 2001, covering the dates of the judicial Inquiry. The *Post-Inquiry* phase, follows the remainder of the

¹ One of the main, if not most important events during the study period into the contamination of Walkerton's drinking water supplies, was the judicial inquiry into uncovering how the contamination occurred. The dates used in Table 5.1 were formed around this important event.

study period from August 28, 2001 to December 31, 2002², encompassing the time following the Inquiry, final reports were prepared and released.

Table 5.1: Story breakdown by event period

Media Outlets	Pre-Inquiry May 24, 2000 – October 15, 2000	Inquiry October 16, 2000 – August 27, 2001	Post-Inquiry August 28, 2001 – December 31, 2002	Total
CBC National News (broadcast)	34	39	14	87
CTV National News (broadcast)	29	38	13	80
National Post (print)	71	117	54	242
Globe and Mail (print)	169	170	71	410
Total	303	364	152	819

Both the Pre-Inquiry and Inquiry periods cover a similar number of stories, despite the differences in time covered at 303 and 364, respectively.

It is also important to highlight the differences between the televised versus print stories. There are a significantly larger number of print stories over the 2.5 year study. Since the national news broadcast coverage occurs once a day and is restricted by time, they are limited in the coverage dedicated to a single issue. The print media do not have these same constraints and are able to provide more detailed coverage. Although multiple stories are published on any given day about the Walkerton events, each story provides a different and unique perspective. For example, the *Globe and Mail* printed 12 stories on May 26th, 2000. Although all stories were in some way directly related to Walkerton, each media story provided a different aspect of the issue: potential lawsuits filed on behalf of the residents; illnesses people were dealing with; speculations on the possible sources of contamination; and descriptive narratives of the community. The multiple and different media stories highlight the broader impact of this risk event on the community, in addition to beginning to construct the various elements of this risk

² Arguably, the post-Inquiry phase is still ongoing, therefore, December 31, 2002 is an arbitrary end-point, but one which provides ample media coverage of government response to the two inquiry reports released during the first half of 2002.

event. Hence, the print media was able to play a more active role in constructing this risk event compared to the televised news. Televised reports on May 26th highlighted: the deaths and illnesses; Premier Harris' visit to the community; and the general feeling in the community. These topics would have a greater visual impact on the audience members.

5.1 Quantitative Content Analysis

The introduction, as indicated by Lorimer and Gasher (2004), summarizes the important information about the story, thus providing the reader or viewer a brief synopsis of what the rest of the story is about. Journalists would refer to this as 'the head'. The introductions generally provide the 'who, what, where, when and why' that signal the topics likely to be covered in the body of the story. Table 5.2 shows the frequency count of the coded references for specific themes found in the introduction of the media reports. These are not percentages, but actual counts of coded references of each subject matter found in the introduction. Of the six themes coded for, only five are reported here. The theme of *Other* has been omitted since it covered many other themes, which were not used in this analysis.

Table 5.2: Coded references of themes found in the Introduction

Media Outlet		Themes				
		Ill/Dead	Blame	Inquiry/ Testimony	Sequence of Events	Trust
CBC National News	2000	47	5	22	15	3
	2001	23	5	23	7	3
	2002	9	0	8	3	1
CTV National News	2000	50	8	29	17	3
	2001	27	7	12	5	2
	2002	12	4	10	5	4
National Post	2000	98	13	65	60	9
	2001	52	17	47	17	1
	2002	33	6	27	5	2
Globe and Mail	2000	188	28	93	75	14
	2001	40	21	52	10	0
	2002	33	11	31	11	5
Total		612	125	419	230	47

As illustrated by Table 5.2, the code *Ill/Dead* was most often coded for, with 612 coded references in the 819 story introductions for all media outlets. Any reference to illness or death as a result of the events of Walkerton was coded for under this theme, including references to the emotional and psychological trauma felt by the residents of Walkerton. For example, in the year 2000, *CBC National News*, had 47 coded references of illness and/or death in the introductions to the broadcast stories. This is not to say that 47 stories contained references to illness and/or death in the introduction, but that 47 references to illness and/or death were coded for in all of the introductions for that particular year. Consequently, a theme could be coded multiple times in one story.

The next theme most coded for was *Inquiry/Testimony* with 419 references in the introduction. This topic highlights issues pertaining to the Inquiry itself, other investigations (e.g., police), and public pressure for ‘answers’. With the exception of the *CBC National News*, *Inquiry/Testimony* is most often coded for during the year 2000, for the remainder of the media outlets. The year 2000 represents a time when questions arose as to how and why *E.coli* entered the local drinking water supplies, as well as, a communal outcry for the need to hold a public inquiry, which began in October.

The theme of *Sequence of Events* covers topics associated with how the contamination occurred, as well as, steps taken to physically repair the system. This theme was coded for consistently over the 2.5 year period under study, as the over-riding purpose of the Inquiry was to determine how the contamination occurred. Coded references to the sequence of events appeared more often during the year 2000 and decreased for the subsequent years. This could be because early on in the Inquiry a number of pertinent factors were revealed; for example, hydrogeologists testified to the physical weakness of the wells, and the Koebel brothers testified to the years of mismanagement of the community’s drinking water system.

The literature indicates the subject matter of blame and trust could play an important role in how the public deals with a risk event that affects their health and their community; these categories were coded for the Introduction. An initial review of the media reports found these two topics were prominent in the body but less so in the introduction of media stories, as shown in Table 5.2. These two themes will be looked at in greater depth in the qualitative section of this chapter.

5.1.1 Story Frames: Health

Frames are an important element in how the media's construction of the Walkerton events could influence risk perceptions of drinking water. The way a story is initially framed, based on the early media reports, may affect the way in which subsequent reports are constructed (Leiss, 2001).

The relative frequency of the coded references of *Ill/Dead*, coupled with the language used in the introduction, plays an important role in how the story is framed; in this project, it reinforces the impact of *E.coli* on the residents' health. This begins to establish a frame for how the audience may understand this risk event. Table 5.3, on the following page, shows how often health issues, which include references to illness and death as a result of the events of Walkerton, was coded for the body of the media reports.

Table 5.3: Breakdown of Health themes coded in the media reports.

Media Outlet		Health Themes				Total Number of Stories		Average health reference/ Story ³
		Body of Story		Introduction	Total Health References ₂			
		Health – Victim Stories	Health – All others ¹	Ill/Dead				
CBC National News	2000	23	35	47	105	44	2.39	
	2001	8	14	23	45	31	1.45	
	2002	0	1	9	10	12	0.83	
CTV National News	2000	19	9	50	78	42	1.86	
	2001	6	14	27	47	27	1.74	
	2002	4	11	12	27	11	2.45	
National Post	2000	48	130	98	276	109	2.53	
	2001	7	71	52	130	89	1.46	
	2002	7	36	33	76	44	1.73	
Globe and Mail	2000	66	161	188	415	230	1.80	
	2001	14	66	40	120	121	0.99	
	2002	17	38	33	88	59	1.49	
Total		219	586	612	1417	819	1.73	

¹Note: These stories contain references to health (illness/death) issues related to the Walkerton events, that the residents of the community experience, as well as those individuals who are directly involved with the events. They do not contain references to specific individuals, i.e., those whose names are used, but general references to the population. These references also include mentions of health impacts of *E.coli* that are referenced from medical doctors or medical and scientific journals. A detailed definition of this node can be found in Appendix A.

²Note: The *Total Health References* refers to the total coded references of health found in the media stories (body and introduction). The calculated values consist of adding: *Health – Victim Stories* + *Health – All others* + *Ill/Dead*.

³Note: Values are rounded to the second decimal place, and calculated as an average of the total number of health references to the total number of stories per media outlet, per year. Since these are the calculated averages for the entire data set, the above assumptions are generalized for the media outlets and may not hold true for each individual story.

Table 5.3 illustrates, how the *CBC National News* in the year 2000 had 105 total references to health issues in the 44 stories reported. This was a combination of 47 references in the Introduction (*Ill/Dead*), plus 58 references in the Body (23 for *Health – Victim Stories*; 35 for *Health – All others*). Additionally, each of the 44 stories found in this year, contained an average of 2.39 references to health issues. These repeated mentions serve to reinforce the health impacts of this risk event.

Most stories make a reference to a health related issue, and many multiple health mentions are made. For the *CBC* and *CTV National News* in the year 2000, there were 2.39 and

1.86 health related mentions (respectively) per media story. With respect to the print stories for the same year, there were similar multiple mentions for the *National Post*, 2.53 per story, and the *Globe and Mail*, 1.80 per story. This same pattern holds over time and across media outlets with the exception of the *Globe and Mail* in 2001 (0.99) and the *CBC National News* in 2002 (0.83).

A second trend emerges where there is a drop in the average health references by all media in the years 2000 and 2001, for all media outlets, but that it increases between 2001 and 2002 (with the exception of the *CBC National News*). However, the total number of health references gradually decreases overtime. There are several reasons that could account for this. As the frequency of media reports decreases over time, the references to health issues should also decrease. The decrease in health stories could be influenced by several elements: firstly, as the risk event first emerges during 2000, the only 'known' during this time are the deaths and illnesses resulting from the contamination; secondly, it is through Inquiry testimony that the public learns what exactly caused the contamination; and thirdly, the media use of repeated health references serves as an anchor to remind the audience member as to what happened before presenting new information.

It is also interesting to note the number of health issues coded for per story are similar in both the print and the broadcast reports, with one exception: only 219 stories were coded as *Health-Victim Stories* as compared to 586 stories coded as *Health – All other*. Stories coded as *Health-Victim Stories* reference residents of Walkerton who are named that have been directly affected by the *E.coli* contamination. Whereas, stories coded as *Health – All other* include the aggregated references to the number of people who died or became ill as a result of the events.

Broadly speaking, the repeated mentions of illness and death in the introduction of the media reports, helps to establish a frame for understanding drinking water risks in two ways. First, the repeated mentions assist in establishing the mental image, or heuristic, of the event,

thereby insuring subsequent reports are understood based on original reports. Cooper and Roter (2000) indicate it is easier to retain and recall general information that is often repeated, rather than specific information that is not often heard. Once the audience member begins to read, for example, a media story on Walkerton, their established mental image of the event aids in understanding new information. Second, the repeated mentions also establish the mental image of drinking water risks where the audience feels a similar risk event could occur anywhere in Canada. Mentioning specific individuals in the body of a story personalizes the impact of the contamination, where the audience could feel this risk event might occur anywhere, including their own community.

5.1.2 Story Frames: Tone

Table 5.4 shows how stories were framed over the 2.5 year study period.

Table 5.4: Story frames¹ for all of the media outlets

Media Outlet		Frames			
		Negative	Balanced – More Negative	Balanced – More Positive	Positive
CBC National News	2000	26	12	3	3
	2001	16	13	0	2
	2002	7	3	2	0
Percentage of Total Number of stories		56.3%	32.2%	5.7%	5.7%
CTV National News	2000	27	12	3	0
	2001	16	4	2	6
	2002	7	2	1	1
Percentage of Total Number of stories		62.5%	22.5%	7.5%	8.7%
National Post	2000	62	24	14	9
	2001	38	24	16	10
	2002	17	12	8	7
Percentage of Total Number of stories		48.3%	24.8%	15.7%	10.7%
Globe and Mail	2000	116	56	23	34
	2001	59	32	10	20
	2002	23	12	9	15
Percentage of Total Number of stories		48.3%	24.4%	10.2%	16.8%

¹Table 4.5 in Chapter 4 provides more detailed and operational definitions of each of the story frames used in this table

In this analysis, stories held a more negative tone than positive, as seen over time and across all media outlets. *Negative* stories had an over-riding emphasis on the destruction caused by the contamination; *Positive* stories generally focused on hope and the possibility of good coming out of the events and a return to 'normal'.

Over the 2.5 year study period, over half (56%) of the 87 stories analyzed for the *CBC National News* were found to be more negatively framed than positive. Similarly, 62.5% of the 80 stories analyzed for the *CTV National News* were found to be framed as *Negative*. A comparable pattern is found with the print media stories, albeit there is a moderate increase in the percentage of print stories framed as positive (as a combination of *Balanced-More Positive* and *Positive*). Despite the fact that within a few months of the outbreak, the water is declared safe to drink and no more new cases of *E.coli* illnesses and deaths are reported, there are relatively few positive-tone stories. A pattern of this type is not surprising given the severity and the speed of the contamination.

The results from Table 5.2 and 5.3, which show a high frequency of coded references to health issues, help explain why the media reports are more often negatively framed, since subject matter influences how stories are framed. These references most often speak of the health issues in a negative manner, emphasizing the number of people who remain ill and those that have died as a result of the contamination.

The following four graphs, Figures 5.1, 5.2, 5.3, and 5.4³ on pages 85 and 86, show the trends in framing over the 2.5 year study timeline, by illustrating the individual monthly trends for each of the media outlets. The graphs show the negative (combined *Negative* plus *Balanced-More Negative*) and positive (combined *Positive* plus *Balanced-More Positive*) framed stories. The graphs were illustrated this way to stress the overall *tones* in story frames of the Walkerton risk event.

³ The values in Figures 5.1, 5.2, 5.3 and 5.4 are not percentages (%) but the actual number of stories.

An illustration of how the broadcast news reports for the *CBC National News* were framed over the 2.5 year study period is shown in Figure 5.1. Immediately following the first media report on May 24th, 2000, a large number of stories were broadcast on the event. This same trend is found in Figures 5.2, 5.3 and 5.4 for the *CTV National News*, the *National Post* and the *Globe and Mail*, respectively (it is important to note that the broadcast media outlets only have one news broadcast each night). Similar to the percentages found in Table 5.4, Figure 5.1 also shows that the majority of these stories were negatively framed, thus verifying the tragic nature of this event.

Following May 2000, the stories continue to be negatively framed. This trend is also seen with respect to the other media outlets, in Figures 5.2 to 5.4. Although the frequency of story framing differs slightly over time between the media outlets, generally, the more broadly negatively framed stories appear more often than the positive story frames.

It is important to note that there is a peak in the number of negatively framed stories in December 2000 (in all of the media outlets) as seen in Figures 5.1 to 5.4. December 2000 was an important month in the Inquiry process, as Frank and Stan Koebel, the foreman and general manager of the Public Utilities Commission (PUC) of Walkerton testified. Although answers to the causes of the contamination were largely determined during this month, the level of mismanagement of the PUC was shocking to the Walkerton residents and the government. The negative reactions, of the residents and elected government officials, played a role by influencing the negatively framed stories.

A trend seen in the print media stories but not in the broadcast media reports is the increase in the number of media reports during the month of October, 2000. Figures 5.3 and 5.4 illustrate the jump in media reports during this time, when the Inquiry began; these stories are also more negatively framed.

Overall, Table 5.4 and Figures 5.1 to 5.4 demonstrate that the Walkerton risk event is portrayed in the media as a predominately negative issue. Other studies (Anderson, 1997; Cooper and Roter, 2000) found the media's tendency to emphasize the sensational and tragic elements of a risk event is by focusing more broadly on human health issues. This analysis found this tendency to be dominant in the media during this event.

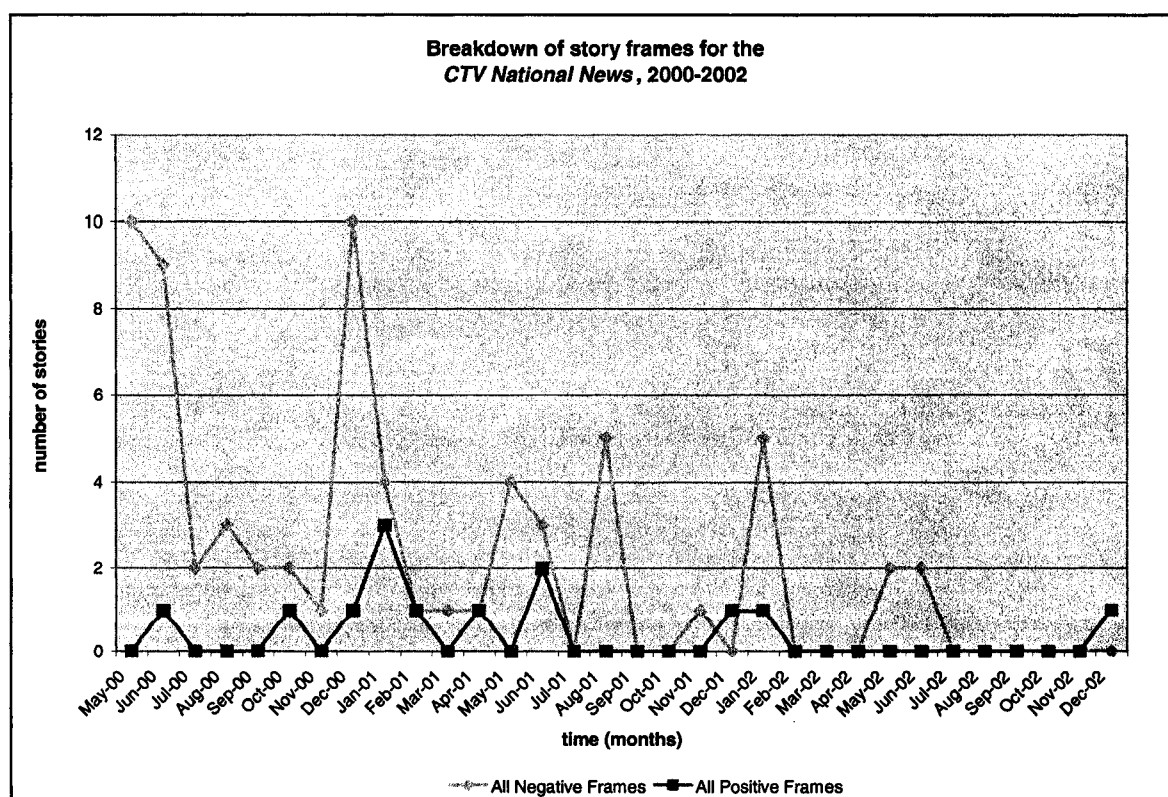
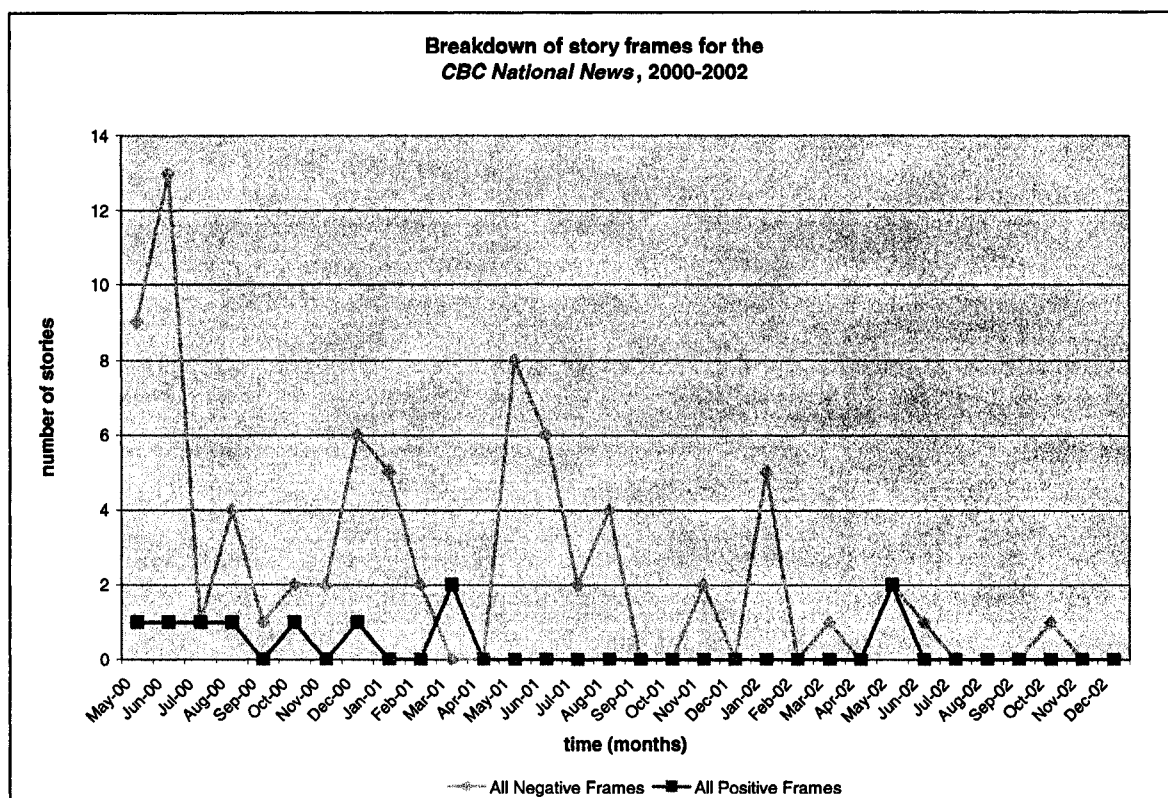


Figure 5.1 (Top) and 5.2 (Bottom): Breakdown of story frames for the *CBC* and *CTV National News*, respectively, for the 2.5 year study period.

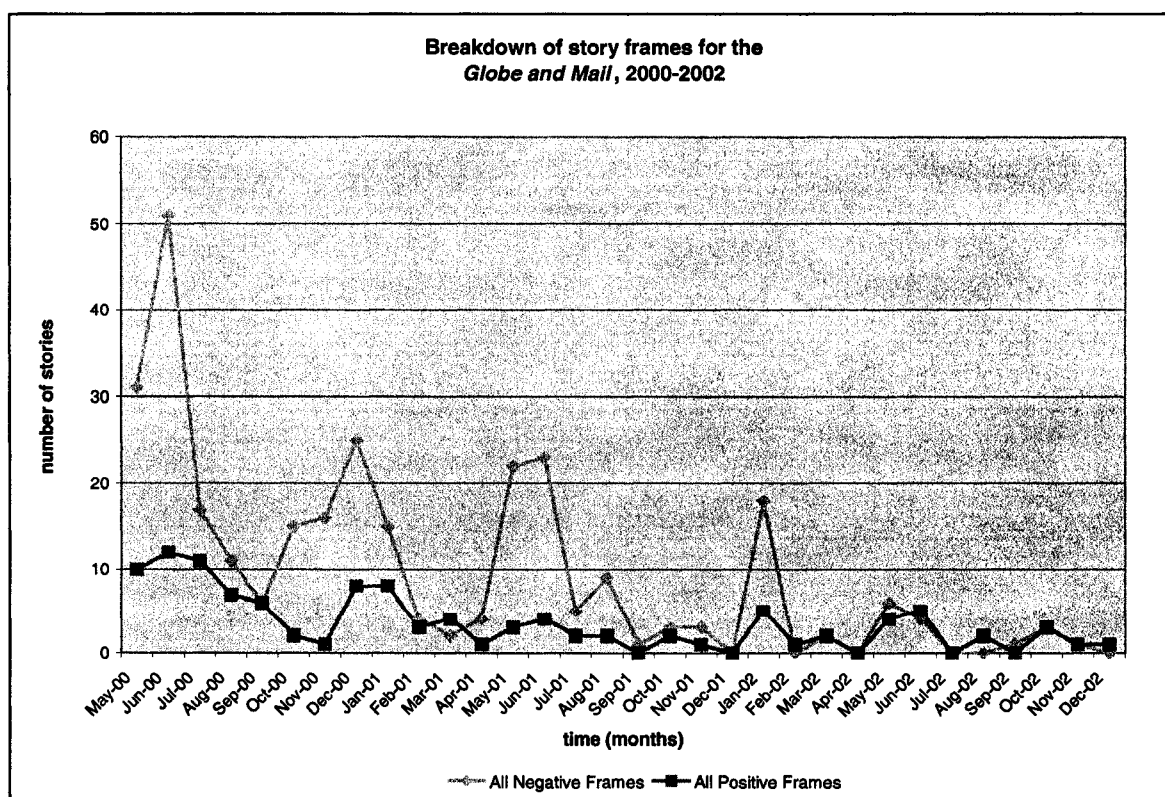
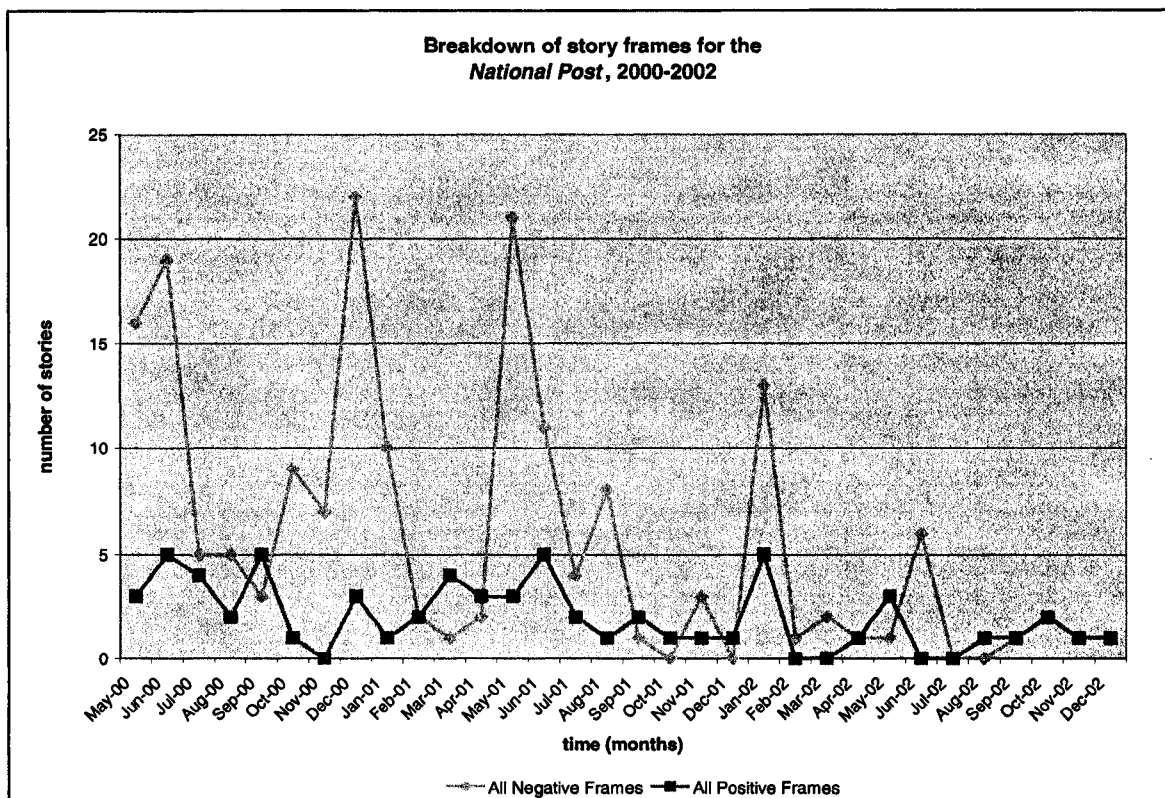


Figure 5.3 (Top) and 5.4 (Bottom): Breakdown of story frames for the *National Post* and the *Globe and Mail* for the 2.5 year study period.

5.2 Qualitative Thematic Analysis

To gain more depth into how the construction of the media reports could influence public perceptions of risk with respect to drinking water, the themes of *Blame*, *Trust* and *Community Description*, must be analyzed. Additionally, the language used in the construction of the story introduction will be discussed to see how the media reports are initially framed. The literature strongly indicates that blame and trust play an integral role in how the general public deals with risk. The media uses the comments of the Walkerton residents to construct a version of how the residents feel. For the most part, the Canadian public's understanding of this event is based on this altered version. The media's construction of Walkerton as a place is also important to how people outside of Walkerton view this community, and how they view the frequency of such a risk happening elsewhere. It also becomes very important to the residents of Walkerton, as the media's construction of the risk event contributes to the stigma they feel as a contaminated community.

In this case study, the introductions of the media story present the Walkerton risk event as the worst *E.coli* outbreak, often referring to the ill and dead. Although it starts to frame the story in a negative tone, how it is eventually framed is dependent on the content of the remainder of the story. In the Walkerton case study, over 80% of the introductions were coded as *Emotional*. While supplying the necessary information to set the context of the story, these introductions also provide more descriptive language that compels attention and elicits arousal from the audience members (Lang et. al., 2003). These introductions often refer to the outbreak using emotionally charged words such as “deadly outbreak of *E.coli*”, “deadly tainted water scandal” and “worst *e-coli* epidemic in Canadian history”. However, it is not the words alone that make this an emotional introduction, but use of other words, italicized in the quotes below:

On this tiny Northwestern Ontario reserve, a place where newspapers are as hard to find as the road out of town after a midwinter blizzard, Walkerton has become the world on everyone's lips.

Not simply because *they sympathize with residents of that tortured place*, but because most of the 300 or so Ojibwa who live here *believe illness, and perhaps death, have entered their own homes through the drinking water* (MacKinnon, 2000, *The Globe and Mail*, A7)

TOM CLARK: Well tomorrow is the day that the residents of Walkerton, Ontario, have been waiting for. It is the day that Stan Koebel takes the stand... *just about everyone lost faith in the water system* (CTV, December 17, 2000).

PETER MANSBRIDGE: Stan Koebel wrapped up his testimony at the Walkerton water inquiry tonight, *insisting he's no liar*. The former utility manager was grilled for hours on what he knew and what he did about last spring's *deadly outbreak of e-coli* (CBC, December 20, 2000).

At the deepest level, the words didn't matter: The moment mattered. Michael Deane Harris – who last pronounced his full name in public at the inauguration of his second government – sat in the same witness stand at the Walkerton inquiry in which Stan Koebel had at six months before, each charged with complicity in the *deaths of seven people from bacteria-contaminated water* (Ibbitson, 2001, *The Globe and Mail*, A8).

PETER MANSBRIDGE: *There's a new worry about water in Ontario tonight.* The province is warning 67 communities that their drinking water may not have been tested properly (CBC, June 12, 2002).

Hearing that one of those accused of failing to notify the community of the contamination maintaining some sort of innocence, and that there is the potential for similar situations to occur in Ontario compels emotion from the audience. This occurs because of the broad ramifications of the contamination on this community to broader fears in other communities like the Northwest Ontario reserve community above.

5.2.1 The Construction of Blame

Table 5.2 details the frequency of coded references of *Blame* in the introduction of the media reports. These coded references are not specific to any individual or group, but includes any mention of blame and issues surrounding blame. Within the body of the media stories, blame was coded for from the perspective of the residents of the community, the government, health officials, the PUC and other individuals and groups. Although the theme of *Blame* was

not often coded for the introduction of the media reports, they were prominent in the body of the stories. Blame is considered a reaction to the Walkerton event (i.e., the Inquiry, people becoming ill and dying), and is a subject developed in the body of the media reports rather than in the introduction.

Blame plays several roles in the construction of the media reports in the Walkerton case study. First, it helps to determine who or what is responsible for the contamination, so that those affected are able to move forward and deal with the risk. It also aids understanding of why residents feel as they do and why they are behaving as they do. Second, blame helps to define the character of Walkerton by the way the residents speak of their community, as well as, by the way they define who is and is not part of their community.

5.2.1.1 The Media's Construction of Blame: The Residents

The coded references of blame uncovers how the residents of Walkerton dealt with the contamination, defines the citizens as victims, and more specifically who or what they held responsible for the *E.coli* outbreak. Moreover, blame also helps to define this community as a place. An overview of the data indicates that blame evolves over time as information is released by the media. Figure 5.5, on the following page, illustrates how blame evolves over time, from the perspective of the residents.

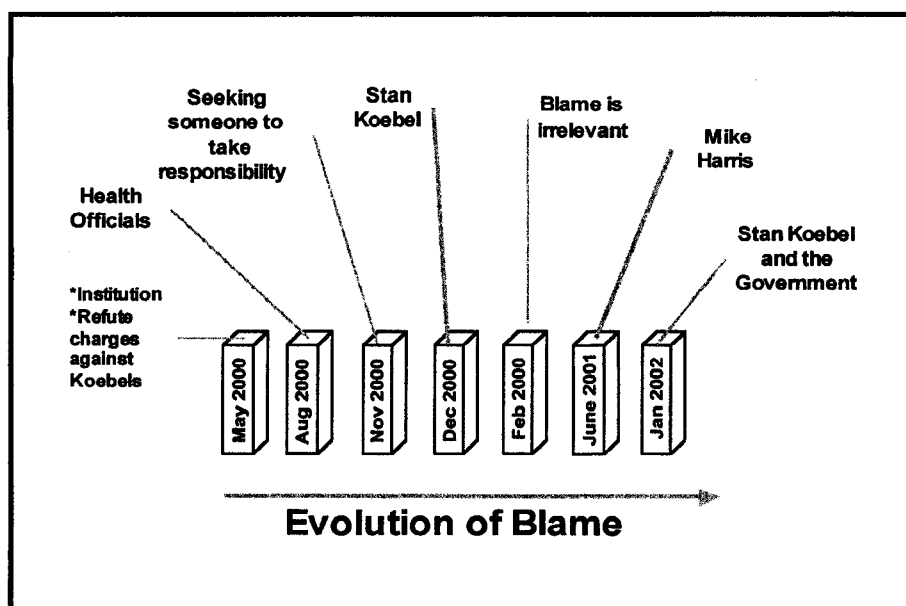


Figure 5.5: The above diagram illustrated how blame evolves over time from the perspective of the citizens of Walkerton. The figure highlights the major changes in whom the citizens blame, as information is released on the event of Walkerton.

Although there are residents that feel differently than what is described in this diagram, the figure serves to broadly illustrate how blame is constructed. In May 2000, as the first media reports of the contamination are released, the residents of Walkerton were immediately upset and angered for not having any advanced warning. The media recounted how residents gave their ill children water to drink, all the while not knowing it was the water itself that was the source of the illness. However, during the early reporting period, the community members refused to blame their fellow residents, Frank and Stan Koebel. Nonetheless, as information became public about the possible causes of the contamination, some began to indirectly blame Stan Koebel, but not specifically by name. Over time, blame shifts from the different institutions to rest firmly on Stan Koebel, as illustrated by Figure 5.5. As the media became an information source for the community and the Nation, the news construction of the risk may have influenced how residents assigned blame. Since the analysis did not include speaking directly with the residents of Walkerton, it can only be assumed that the media had some influence over what the residents have thought about. The following table, on pages 85 and 86, highlights some of the

comments and concerns raised by the citizens over the study period that describe how the residents were feeling:

Table 5.5: Evolution of Blame: The evolution of blame from the perspective of the citizens of Walkerton

	Date	Quote
A.	May 24, 2000 (CTV News)	(Resident blaming the municipality and the local PUC managers) PERRY CASSIDY: I think they should have done something sooner. They should have, if they were flushing the system they should have told us right away that this was a problem.
B.	May 25, 2000 (CBC)	(Walkerton resident): They told us all the time oh, the water's perfectly fine to drink. Jesus Christ, they knew it.
C.	May 26, 2000 (Cheney, 2000, A9)	"...grief caused by the death of the E.coli victims has begun to transform into anger and a desire for vengeance. "People are looking to hang somebody. But to me, that's not what it should be about right now. We need to get this fixed""
D.	May 26, 2000 (Oziewicz et al., 2000, A1).	"Why wasn't this information brought to the public right away?" one man shouted. " Somebody is going to pay," another said."
E.	May 27, 2000 (CTV News)	PETER MURPHY: Stan K[oeb]el, the man who knew the water was contaminated and didn't tell anyone, was still in hiding and said to be extremely distraught. He was well known in Walkerton and liked. While many said he made a mistake, they bear him no ill will. BUSTER ETHERTON (Resident): And he is a nice, good person
F.	May 27, 2000 (Blatchford, 2000, A01).	(Walkerton resident) "Seeing Stan being led down main street in leg irons is the last thing anyone wants to see...This isn't the way we run our country. This is too good a country for that" " If Mr. Koebel is found to have made a mistake...he'll be blameworthy, he'll pay the price. But let someone in authority say it. Let's not say it on the streets. And Stan has a boss. The boss is the PUC. And the PUC has a boss. That's the mayor. And the mayor has a boss."
G.	May 30, 2000 (CTV)	FRASER:...But residents of this tightly knit community of five thousand aren't looking for a scapegoat [Resident]: I support him one-hundred percent. I'm right behind him [Resident]: I kept praying for him [Resident]: I'm not blaming anybody, none of us are.
H.	May 30, 2000 (CBC)	HERMANT (Reporter): Ken Ball has reason not to welcome Koebel back. Business at his bar has plummeted...there are no harsh words for Stan Koebel. BALL: Up here everybody knows everybody. And I honestly don't think that there's a whole pile lot of people ready to lynch him.
I.	August, 4, 2000 (Bourette, 2000g, A1)	(Dr. David Biesenthal, owner of farm near well#5) "... even if the source of contamination is from his cattle, the fault clearly lies within the system. "I personally think that we are taking the onus from what happened 40 or 50 years ago. I know this well would never have been dug there now..."
J.	August 5, 2000 (Bourette, 2000a, R9)	"Few people are blaming Koebel. It's not for them to judge, they say. He's a victim, they claim, not a villain... "He's being crucified... Everybody else – especially the government – is trying to place the blame on him. If you polled everybody in town, you wouldn't find too many people mad at Stan." Koebel is still a pillar of the community. Much like

		his father, Stan Sr., who spent his life working for the town... "We all love him" .
K.	August 14, 2000 (CTV)	SAHLAS: They're also angry because health officials knew about the illnesses last Thursday night and said nothing at a public meeting. ...KEN HARTMAN (Former Mayor): It's fine if the doctor is not concerned, but the people are concerned. What do they know that we don't know? What are they keeping from us? These are the questions that go through people's minds.
L.	November 29, 2000 (CBC)	UNIDENTIFIED WOMAN (1): Too many people lost their lives over, you know, drinking water. So I think somebody has to take responsibility for what happened.
M.	December 1, 2000 (Bourette, 2000h, A8)	(Reporter commentary of Mayor Thomson's testimony at the Inquiry) "Like most of the townspeople, the mayor has refused to pin blame on Mr. Koebel"
N.	December 17, 2000 (CTV)	McDonald blames Stan Koebel, the manager of the water system, and his brother Frank. MCDONALD: They certainly had a responsibility to the citizens of Walkerton to ensure that the water was pristine, and not only did they fail, but levels above them failed.
O.	December 18, 2000 (Bourette 2000c, A3)	"He remains convinced that his old friend is being made a scapegoat when he was far from acting alone in his role in the tainted water. "I know Stan personally and I always thought he was a good guy...it's just that he was caught with his pants down on this one... I don't think there was any malicious intent there at all" " (Bourette, 2000b, A3).
P.	December 22, 2000 (Bourette, 2000e, A9)	... Mr. Elliott says he has turned his back on Stan Koebel. "I never thought I could feel so angry"... he recalls the panic of the spring morning when his four-month-old baby...began to writhe in pain... "There are so many people who are still sick around here. I just don't think I'll be able to forgive Stan"
Q.	February 2, 2001 (Gatehouse, 2001, A04)	(Resident who's daughter fell ill as a result of the contamination) "I think finding fault at this point is not important, but the ability of people to get on with their lives is paramount "
R.	June 29, 2001 (CBC)	(Walkerton resident, regarding Mike Harris) "I want him to realize that is was partially his fault that people ended up sick "
S.	January 18, 2002 (Smith, 2002, A3)	(Resident comments after the release of the first Inquiry report) "In the long run, you can't just blame these two guys... You can't really say nobody else knew there was something bad going on" "The Koebels didn't mean to hurt anybody...They feel terrible. The government should take their part of the blame, too "
T.	January 19, 2002 (Vallis, 2002, A12)	(Resident who's son was ill from the contamination) "I guess I want fingers pointed, but I realize that's not what this is all about... I feel the Koebels are hugely at fault and I'd like to see justice done there. " Mrs. Hammell wants criminal charges laid against Stan Koebel, a man she was once proud to call her neighbour... "It sounds pretty harsh, but if you saw what our little guy went through and what he's still going through, I just don't think it's fair that he get off scot-free"

As illustrated by Quotes A to H in Table 5.5, although the community is angry about the Koebel's contribution to the contamination, they refrain from specifically blaming them. This is seen early in the media's construction of the event. In Quotes A to D, references to the individual(s) being blamed are not specific to a person, but to 'they' and 'somebody', speaking generally about who they wish to blame. Quotes E to H show comments that suggest that residents still see Stan Koebel as their friend, and that they believe that the events have affected him as much as any of the other members of the community. Specifically, residents refer to him as a "good person" (Quote E), and they are also "praying for him" (Quote G). Moreover, the media constructed him as the "guardian of [the town's] shared interests" (Parr, 2005, p254). Additionally, the construction of blame from the residents perspective also illustrate the type of community this is, specifically illustrates the area as a "tightly knit community" (Quote G) and shows that they believe "our country is too good for that" (Quote F). However, the use of specific language chosen by the media to construct their stories (bolded text in Table 5.5, pages 86 and 87) illustrates the emotions felt by the community members over what has occurred.

By August 2000, more information is released as to the potential causes of the contamination and how town officials dealt with the information they were receiving. During this time, blame from the resident's perspective begins to shift from broadly blaming the higher institutions, such as the government and the entire water system (Quote I) to more specific departments, such as the Public Health Units. In this way, residents feel they are once again being left out of information loop as seen in Quote K. However, the support for Stan Koebel continues to be strong during this period, as noted by Quote J. Here, residents still see him as a "pillar of the community" and exclaim he is also a victim and "not a villain".

The community support for Stan Koebel began to crumble when he testified at the Inquiry in December 2000. Koebel's testimony began on December 18th and was described as "explosive" and as "turned the tide of public sentiment against him" (Gillis, 2000b, A04).

Quotes M-P illustrate the reaction to Stan Koebel during the month December 2000. It shows support for Koebel is strong at the beginning of the month (Quote M), but falls after he testifies (Quote N and P). Not only can the community members not forgive him as an institutional representative for what happened, they cannot forgive him as a member of their community.

Although evidence implicating Stan Koebel of withholding information regarding elevated *E.coli* in the drinking water that most likely would have prevented some of the deaths and illnesses, Stan continued to retain support by some of the community. Even though some community members still supported Stan Koebel, they feel that he is not the only one to blame (Quote N) nor were his actions a malicious attack on their community (Quote O). Although some support for Koebels remains through the study period (Quote S), it is not as strong as earlier in study period.

By early 2001 (Quote R) residents are tired and want their lives to return to normal. They believe this to be paramount (Quote Q) to move forward. This is before the Premier testifies at the Inquiry, which takes places on June 30th, 2001. As illustrated by Quote R, residents are now directing some of the blame towards the Premier, Mike Harris.

The analysis of blame from the perspective of the citizens of Walkerton also reveals the type of community that they are as a whole. The thematic analysis pulls out some of the more descriptive discussions around blame, where the word 'blame' is not even used. Defining how they are part of this community and how similar communities would also deal with such an event; this quote speaks directly to how the community is dealing with this risk event:

"People are getting angry but in a very Bruce Country manner... They don't air their dirty linen in public and anger is directed at a very non-specific 'they'..." "You have to understand people here... You don't hear the laying of blame and you don't hear anger. I'm not saying it's not there but people want the community to be well again... That's the way people are here in rural Ontario. They want to be part of the solution, not part of the problem" (Iverson, 2000, National Post, A07).

Moreover, resident statements used as part of the media's construction of blame reinforce the idea of this being a small, tightly-knit community, further defining Walkerton's sense of place. Residents are not quick to judge or crucify a member of their community until they receive all the information. Even when the final reports of the Inquiry are released, and the role of the Koebel brothers in the tragedy is known, residents realize it was a broader system failure that caused the contamination and still refrain from directing all of the anger towards these two men.

5.2.1.2 The Media's Construction of Blame: The Government

Unlike blame from the citizen's point of view, the blame directed from the various levels of government does not evolve over time. Provincial Opposition party members put blame squarely on the Conservative government and make mention of the Premier. Members of the Conservative government try to refute the charges and attacks by directing blame to the local community and specifically onto Stan Koebel. Although the media outlets generally present similar subject matter, a marked difference is seen with the print media's construction of blame from the perspective of the provincial government. The *National Post* takes on a government advocacy role, criticizing other media outlets for their portrayal of government response to the Walkerton crisis. The following editorial from the *National Post*, on December 20th, 2000, describes their views of other media constructions:

"... some news media wasted no time jumping to conclusions. They knew who to blame: Mike Harris, the Ontario Premier. On May 30, in a front-page story titled *The High Cost of Common Sense*, the *Globe and Mail* said Mr. Harris's policies 'caused people to die.' A week later, the *Globe* doubled down: 'Premier Mike Harris's insistence that his government is not culpable becomes more untenable... This kangaroo trial by the media was conducted hastily during the summer, to secure a conviction against Mr. Harris before contradictory facts were discovered... But one lesson we have already learned – likely lost on Ontario's Liberal opposition and like-minded media pundits – is that it is foolish and dishonest to make political hay out of tragedies before the facts are out' (National Post Editorial, 2000, A19).

The *National Post* criticizes how other media reported on the Walkerton events, describing the news construction as a “kangaroo trial” and by laying blame too early in the Inquiry process, the media does a “dishonest” service to the public. Moreover, in addition to broadly blaming other news media outlets, the *National Post* also criticizes the Liberal government for their hasty decision on how the contamination occurred. This type of criticism shows how the media broadly polices itself to ensure all views (or at least the preferred view of different media outlets) are heard and to challenge the audience to question what they read. The two broadcast outlets, the *CBC National News* and *CTV National News*, generally provide a similar type of reporting, in that the subject matter and emphasis on a particular topic is similar. Both broadcast outlets make efforts to look at other issues surrounding drinking water risks, such as how various communities deal with similar situations to Walkerton or the safety of bottled water. The most notable differences in reporting styles relate to the language used in constructing their stories, which may impact the way people interpret the information that is broadcast.

The different ways in which blame is constructed, from the perspective of the government, could influence the way in which Walkerton residents react to government. The overall media concentration on government action or inaction could influence the way the general public trusts future actions when dealing with similar risks. Throughout media reporting, presentations of how government officials deflect blame from themselves onto others results in no one taking responsibility for the contamination. This may leave the residents and general public to wonder who is responsible for the Walkerton risk event.

5.2.2 The Media's Construction of Trust: Presenting Views from the Residents

Unlike the topic of blame, which evolves over time, trust, or the lack thereof, remains consistent throughout the reporting period. The following table, Table 5.6, highlights the analysis of trust.

Table 5.6: Resident quotes regarding the loss of trust

	Date	Quote	Loss of Trust
A.	May 26, 2000 (CBC)	BUCHANAN (Resident): I don't believe anything that the town says and it's going to be for a very long time. You know and even when they say they've found the root of the problem and flushed their systems out, how do we know that our systems in our own houses are going to be free of it?	Against the "town" and infrastructure
B.	May 26, 2000 (Abraham and Kilpatrick, 2000, A1)	Resident "You only hear of this in Third World countries...I wouldn't drink water again if my life depended on it. "	Against water
C.	May 26, 2000 (Vallis, 2000, A09)	"You realize it's surprising how often you go to turn on the water until you can't use it..." He is so distrustful of Walkerton's water that he planned a 10-kilometre trip to Mildway just to take his morning shower yesterday.	
D.	July 14, 2000 (CBC)	ROUMELIOTIS (Reporter):...Laurie Johnson won't talk to police this weekend. She doesn't trust what they'll do with her medical file. Or of her sons...	Against the police who are looking for answers
E.	August 14, 2000 (CBC)	"For Walkerton's people, it comes down to trust. They still can't trust their water , and many say they can't trust those who are suppose to keep them informed "	A collective "those"
F.	December 5, 2000 (CTV)	"UNIDENTIFIED WOMAN (1): You gentlemen are telling me it's safe to drink this water. I'd like to invite you down to my house for a drink of water out of my tap. I don't want to do it... DONNA BERBERICH (Resident): No way in hell are we drinking it in this house" (CTV, December 5, 2000)	Distrust of Water
G.	December 7, 2000 (Foss, 2000, A1)	"... it put in doubt the fitness of the people caring for water safety in the town"	
H.	December 11, 2000 (CBC)	"UNIDENTIFIED MAN: Are any of you people drinking the water yet? I'm not. And I think it's the majority of the feeling in town" (CBC, December 11, 2000).	
I.	December 17, 2000 (CTV)	"JAMIE MACDONALD (Former Walkerton Resident): The main reason why we're moving is that we don't have the trust in the water system anymore" (CTV, December 17, 2000).	
J.	January 31, 2001 (McLaughlin, 2001, A6)	"...Laurie, who still avoids Walkerton water, said: "If I won't drink it, who else will? No one trust the water , so who would want to live here"	
K.	May 4, 2001 (CTV)	"YVONNE CARROL (Resident): No, we're not drinking the water...Just the faith in the water isn't quite there yet "	

		(CTV, May 4, 2001).	
L.	May 12, 2001 (Barber, 2001, A3)	"People who were seriously affected... I don't think they'll ever touch it again. I won't. Not after I went to the hospital with my son having bloody diarrhea and they told me he could die " (Barber, 2001).	Collective "they", water and government
M	January 19, 2002 (Blackwell, 2002, A01)	"People are still ill, they're having residual effects from the E.coli... I don't know if we'll ever be able to move on totally or get over it totally. I don't think that will ever happen. It's just too big a betrayal " (Blackwell, 2002, A01).	
N.	May 23, 2002 (CTV)	CHAO (Reporter): As for the Berberich's, they've tried to get back to life as normal. But they say their faith in the water and in their government will never be restored.	
O.	October 29, 2002 (CBC)	" I don't think that will ever repair that trust given the psychological trauma that we went through here" (CBC, October 29, 2002).	

The bolded text in Table 5.6 illustrates the strong language used to express trust, or the lack thereof, from the perspective of the Walkerton residents. The language used in describing the community's distrust of the water is very strong and emotional. In comparing the language used in constructing blame and trust, the coded references of blame are not as strong or powerful an emotion as trust. Blame tends to show more action, with respect to community members supporting Koebel (Table 5.5, Quote E, F, G, and J), whereas the coded references of trust illustrates how people feel towards their drinking water (Table 5.6, Quote C, B, K, and N) and, broadly, the government (Table 5.6, Quote A, E, G, and N). The description of the community's lack of trust in the government and of their water source remains strong throughout most of the reporting period. Moreover, once the water is declared safe to drink, the residents begin to express uncertainty in whether they will or could ever trust in the safety of water again.

GREG MacLEAN (Walkerton resident): It's just an irrational human fear that after this happened, once burned, twice shy. Eventually, as I said, we will drink it...

UNIDENTIFIED WOMAN (2): People aren't just going to trust, they're not going to trust. It's their lives that they're concerned about, and trust just doesn't build up overnight. It will take months. It may even take years. Some people may never drink the water again (CBC, December 5, 2000).

PETER MURPHY (Reporter): Sheryl Campbell uses Walkerton's water to clean with, but she and her family won't drink it even though health officials are about to say it is clean, safe and free of e-coli.

SHERYL CAMPBELL (Resident): No. Maybe some day, maybe some day, but not right now (CTV, December 4, 2000).

Trust also reflects who does and does not belong in the community. Residents refer to a collective 'they', to reflect the institutions that are suppose to keep them safe. Residents refer to the "town" (Quote A), "You gentlemen" (Quote F) or "they" (Quote L) when describing the officials in their community. Those the residents do not trust are no longer part of their community. The analysis also showed the lack of trust, with respect to water and elevated water to an institutional level. From Table 5.6, Quotes A, E, G, I, J, K, and N all illustrate that both water and the system designed to keep them safe are compromised, rather than the individuals that were responsible to keep the water safe.

We also see an amplification effect of the contamination in Table 5.6, where there are trust issues at the local level and the provincial level, "Ontario citizens have had lingering doubts about the safety of their water supply since six people died and another 2,000 fell sick..." (Bourette, 2000f, A4) and the national level, "The battle against the bacteria did more than rock this town. It has shaken many Canadians' confidence in their drinking water" (CTV, June 5, 2000). Consequently, it is seen how the media's presentation of this event may have affected the rest of the country.

5.2.3 The Media's Construction of Walkerton as a Place

Several media stories report that the *E.coli* contamination put Walkerton on the map. It was through the eyes of the media that the town became known based on how the community is described before and after the contamination.

Pre-events reference codes for an indication of how the media concentrates on the spatial location and size of Walkerton when describing this community: "Walkerton, a small farming

community of 4,800 south of Owen Sound” (McLaughlin, 2000, A6); “sleepy farming community” (Bourette, 2000d, A1); and “population a bit short of 5,000, is a little more than three hours driving from Toronto...from Toronto to Walkerton, it may be 100 years in attitude” (Gray, 2000, A14). Media presentations become very descriptive to differentiate from larger communities: “The rolling green countryside of Southwestern Ontario takes a sudden dip into the valley of the Saugeen” (Gray, 2000, A14); “From the hills that surround it, the town is a mosaic of trees and Victorian buildings” (Ebden, 2000, A8); and “Walkerton may remain one of the most scenic, community-minded towns in Southwestern Ontario” (Gillis, 2000a). What is prevalent is its size, rural-ness, and far from ‘contaminated’ land-uses that may affect the water: “It’s a community like many in rural Ontario. The kind of place where people feel the environment is, if not pure, at least not contaminated” (CBC, May 24, 2000), “Beside the fast flowing picturesque, Saugeen River as it nears Georgian Bay, lies one of the best known small towns in Canada, Walkerton” (CBC, May 7, 2001), and “The friendly secretary spoke of the town’s private wells, and how little chlorine was required because of the purity of the water” (Axler, 2000).

Following the contamination, coded under the node *Post-events*, the media reports highlight the physical impact the city is dealing with, “Work crews have washed the system with chlorine and now will dig up the roads and replace kilometers of old pipes” (CBC, July 27, 2000), as well as the economic impacts, “The scars to this town are everywhere. “For sale” signs litter the landscape” (CTV, May 20, 2001) and “Sandie King has had her house listed since April, well before the water became contaminated. Since the outbreak, she had one Walkerton resident come to see it... “You can list it at \$1 and it wouldn’t sell right now”” (Mackie and Alphonso, 2000, A5). This is a stark contrast to descriptions prior to the contamination.

The media’s attention over the risk event also amplifies what is happening. This ‘sleepy town’ has been turned into something entirely different:

“But the media, they were everywhere. The outsiders. Of course, people know about the media now and they expect them to arrive in places like Walkerton, as they expect vultures to arrive in pursuit of carrion.

There were television trucks and cars all along the block by the municipal building. It’s entirely possible that a TV truck had never before been on the streets of Walkerton...

And there were all those reporters wandering up and down Durham Street, the main street in town. When most people were huddled at home, it was not hard to spot the invaders from Toronto.

...some of his parishioners were afraid to walk down Durham because there were always guys with microphones asking whether they were angry” (Gray, 2000, *The Globe and Mail*, A14).

This quote illustrates the impact of the contamination on the community. There is now an artificial economy that has been built with the arrival of the media. Since the people of Walkerton do not want to leave their homes for fear of dealing with the media, or with the feelings of stigmatization over being from Walkerton, the community seems to feel like hostages in their own town:

Things like soccer games in other towns are being cancelled. Fear of e-coli is the reason...

UNIDENTIFIED CHILD: Yeah, really unfair, yeah. I just don’t know why they like, don’t wanna play with us.

HERMANT: ...Many clients from outside of Walkerton just don’t want to be near Judy Gingrich or her nail salon. She says Walkerton has become a dirty word.

JUDY GINGRICH/NAIL SALON OWNER: ...And it makes you feel you know, bad that people think that this is. That we’re some kind of new leper colony that has sprung up. (CBC, May 31, 2000)

Dr. McQuigge said he has heard of a Walkerton sports team being relegated to separate sleeping rooms for an out-of-town game and a McDonald’s restaurant in Hanover refusing service to people from Walkerton. “This is unnecessary and hurtful to the people of Walkerton...Residents of Walkerton should be treated with consideration, and not treated as if they are contagious” (Mackie et al., 2000, *The Globe and Mail*, A1)

“People are afraid to eat out” said owner Ken Strucke, adding that he’s seen business plummet 50% since the outbreak began. “You go up to someone in Toronto and say you’re from Walkerton and they take three steps back – they’re scared you can transmit it” (National Post, 2000, A07).

5.3 Conclusion

Media reporting on the Walkerton risk event was steady over the 2.5 year study period. Although there are periods of increased frequency of reporting of the risk event, like at the start of the Inquiry process, the reports have been consistent. Although several larger themes were coded for the introduction of the media reports, the subject matter of *Ill/Dead* was most often coded for as this played a large role in the construction of the risk event. The repeated reference to health issues helps to establish the heuristic of 'what happened' and this may influence the understanding of future events.

Stories were more often negatively framed. Although the themes of blame and trust were not often coded for the story introductions, they were found within the body of the media reports. The media construction of government blame remained consistent with each political party blaming the other for the events. However, the *National Post* took on a more advocacy role in defending the actions of the Conservative government.

Media presentations of resident blame evolved over time as new information was released. Blame was directed generally at the government or 'someone' before being directed at specific individuals, such as Stan Koebel and Mike Harris. Trust did not change over time, but the language used in constructing trust was much stronger than blame. Interestingly, although the residents lost trust individuals (Kobel's), they also lost trust in water; elevating water to an institutional level. The media also constructed a before and after image of Walkerton. The construction showed a quiet, tightly-knit community that was overrun by the media and other outsiders. The contamination itself also stigmatized the community, contributing to their changing sense of place.

Chapter Six Discussion

6.0 Introduction

The contamination of the local drinking water system in Walkerton became an important event that illustrated how the media report on risk events, as well as, the broader issues related to risk and public perceptions. One issue highlighted was problems related to the overall safety of drinking water in Walkerton. This may have also signaled the existence of problems with water in other communities, and prompted an overhaul of the provincial water system. The Walkerton event maintained its presence in the national media, occasionally having a greater media presence than other public health risk issues, illustrating its relative importance in the social realm.

6.1 Constructing a Risk

The outbreak of *E.coli* was not just a passing event. Acute risk events generally have a short period of high frequency reporting, tapering off after the initial ten-day reporting period (Frewer et.al., 1998; Braxton et.al., 1999). Chronic risk issues may appear more regularly or sporadically in the media, and span a much longer period of time. Unlike other acute risks, the Walkerton event, due to its large number of media stories, may be recalled more frequently than other risk events.

The media coverage maintained a focus on the negative health impacts on the community. While not overly surprising, this negative tone dominated over the 2.5 year study period. Despite many positive aspects – the risk being declared over within a few days, the establishment of a public Inquiry - the media reports continued to stress the negative aspects of this event. Negative events tend to be recalled more frequently particularly when they are sensationalized (i.e., emphasis on illness and death). Maintaining the right balance of sensationalism in news media reporting helps to secure their market share of audience viewing (Cooper and Roter, 2000).

Stressing the negative aspects of the event may also resonate more with the public. The repeated use of the negative health references can be viewed as ‘linguistic tags’ (Petts et.al., 2001), that play on common fears and anxieties. These tags have a familiarity attached to them that the general public understands and can link them to past issues or events, which facilitates their connection to present risks. Linguistic tags are similar to issue framing when defining an event or issue. The initial framing of an issue becomes particularly important as it establishes how the general public may quickly view the issue. For example, making links between the Walkerton risk event and a current event, such as the 2006 boil water advisory in Vancouver, helps to frame the current event as potentially ‘deadly’. Over two million residents in Vancouver, British Columbia, were placed on a boil-water advisory for an indeterminate¹ period of time, in November, due to high turbidity in the water, which could introduce bacteriological parameters (e.g. *E. coli*, viruses, etc) to the water supply, possibly endangering public health. What is interesting about this front page *Globe and Mail* story is that it likens the potential threat with Vancouver’s water to the actual threat that happened in

¹ At the time in November, 2006, the length of time the boil water advisory would remain was unknown. However it has since been lifted.

Walkerton six years earlier (see Fong, Nov. 17, 2006, A1). By comparing the Vancouver issue to Walkerton – the worst *E. coli* outbreak in Canadian history – the public is able to recall the potential dangers that can occur. The word ‘Walkerton’ becomes the tag to which the general public relates illnesses and death with the consumption of contaminated water.

Another possible reason why this risk event was featured so prominently in the media agenda is that water safety became an issue in a developed nation. Canada, which is known for its abundance of fresh, clean water, is not supposed to be affected by problems of this nature. Cresswell (1997) suggests that water symbolizes ‘life’, stressing its vital importance for human health. Worldwide, more people die and become ill due to the sheer lack of water (for personal and household uses) rather than from impure water (Leclerc et.al., 2002). The lack of medical care, malnutrition and deficiencies in the quantity and availability of water results in millions of deaths per year from diarrhea and enteritis. In 1997, the World Health Organization (WHO) listed diarrhea as the top-ranked cause of morbidity and 6th in mortality, worldwide (Leclerc et.al., 2002). Hrudey et.al., (2002 and 2003) suggest the developed world is not immune to such tragedies, as seen in Walkerton. He and his colleagues indicate that such waterborne diseases are also apparent more broadly in North American and Western European communities, raising questions as to why such failures in water treatment technologies continue to occur. As a result, water can be defined in some regions as something that can cause great harm to human populations; however, it is something that is essential and necessary to human life. What became interesting through media presentations was that the situation in Walkerton became likened to that of a developing nation – although the water might be contaminated and deadly, it is necessary. However, most people in urban areas in the developed countries, more specifically Canada,

do not think twice about what comes out of their tap; often accepting on blind faith that the water is clean.

The location of the drinking water contamination – a small rural community – likely provided comfort to most Canadians living in larger urban centres. Nonetheless, it confirmed province-wide worry of those monitoring environment and public health (Parr, 2005). Driedger and Mistry (2006) suggest that most people do not think about the quality of their water until something happens to raise concern. As such, the less familiarity the public has with a risk issue, the more they may depend on the media for their information (Watt et.al., 1993; Soroka, 2002). All in all, Canadians generally do not consider drinking water to be a risk to their health and well being (Slovic et.al., 1993; Krewski et.al., 2005). The Walkerton situation may have altered this, however, particularly for communities that, like Walkerton, are dependent on ground water supplies and (partly) and are surrounded by agricultural land.

One element that is generally found in media reporting of contested issues is experts who may resist media depictions of the event or issue. Commonly there are experts, such as those in risk management or communication, who refute media representations of risks, as they feel the media exaggerate some elements of the risk and downplay others. What became clear in this analysis, however, was the lack of contestation of the media constructions of the risks. The physical intrusion of the media in the community was contested by the residents. However, the Inquiry into the Walkerton event revealed that years of mismanagement and gross misconduct on the part of the Koebel brothers and government cuts to water testing, all contributed to the contamination. Neither the general public nor the experts dispute the media information revealed about how the contamination

occurred. Instead, there may have been greater concern over what the Walkerton risk event uncovered, within the province regarding drinking water safety, than on how the media portrayed the risk event. The media, as one of the primary sources of information, helped to amplify the potential risks.

The *National Post* was the only media source found to be openly refuting other media constructions of the events. However, this may be viewed as part of the *Post*'s ongoing 'newspaper war' with the *Globe and Mail*, where this type of behaviour is common. Newspapers refuting the representations provided by other outlets can encourage social dialogue, and set the preferred ideological tone being promoted.

6.2 The Role of Blame and Trust in Understanding and Constructing a Risk

The media representation of blame and trust from the perspective of the residents illustrates how they contested general information about the risk event (i.e., the Koebel brothers' role in the contamination), though not specifically the media's presentation of this information. Moreover, issues of blame and trust play an important role in the broader understanding of how the public deal with risks, including their evaluation of presented information. Petts et.al., (2001) suggest that with respect to risk reporting, the media try to find someone to whom they can assign blame as a way to personalize the event – putting a face to who or what may have caused the risk. In general terms, once blame is ascribed by those affected, the general public is able to begin moving beyond what happened and returning to some state of "normal". In the Walkerton context, the residents of the community, through the media's construction, refused to trust the drinking water, even when it was officially declared safe to drink. The media's construction highlights the great

concern the community members have over the safety of their drinking water and also of those responsible to keep them safe. From a media perspective, blame plays a role in triggering media attention (though not the only trigger in this risk event) to an issue, and sustaining that attention for the duration of the event.

The analysis of the themes of blame and trust highlighted something unique with respect to this risk event. They not only illustrated how the community was dealing with the risk, but they also defined the community and more specifically, the character of the community, delineating who does and does not belong in Walkerton. Quotes from Walkerton residents in media stories illustrate that the residents defined themselves, in part, by where they live - in a friendly, picturesque community, where the environment, “if not pure, is not contaminated” (CBC, May 24, 2000). This description of the community begins to develop a *sense of place* for Walkerton or “quality of life” (Agnew, 1993, p.263). Apart from the residents’ comments, the media’s description of Walkerton creates a picture of a small, rural community, where everyone knows everyone, similar to many small towns found in rural Ontario. The character of the community is indirectly revealed when the residents begin to deal with the risk event. Residents felt sympathy with the Koebel brothers, arguing that now was not the time for anger (Parr, 2005). What emerged from the analysis was how pervasive resident community identities shaped their responses: blame is less important than solutions, and supporting fellow Walkertonians (the Koebels) was an integral part of belonging to this community. Masuda and Garvin (2006) argue that place attachments are embedded in the rural idyllic lifestyle. Extending their argument to this research, residents of Walkerton would not believe that one of their “own” could be responsible for the contamination in their community, nor that anger was the logical

response. Consequently, how the community members assigned blame becomes a product of their social and cultural background. For example, when residents spoke of how to deal with the Koebel brothers for their part in the contamination, “lynch[ing]” (CBC, May 30, 2000) them or “[s]eeing Stan being led down main street in leg irons is the last thing anyone wants to see” (Blatchford, 2000, A01). As Parr (2005) noted, journalists were annoyed not to find a mob of angry residents ready to pin blame on someone.

A change in the social relationships within the community emerges as the residents assign blame. As blame evolves over time (i.e., who the community blames changes), the character of the community does not evolve, but continues to develop, adding a layer that more clearly defines this place. As more information is revealed regarding the Koebel brothers, some members of the community remain supportive of their fellow residents, even if they do blame them for the contamination. Residents feel that although the brothers are to blame, the community as whole suffers for what happened and the brothers remain part of Walkerton. Although the community generally remained supportive of the Koebel brothers, there was some change in the neighbourly relationships, which began to deteriorate once information emerged, during Inquiry testimony. There were some residents who felt being part of this community meant supporting the Koebel brothers unconditionally, whereas others believed the brothers should be held responsible for what happened. A faint divide begins to form in the community. In assigning blame, it is not just whom the residents blame, but also the way they continue to support the Koebels, that helps to develop a sense of place for Walkerton. As such, a compassionate, close-knit community is portrayed through these comments.

The drinking water contamination was a private event that quickly became a public affair; yet, through the media's representation of the community, vicious verbal attacks on the Koebel brothers regarding their part in the contamination were not noted. Even in light of it being such a publicized event, the Walkerton residents held fast to their traditions, "wary of premature 'finger-pointing' by city media" (Parr, 2005, p.256) that may have caused greater tensions within the community. Uncovered through the analysis of the theme of blame, was a Walkerton community that can be compared to the likeness of a somewhat *normal* family relationship - that no matter what happens family is always there for one another.

Through the media's construction of blame, from the residents' perspective, including the physical description of the community, a sense of place is developed. Canadians reading or viewing these stories are given a glimpse of what it is like being in the community, but also generally what the community is like. The media's representation of the residents, through blame, evokes feelings of a compassionate community even though they have been exposed to the contamination. The risk event creates a feeling of isolation from those beyond the walls of Walkerton and an internal sense of cohesiveness is ignited, as the residents dealt with the stigma now imposed on them (Edelstein, 2004). The cohesiveness exists in part because the residents now have a new common identity, as a result of being part of this contaminated community. What is also noted is the change in the community members' experience with their surroundings, as trust is lost in those responsible to keep them safe.

The community, bounded and defined by the contamination, is not just a place where the residents live; it is a place of "active dimension of social relations" (Masuda and Garvin,

2006, p.451) that work together with culture to create meaning to those places (Shields, 1991). The internal community interactions (i.e., residents going to work, taking part in community events or just walking down the street chatting with their fellow residents) help to define this rural community of Walkerton. Through the media's construction of blame and trust, from the perspective of the residents, the following changes in place are noted. First a new border is drawn around the community defined by the presence of *E.coli*, redefining its *locale*; places or settings of 'social relations'. The spatial extent of the *E.coli* contamination defines the new boundary of Walkerton, which may go beyond the physical or political borders of this community, as a "risk perception shadow is cast over" the affected areas (Edelstein, 2004, p.9). The physical positioning, or *location*, of the community does not change. Once the community became defined as a contaminated community (Edelstein, 2004), place, as defined by Agnew (1993), also changes. Second, the economic and social relationships change within the community. The contamination of the drinking water brought the media to the community, many of whom had never visited Walkerton previously. As such, it created an artificial-micro economy that disappeared when the Inquiry ended. With the intrusion of the media in the community, the residents became very aware of 'outsiders' and suspicious of their role in the community. As such, the friendly and inviting community (Cheney and Freeze, 2000; Gray, 2000) that existed before the contamination occurred, as presented by the media, disappeared. Although the residents seek someone to blame, they are also aware that attacking their fellow community members is not how the situation should be handled. A change in the community's character is accompanied by a loss of trust in formalized government structures (e.g. water systems

management). Therefore, the third change in place that is noted is that although it remains a close-knit community, the relationship of the residents to their community has deteriorated.

As blame begins to define the place of Walkerton, the analysis of trust from the perspective of the residents also showed who did and did not belong. Distrust disconnects the community with their surroundings. The relationships in Walkerton have been torn, and a shift in the community structure and social relations is apparent. Parr (2005) argues that the residents felt their home (the community) stopped providing the safety and security they expected, altering their sense of place. The community's handling of the contamination begins to create a 'them' and 'us' attitude, creating a shift in their relationship with the environment around them (Relph, 1997). Cresswell (1996) argues that places are constructed and defended based on the understanding of what does and does not belong. Those individuals who are located outside of the borders of the community that are not affected by the contamination or who are not suffering as the residents are, are specified as 'them'; whereas, 'us' are the residents who are directly touched by the event and are trying to figure out what happened. They want to know why the contamination occurred in their community. 'Them' is further defined by those whom the residents blame for the contamination, including those who did not inform the community in time, adding to a loss of trust. Therefore, a divide in the community with respect to trust forms similarly to the divide noted with respect to blame.

In Walkerton, the presence of this contaminant alters the sense of place for the residents of the community and eventually the meaning of place for the community, as seen through the resident comments privileged in the media's construction of the risk event. Thus, the risk event and the community in which it occurs are intertwined.

6.3 The Social Amplification of Risk – The Role of the Media

The contamination of the drinking water in Walkerton may have been amplified to a greater degree due to the impacts on the community as a whole. Masuda and Garvin (2006) discovered that risk amplification occurred in a community study of future industrial sites on the basis of where such “industrial intrusion was not welcome” (p.452). In their study, the contamination created a situation where there was something unwanted or that is not naturally found in a rural community and thus seen as an intrusion in the community. Similarly, in Walkerton, *E.coli* was an intrusion in the community, bringing with it unwanted media attention and stigmatization of community members by those beyond the borders. In such public health risk situations, stigma can be attributed to both the presence of the contaminant in the community, for which ‘outsiders’ fear catching, and to the media’s attention on the issue. The media play an important role in shaping individual and group views of an issue (Kasperson et.al., 2001). The media are not just transmitters of information; so much as they interpret and communicate information about a risk. They select certain aspects of the risk event to describe what is happening and provide the audience member a particular version of the events. As such, it is not a linear communication of information, as may be implied by the social amplification of risk framework (Petts et.al., 2000). The media focus on the negative, despite positive changes that emerge (e.g. improved water system in Walkerton, stronger regulations in Ontario). The media attention on this risk continued to keep the *mark* (highlighting a negative element of the event) visible. As such, it perpetuated the stigma, formed as a result of the contamination, attached to this community and its residents. Consequently, both risk

amplification and stigmatization play an important role in risk perceptions (Kasperson et.al., 2001).

6.4 National Understanding of Place – Limitations of this Study

The analysis uncovered national media representations of a local event. At this level, the media were able to affix labels to the risk event that may have not been plausible at the local level. When *The Globe and Mail*, seen as Canada's news-agenda setter and "self-declared national newspaper" (Klaehn, 2005, p.138), declares the Walkerton risk event as *the* worst *E.coli* outbreak in Canadian history, the general public may begin to develop similar views of the issue. As such, the resulting stigma attached to this risk event is greater and farther reaching, than if a local paper had issued a similar statement. With national coverage, however, come limitations: the local perspective or colour may not be as apparent as may be seen if the coverage was truly local. Nonetheless, the embedded nature of the media in Walkerton may have influenced their story constructions somewhat.

Although the four media outlets used in the analysis provide a national perspective, they are all based in Ontario, and more specifically in the Greater Toronto Area (GTA). As such, the media coverage may have a stronger Ontario perspective, rather than one that reflects the broader ideals of the country. The attention the Walkerton risk event received may have been a result of the regional concern over drinking water issues, rather than that of the entire country. Canada does not have a dedicated national newspaper that the public can turn to, to provide that one national perspective. Instead, Canada has two national print media, the *Globe and Mail* and the *National Post*; each which have their own agendas and ideology that they are trying to promote. As in many countries, the various regions of

Canada are unique in their social, economic, political and physical makeup. As such, one paper or media source may not be able to accurately reflect the ideals or broader perspectives of a country. Regional perspectives in Canada are represented through the larger print media sources found in the urban centres (i.e., Vancouver, Calgary, Winnipeg, Halifax, etc.) across the country.

Chapter Seven

Conclusion

7.0 Introduction

The contamination of the local drinking water in Walkerton, Ontario, in May 2000, was a highly publicized acute risk event raising concerns over the safety of drinking water in the province. Until this time, Canada had not experienced a drinking water risk of this magnitude before. Generally, Canadians did not consider drinking water to be of great risk to public health (Slovic et.al., 1993; Krewski et.al., 2005).

The Walkerton risk event provided a unique opportunity to study how the media constructed a recent risk event. When the media began reporting on the events, initially triggered by the illnesses and deaths, they became one of the primary sources of information. They were the first on the scene to “structure and frame what the public beyond Walkerton would know about the event and what would remain beyond scrutiny” (Parr, 2005, p.253), often describing it as *the* worst outbreak of *E.coli* in Canadian history. In addition to the adverse health impacts on the community, the contamination also changed the “local politics, neighbourly relations, and popular understandings of the responsibilities of being and knowing in place” (Parr, 2005, p.251).

The media’s construction of this risk event provides a broader view of how the media constructs risk events, and what the public may be thinking about with respect to

drinking water risks. The analysis showed the risk event played a major role on the media's agenda for an extended period of time, illustrating its relative importance on the Canadian national media. By focusing on the health consequences to construct their stories, the media concentrated on the more negative aspects creating an overly negative tone to the risk event. Due to the more often negatively framed stories, when confronted with similar risks in the future, the general public may become more concerned about the safety of their drinking water.

The media's attention on this risk issue may have amplified the risk to a greater degree causing the community and its residents to be stigmatized. Stigma, as result of a risk, is not unique to Walkerton. This risk event created a new identity, both for the residents and the community as a place. Place, became more defined through the analysis of blame and trust from the perspective of the residents.

The goal of this thesis project was to conduct a media analysis of the news construction of the Walkerton risk event to uncover the messages that are being conveyed to the audience regarding this risk event. To this end, the following three research objectives (in italics) were used to guide the analysis. Each one was designed to capture a component of the media's construction that may influence broader public perceptions of drinking water risks:

1) To understand how the media communicate and legitimate information about drinking water risk that could influence public opinions.

The media does not only consist of those creating the story, but also editors and owners who also influence the journalist reporting. The media do not communicate the events directly as they occur; rather they use certain elements of the event to convey a

picture they wish to present. These pictures reflect the dominant ideology the media outlet tries to promote. By framing stories to put emphasis on certain aspects over others, the media are able to manipulate the ‘picture’ of the events the public eventually sees. As such, the members of the public who are media dependent may not be able to separate the bias from fact and view these aspects of the risk event as being important.

The salience of this issue over time in the media suggests that it remained relatively prominent on the media’s agenda, even when other public health issues (see Chapter 1) were being reported. During the early reporting period, the increased frequency of reporting could imply to the general public the relative importance of this issue. Therefore, the way in which the story was presented could influence the public to think this is worthy of their concern.

Bishop (2001) suggests several ways the media legitimate information so as to make it relevant for their audience and also as a way to self-police their work. By using information and quotes from sources, the media story becomes more credible and the information more trustworthy for the audience (Bishop, 2001). The potential risks of drinking water are legitimized by the media’s use of quotes made by the residents that describe how they were dealing with the contamination. Since the general public is able to see and hear direct accounts from those affected, the risk becomes more real for those outside of Walkerton.

2) To determine how the media represents the community’s understanding of the events by following the news construction of the events and examining the comments made by the Walkerton residents

The media are interpreters and communicators of risk information. They use selected resident comments to illustrate the effects of the contamination on the community, as well as, adding a personal touch to the event for those not directly affected. However, these

comments are not necessarily direct representations of how the residents feel as they are the media's representation of how the residents feel. The media generally focus on the more negative aspects of the event, often characterizing the residents of this community as victims. Moreover, the media's role is a continuous one in constructing various aspects of the risk event for the general public.

Although they are trying to move forward and get back some sense of normalcy, some residents continue to blame the Koebel brothers for the contamination. Through the media's construction of blame and trust, from the residents' perspective, how the community dealt with the contamination is revealed. More surprisingly, the character of the community is also revealed through the analysis of these themes. Although residents blamed individuals within the community for the contamination and lost trust of those responsible to keep them safe, including the water, the analysis also created this place of Walkerton for those beyond its borders.

3) To understand the role of values, such as trust, in the construction and reporting of events

On many levels, trust plays an important role in how the public perceives risk. Whether the public trusts the information source or not, will determine the likeliness of that information being amplified. However, trust also plays a role in how the media construct the risk. The literature (Chapter 3) indicates that the acceptance of risks is also based on how the public trusts those in charge of managing risks. In the Walkerton case study, trust played an important role in illustrating the outrage of the community towards those in charge of keeping the residents safe. In addition, the lack of trust plays a role trying to (re)define their community. As a result, those the community no longer trusts are not considered to be part

of this small community. It is a consensus that the residents feel the contamination had a negative effect on the community as a whole, and thus they all equally suffered.

7.1 Contribution of this Research

This thesis will add to the work in risk research and media analyses in three broader areas – the theoretical, methodological and substantive contributions. Each of these is outlined below.

7.1.1 Theoretical

The geographical context of this research aims to extend Edelstein's (2004) conceptualization of a contaminated community. Edelstein's concept is largely focused towards toxicological contamination, caused by technology. The events of Walkerton, however, illustrate that Edelstein's work can be extended towards other forms of contamination that are not be naturally defined as such. The results of this analysis show that the pollutant, or contaminant, can also take the form of a microbiological contaminant. In the Walkerton example, *E.coli* is a naturally occurring bacterium that is helpful to cows, but becomes a risk when in contact with humans. Therefore, the contaminant within this concept can also be redefined. This research also helped to redefine what constitutes a risk. Within Edelstein's framework, the pollutant is considered a contaminant, no matter its origin. It is defined as a harmful substance, even if it does not come into contact with the public. *E.coli*; however, is not a harmful substance when found in a natural environment, unless it comes into contact with humans.

The *E.coli* contamination bounded the community and cast a risk perception shadow over Walkerton and surrounding affected areas. As such, community relationships and definitions changed, as all residents became defined by this new identity, leading to stigma. The changes in the community definition also emerged from the analysis of blame and trust. Although the literature indicates how trust and blame issues play a role in dealing with a risk event, by those affected, it did not indicate how these themes play a role in defining a community and its residents who have experienced the risk. In this analysis, not only does blame and trust illustrate how the community deals with the risk, but also it creates a place, as defined by Agnew (1993). Through blame, a close-knit and caring community is revealed, suggesting that all residents equally were harmed by the contamination. The analysis of trust reveals a divide in the community of those harmed by the contamination on one side and those residents blame for the contamination on the other.

7.1.2 Methodological

It is hoped that the results of this research will provide a method to speculate on public perceptions of risk, using the media as a surrogate for public opinion. This study provides both a quantitative and qualitative approach to assessing a single risk by evaluating one of the main sources of information for the public - the media.

Risk perception research is predominately based on quantification, by evaluating a series of risks on a numerical scale. The method developed to analyze the media data for this research provides another avenue to assess the public's perception of specific risks. This combined approach could help to further understand how these media messages are created and how they may influence the public in risk decision-making. This can be accomplished

by looking at both the frequency at which the media report on a risk, as compared to other issues, and also by evaluating thematically the messages being constructed.

To understand what the public thinks, it is best to speak directly to them, though this is not always possible. A media analysis highlights what the public may be thinking about by evaluating the messages they receive. Moreover, how the public feels about a risk such as drinking water is often reflected and reported in the news. Thus, by following what the public says in the media, the media could also act as a surrogate to gauge public opinions about issues.

7.1.3 Substantive

Understanding why the public may react to risks as they do is one of the key contributions of this research project. By using the Walkerton events as a case example, perceptions of risk could be extrapolated by evaluating media sources. One of the key elements that influence perceptions of risk is trust; one of the important themes to come out of this research. Past studies have already argued that people reject tap water on several grounds, one of which is their concern regarding their health (Turgeon et. al., 2004). If this remains true for Ontario, then there appears to be a lack of communication between the changes in legislation. For example, the introduction of the *Safe Drinking Water Act* (see Chapter 2) ensures that residents of Ontario can be assured safe drinking water and public opinion should be included in the process. It may also signal that legislative changes are insufficient to rebuild public trust.

This research will add to the growing list of literature already written about on the Walkerton risk event. Those listed here are predominately used in this research thesis.

Driedger (2007) explores the utility of using the media as a tool to gauge public perceptions of a risk, by comparing the print and televised coverage of the Walkerton risk event, over a 2.5 year period. Analysis of print versus televised media coverage is often not found within the academic literature. Parr (2005) used transcripts of the Inquiry and media reports of the events to determine the local priorities of water, and the impact of the contamination on the community. Ali (2004) conducted a socio-ecological autopsy of the Walkerton events, to understand the chain of events leading to the contamination. Interestingly, Ali suggests a need for a transdisciplinary approach to the study of environmental health problems. Hrudey and colleagues (2002 and 2003) compared the epidemic in Walkerton to other waterborne diseases in the developed world, suggesting the need for greater attention on broader issues related to water safety. Somewhat similar to Hrudey and colleagues, Brown and Hussain (2003) use the Walkerton tragedy as a case study urging for the need for better water quality monitoring with respect to microbiological contaminants. Prudham (2004) examines the risk event as a consequence of the neoliberal reforms, which includes such things as deregulation and privatization. And finally, in a clinical health study of those affected by the contamination, Richards (2005) describes the screening and treatment process during a seven year health study for those experiencing illness. Thus, it is seen that a range of growing research has already been undertaken regarding this risk event, and one could speculate the important influence this event has had on risk research in the Canadian context.

7.2 Future Points of Research and Limitations of Study

The media analysis conducted for this research thesis was a small portion of a larger SSHRC funded project. The analysis showed how the media constructed the Walkerton risk event. The focus on health themes, coupled with the frequency of reporting and the overall framing of the stories, may influence the perceptions of risk regarding drinking water. Moreover, it could also influence how the public views the responsibilities of the different levels of government in safeguarding communities.

This analysis covered the Canadian national media for four different media outlets. This provided a national perspective on this localized risk issue, although it did concentrate and provide local experiences of community residents. To understand how the local media constructed this event, future research should focus on analyzing local print and broadcast media coverage. This would provide an opportunity to compare the national and local media coverage of the same event.

In most cases, with respect to the print and broadcast media outlets studied, the same groups of journalists were involved in the reporting over the 2.5 year study period. For future research, to conduct interviews with these reporters to understand how they constructed the Walkerton risk event would be insightful: What influenced their work and what they believe to be the broader implications of their work on risk perceptions? Many of these reporters remained in Walkerton from when the first story broke, living and reporting directly from there. As such, these reporters became part of the community and they had a direct role in constructing and publishing the images that the public viewed that may have influenced their perceptions of drinking water risks.

Another component to the SSHRC funded project is to conduct focus groups across Ontario to gauge post-Walkerton public perceptions of drinking water. It would be interesting to pull out of this data the results of how the public views drinking water risks, as well as, the role of the media in reporting on risks and compare that to the analysis conducted here. This could show the influences of the media on public thinking. An initial analysis has shown that some of the public uses at least one of the four media sources, used in this analysis, as a source of information. An additional comparison is made at the local level, as some participants in the focus groups mentioned their local radio, television and print media as being their primary sources of information.

Even within the media analysis conducted there were a number of nodes/codes that were not examined in greater detail, given their relative fit with the objectives of this research. Those codes used to analyze the media data were ones that became clear during the analysis to play a larger role in the media's construction and in the broader context of risk analysis. As discussed earlier, the coding structure was developed based on the information that was emerging from the media data, during the free coding process and information from the literature. Thus, all of these nodes are important to the overall analysis of the media data. Due to time constraints, not all of these nodes were used for this analysis. As such, an interesting study would be to see how the media reflected the regional comments of Canadians with respect to the Walkerton risk event. How people perceive risks are also dependent on their social and cultural surroundings. Therefore, regional differences in how people perceived drinking water risks could be explored through these comments.

7.3 A Final Note...

The media analysis presented here only presents a small component of the information that was collected regarding the Walkerton risk event. The analysis uncovers some of the underlying messages and assumptions the Canadian national media constructed regarding the Walkerton risk event that may influence public perceptions of risk regarding drinking water. The analysis also highlighted the broad subject matter that was used when reporting on other public health risk events. As such, these ideas may help risk communicators understand why the public react to risks as they do.

Chapter Eight

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Appendix

Free Node Summary Report – Appendix A

Project: WalkertonThesisAnalysis
Generated: 12/11/2006 10:01 AM

Citizen Comments

Free Node

Any comments made by citizens (will be doubled coded with other nodes from the tree nodes); includes testimony of residents of Walkerton (Kobels, Mayor, etc);

Nickname		Words Coded	13,482
Created	5/8/2006 10:54 AM	Paragraphs Coded	1,533
Modified	7/16/2006 5:25 PM	Coding References	298
		Sources Coded	41
		Cases Coded	18

Hazard Sequence

Free Node

Anything to do with how people are reacting to the events based on the information they receive about the Walkerton events or based on past events (similar or not- ie. could be a completely different type of risk event); hazard notifications (individual instances); Citizen rxn to Reserve DW issues based on their experience with Walkerton;

Nickname		Words Coded	7,970
Created	2/28/2006 5:54 AM	Paragraphs Coded	887
Modified	7/16/2006 4:26 PM	Coding References	185
		Sources Coded	25
		Cases Coded	9

Media

Free Node

Information about what the media focus on; comments from anyone on what they feel the media is doing;

Nickname		Words Coded	1,901
Created	6/30/2006 10:28 AM	Paragraphs Coded	213
Modified	7/10/2006 10:33 PM	Coding References	32
		Sources Coded	7
		Cases Coded	0

Metaphors

Free Node

Nickname		Words Coded	3,702
Created	7/13/2006 10:59 PM	Paragraphs Coded	448
Modified	9/25/2006 10:52 AM	Coding References	209
		Sources Coded	42
		Cases Coded	27

Tree Node Summary Report – Appendix A

Project: WalkertonThesisAnalysis

Generated: 12/11/2006 9:58 AM

Additional concerns by Citizens

Tree Node

Concerns that are not captured by the above; when will the water get turned on; when will the children get back to school; when will life get back to normal; wanting Harris to apologize;

Nickname		Words Coded	7,397
Created	4/6/2005 12:35 PM	Paragraphs Coded	764
Modified	9/25/2006 10:53 AM	Coding References	189
		Sources Coded	45
		Cases Coded	29

Announcer~Reporter~Journlist

Tree Node

Name of the person making the report; also includes Canadian Press/Wire; Editorial;

Nickname		Words Coded	2,894
Created	1/22/2006 1:18 PM	Paragraphs Coded	1,087
Modified	9/25/2006 10:53 AM	Coding References	921
		Sources Coded	113
		Cases Coded	70

Balanced

Tree Node

Equal representation; not sure of either above

Nickname		Words Coded	0
Created	2/4/2006 1:06 PM	Paragraphs Coded	0
Modified	7/20/2006 12:11 PM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Blame

Tree Node

Anyone blaming anyone else for this tragedy; indications of specific individual(s) that should not be blamed; finger pointing;

Nickname		Words Coded	3,399
Created	3/19/2005 4:19 PM	Paragraphs Coded	374
Modified	9/25/2006 10:53 AM	Coding References	116
		Sources Coded	31
		Cases Coded	17

Blame	Tree Node
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Who is doing the blaming and capture who they are not blaming to see if this changes as time goes on; making criticisms; blaming certain individuals; groups of people; organizations;

Nickname		Words Coded	358
Created	3/19/2005 4:25 PM	Paragraphs Coded	45
Modified	9/25/2006 10:52 AM	Coding References	5
		Sources Coded	1
		Cases Coded	1

Blame	Tree Node
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Anyone blaming anyone else for this tragedy

Nickname		Words Coded	305
Created	4/5/2005 5:52 AM	Paragraphs Coded	32
Modified	7/16/2006 4:33 PM	Coding References	12
		Sources Coded	11
		Cases Coded	6

Body	Tree Node
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All material between the introduction and the concluding statement

Nickname		Words Coded	0
Created	3/19/2005 4:12 PM	Paragraphs Coded	0
Modified	3/19/2005 4:12 PM	Coding References	0
		Sources Coded	0
		Cases Coded	0

By Citizens	Tree Node
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Those who live in Walkerton and along the perimeter of the city that are affected by the contamination (based on Edelstein, 2004)

Nickname		Words Coded	3,363
Created	3/24/2005 8:51 AM	Paragraphs Coded	329
Modified	9/25/2006 10:51 AM	Coding References	105
		Sources Coded	33
		Cases Coded	23

By Citizens	Tree Node
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Reaction to investigations; reaction to compensation;

Nickname		Words Coded	2,936
Created	3/24/2005 9:13 AM	Paragraphs Coded	322
Modified	7/16/2006 5:24 PM	Coding References	67
		Sources Coded	23
		Cases Coded	9

By Government**Tree Node**

Calls by the opposition; all levels of government; current officials only; medical officer of health

Nickname		Words Coded	3,448
Created	3/24/2005 8:51 AM	Paragraphs Coded	358
Modified	9/25/2006 10:52 AM	Coding References	89
		Sources Coded	19
		Cases Coded	11

By Government**Tree Node**

Nickname		Words Coded	2,409
Created	3/24/2005 9:13 AM	Paragraphs Coded	277
Modified	7/9/2006 11:08 PM	Coding References	60
		Sources Coded	15
		Cases Coded	5

Calls for an Inquiry**Tree Node**

People asking for what happened; asking for truth to come out (this could also be occurring during the time of the Inquiry); other question that are coming out as a result of Walkerton; requests for standing;

Nickname		Words Coded	162
Created	3/19/2005 4:31 PM	Paragraphs Coded	20
Modified	6/28/2006 4:10 PM	Coding References	3
		Sources Coded	3
		Cases Coded	3

Cause of Mistrust**Tree Node**

Specific instances of where trust is lost and why; Possible causes of mistrust;

Nickname		Words Coded	2,975
Created	4/20/2005 6:27 AM	Paragraphs Coded	279
Modified	9/25/2006 10:52 AM	Coding References	62
		Sources Coded	17
		Cases Coded	11

Citizens**Tree Node**

Those who live in Walkerton and along the perimeter of the community that are affected by the contamination (based on Edelstein, 2004)

Nickname		Words Coded	4,630
Created	3/19/2005 4:28 PM	Paragraphs Coded	496
Modified	9/25/2006 10:53 AM	Coding References	121
		Sources Coded	32
		Cases Coded	23

Citizens**Tree Node**

Those who live in Walkerton and along the perimeter of the city that are affected by the contamination (based on Edelstein, 2004)

Nickname		Words Coded	1,856
Created	3/19/2005 4:37 PM	Paragraphs Coded	156
Modified	7/9/2006 1:36 PM	Coding References	48
		Sources Coded	15
		Cases Coded	11

Citizens**Tree Node**

Those who live in Walkerton and along the perimeter of the city that are affected by the contamination (based on Edelstein, 2004)

Nickname		Words Coded	1,477
Created	3/19/2005 4:40 PM	Paragraphs Coded	136
Modified	7/10/2006 2:40 PM	Coding References	38
		Sources Coded	5
		Cases Coded	4

Citizens**Tree Node**

Those who live in Walkerton and along the perimeter of the city that are affected by the contamination (based on Edelstein, 2004)

Nickname		Words Coded	3,511
Created	3/19/2005 4:47 PM	Paragraphs Coded	342
Modified	9/25/2006 10:52 AM	Coding References	108
		Sources Coded	44
		Cases Coded	33

Citizens**Tree Node**

Those who live in Walkerton and along the perimeter of the city that are affected by the contamination (based on Edelstein, 2004)

Nickname		Words Coded	2,164
Created	1/23/2006 7:15 AM	Paragraphs Coded	526
Modified	9/25/2006 10:53 AM	Coding References	427
		Sources Coded	76
		Cases Coded	53

Community Definition**Tree Node**

Media accounts of Walkerton before and after the events;

Nickname		Words Coded	1,037
Created	1/23/2006 7:16 AM	Paragraphs Coded	168
Modified	9/25/2006 10:53 AM	Coding References	98
		Sources Coded	31
		Cases Coded	16

Conclusion**Tree Node**

As introduction, last paragraph or closing statment by the anchor or report

Nickname		Words Coded	0
Created	3/19/2005 4:13 PM	Paragraphs Coded	0
Modified	3/19/2005 4:13 PM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Council~Lawyers**Tree Node**

Includes O'Conner

Nickname		Words Coded	1,659
Created	4/6/2005 12:49 PM	Paragraphs Coded	171
Modified	7/7/2006 5:28 PM	Coding References	45
		Sources Coded	17
		Cases Coded	12

Date**Tree Node**

Code the title; broadcast media and date

Nickname		Words Coded	20,565
Created	3/19/2005 4:10 PM	Paragraphs Coded	5,216
Modified	9/25/2006 10:53 AM	Coding References	819
		Sources Coded	113
		Cases Coded	70

Emotional**Tree Node**

Negative/Positive tone; devastation; deadliest; dramatic; anger; hope lost; troubling;

Nickname		Words Coded	41,588
Created	3/19/2005 4:23 PM	Paragraphs Coded	4,377
Modified	9/25/2006 10:53 AM	Coding References	559
		Sources Coded	100
		Cases Coded	64

Emotional		Tree Node	
Nickname		Words Coded	29,460
Created	3/19/2005 4:52 PM	Paragraphs Coded	3,318
Modified	9/25/2006 10:53 AM	Coding References	386
		Sources Coded	78
		Cases Coded	46

Emotional		Tree Node	
Nickname		Words Coded	9,957
Created	4/5/2005 5:55 AM	Paragraphs Coded	1,021
Modified	9/25/2006 10:53 AM	Coding References	106
		Sources Coded	57
		Cases Coded	30

Evidence		Tree Node	
Evidence: health impacts on the community members and sequence of events			
Nickname		Words Coded	53
Created	1/23/2006 6:24 AM	Paragraphs Coded	7
Modified	9/25/2006 10:50 AM	Coding References	1
		Sources Coded	1
		Cases Coded	1

Federal		Tree Node	
Nickname		Words Coded	207
Created	3/19/2005 4:31 PM	Paragraphs Coded	24
Modified	9/25/2006 10:52 AM	Coding References	5
		Sources Coded	3
		Cases Coded	3

Federal		Tree Node	
Nickname		Words Coded	0
Created	3/19/2005 4:43 PM	Paragraphs Coded	0
Modified	3/19/2005 4:44 PM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Federal		Tree Node	
Nickname		Words Coded	0
Created	3/19/2005 4:43 PM	Paragraphs Coded	0
Modified	3/19/2005 4:44 PM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Federal		Tree Node	
Nickname		Words Coded	0
Created	3/19/2005 4:48 PM	Paragraphs Coded	0
Modified	3/19/2005 4:49 PM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Federal Government		Tree Node	
Elected officials; associated with a political party			
Nickname		Words Coded	138
Created	1/23/2006 7:15 AM	Paragraphs Coded	34
Modified	9/25/2006 10:52 AM	Coding References	29
		Sources Coded	15
		Cases Coded	11

Frame~Perception of Overall Story		Tree Node	
Overall frame of the story			
Nickname		Words Coded	0
Created	2/4/2006 1:04 PM	Paragraphs Coded	0
Modified	2/4/2006 1:07 PM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Going over facts only		Tree Node	
Recount of what was just said in the report			
Nickname		Words Coded	25,516
Created	3/19/2005 4:51 PM	Paragraphs Coded	2,876
Modified	9/25/2006 10:53 AM	Coding References	365
		Sources Coded	96
		Cases Coded	61

Government Officials**Tree Node**

Accepting responsibility and issuing blame; current officials;

Nickname**Words Coded**

0

Created

3/19/2005 4:29 PM

Paragraphs Coded

0

Modified

3/16/2006 6:11 AM

Coding References

0

Sources Coded

0

Cases Coded

0

Government Officials**Tree Node**

Current government officials;

Nickname**Words Coded**

0

Created

3/19/2005 4:36 PM

Paragraphs Coded

0

Modified

3/16/2006 12:17 PM

Coding References

0

Sources Coded

0

Cases Coded

0

Government Officials**Tree Node**

Current officials;

Nickname**Words Coded**

0

Created

3/19/2005 4:40 PM

Paragraphs Coded

0

Modified

3/16/2006 1:16 PM

Coding References

0

Sources Coded

0

Cases Coded

0

Government Officials**Tree Node**

Current officials

Nickname**Words Coded**

0

Created

3/19/2005 4:48 PM

Paragraphs Coded

0

Modified

3/16/2006 1:26 PM

Coding References

0

Sources Coded

0

Cases Coded

0

Government Officials' Reaction**Tree Node**

Federal, provincial, municipal (mayor); all current officials;

Nickname**Words Coded**

2,014

Created

3/19/2005 4:37 PM

Paragraphs Coded

229

Modified

7/8/2006 7:42 PM

Coding References

49

Sources Coded

12

Cases Coded

7

Groups and Organizations**Tree Node**

Local groups (could include citizens also); Police, Health Canada; Catholic Education Board; other school boards; Concerned Walkerton Citizens; Pollution Probe; MOE; Ministry of the Solicitor-General; Association of Municipalities of Ontario; OMA;

Nickname		Words Coded	2,013
Created	1/23/2006 7:15 AM	Paragraphs Coded	374
Modified	9/25/2006 10:53 AM	Coding References	228
		Sources Coded	62
		Cases Coded	39

Headline**Tree Node**

Title of the broadcast segment or the title of the article

Nickname		Words Coded	9,424
Created	1/22/2006 1:17 PM	Paragraphs Coded	1,098
Modified	9/25/2006 10:53 AM	Coding References	822
		Sources Coded	113
		Cases Coded	70

Health- All others**Tree Node**

Scientific evidence; expert information; information from medical journals; statements of # of people ill, dead, in hospitals;

Nickname		Words Coded	11,609
Created	1/23/2006 6:33 AM	Paragraphs Coded	1,393
Modified	9/25/2006 10:53 AM	Coding References	584
		Sources Coded	86
		Cases Coded	51

Health Officials**Tree Node**

Medicial Officer of Health; Other medical officials (nurses, doctors)

Nickname		Words Coded	1,046
Created	3/19/2005 4:30 PM	Paragraphs Coded	122
Modified	7/9/2006 6:04 PM	Coding References	31
		Sources Coded	14
		Cases Coded	7

Health Officials**Tree Node**

Not practicing medical doctors

Nickname		Words Coded	2,403
Created	3/19/2005 4:35 PM	Paragraphs Coded	245
Modified	7/7/2006 5:30 PM	Coding References	65
		Sources Coded	12
		Cases Coded	8

Health Officials**Tree Node**

Medical officers of health; nurses; doctors

Nickname		Words Coded	92
Created	3/19/2005 4:38 PM	Paragraphs Coded	12
Modified	7/7/2006 6:04 PM	Coding References	3
		Sources Coded	3
		Cases Coded	2

Health Officials**Tree Node**

Medical officer of health; other medical officials (nurses, doctors)

Nickname		Words Coded	105
Created	3/19/2005 4:41 PM	Paragraphs Coded	13
Modified	7/10/2006 10:21 AM	Coding References	2
		Sources Coded	2
		Cases Coded	1

Health Officials**Tree Node**

Medical Officer of Health; Other medical officials (nurses, doctors)

Nickname		Words Coded	29
Created	3/19/2005 4:48 PM	Paragraphs Coded	2
Modified	5/2/2006 9:57 PM	Coding References	1
		Sources Coded	1
		Cases Coded	1

Health- Victim Stories**Tree Node**

Stories about the victims of the contamination; description of illnesses and death related to contamination; victim stories from the victim's point of view or reporter telling their stories; personal stories;

Nickname		Words Coded	9,828
Created	3/24/2005 8:56 AM	Paragraphs Coded	1,052
Modified	9/25/2006 10:52 AM	Coding References	229
		Sources Coded	59
		Cases Coded	42

Ill~Dead**Tree Node**

Reporting of the number of people ill or dead as a result of the contamination; also code use of phrase "tainted water";

Nickname		Words Coded	5,889
Created	3/19/2005 4:19 PM	Paragraphs Coded	832
Modified	9/25/2006 10:53 AM	Coding References	480
		Sources Coded	91
		Cases Coded	59

Ill~Dead**Tree Node**

Reporting of the number of people ill or dead as a result of the contamination (also code if use tainted water)

Nickname		Words Coded	1,995
Created	4/5/2005 5:51 AM	Paragraphs Coded	274
Modified	9/25/2006 10:53 AM	Coding References	164
		Sources Coded	56
		Cases Coded	32

Impact of Walkerton**Tree Node**

Action taken as a result of Walkerton - changes in government regulations, public changes in water behaviour; impact of new regulations on communities (big, small); Perkel's book; lessons learned; reaction to legislation (from Inquiry);

Nickname		Words Coded	18,782
Created	2/16/2006 11:24 AM	Paragraphs Coded	2,057
Modified	9/25/2006 10:53 AM	Coding References	434
		Sources Coded	59
		Cases Coded	27

Individuals and Groups**Tree Node**

Any mention of individuals, groups, etc in the media reports to determine who is saying what, but also who the media are going to for information. Only counts (comments not needed). Does not include reporter/journalists who are telling the story; only include 1 mention of person in broadcast since it could be an interview, part of testimony; only those associated with the Walkerton events or if the story is a result of or impacts the Walkerton events; only those who make a statement or the media is paraphras

Nickname		Words Coded	0
Created	1/23/2006 7:14 AM	Paragraphs Coded	0
Modified	6/27/2006 10:20 AM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Inquiry Findings**Tree Node**

Anything to do with the findings from the inquiry; what it showed overall; general information found after the inquiry is over; not to include reaction to the reports;

Nickname		Words Coded	7,588
Created	4/20/2006 1:47 PM	Paragraphs Coded	835
Modified	7/17/2006 9:11 PM	Coding References	140
		Sources Coded	17
		Cases Coded	5

Inquiry Report Leak**Tree Node**

Information about the leak of the report; related to the criminal investigation;

Nickname		Words Coded	1,354
Created	4/21/2006 10:07 AM	Paragraphs Coded	151
Modified	7/19/2006 12:15 PM	Coding References	18
		Sources Coded	3
		Cases Coded	2

Inquiry~Testimony**Tree Node**

Calls for inquiry; wanting information to come out; police investigation; other investigations (not civil suits); questions raised by the citizens, media, gov't, etc; final reports;

Nickname		Words Coded	13,849
Created	3/19/2005 4:19 PM	Paragraphs Coded	1,488
Modified	9/25/2006 10:51 AM	Coding References	360
		Sources Coded	69
		Cases Coded	45

Inquiry~Testimony**Tree Node**

Included initial interviews with citizens (in the summer, 2000) about what happened;

Nickname		Words Coded	4,846
Created	3/19/2005 4:25 PM	Paragraphs Coded	554
Modified	9/25/2006 10:52 AM	Coding References	132
		Sources Coded	30
		Cases Coded	14

Inquiry~Testimony**Tree Node**

Calls for inquiry; wanting information to come out; police investigation; other investigations (not civil suits)

Nickname		Words Coded	4,279
Created	4/5/2005 5:52 AM	Paragraphs Coded	509
Modified	7/16/2006 4:29 PM	Coding References	89
		Sources Coded	45
		Cases Coded	25

Introduction**Tree Node**

Coding first paragraph or introduction of the segment (could be anchor or reporter themselves); Coding of the first 2 paragraphs of the print media articles;

Nickname		Words Coded	0
Created	3/19/2005 4:12 PM	Paragraphs Coded	0
Modified	7/20/2006 12:13 PM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Koebels**Tree Node**

Nickname		Words Coded	2,259
Created	3/19/2005 4:35 PM	Paragraphs Coded	292
Modified	7/9/2006 5:42 PM	Coding References	102
		Sources Coded	11
		Cases Coded	9

Language of Reporter~Announcer**Tree Node**

Nickname		Words Coded	0
Created	4/5/2005 5:50 AM	Paragraphs Coded	0
Modified	4/5/2005 5:50 AM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Language of announcer~reportor**Tree Node**

Nickname		Words Coded	0
Created	3/19/2005 4:51 PM	Paragraphs Coded	0
Modified	3/19/2005 4:51 PM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Language of Reporter~Announcer**Tree Node**

Coding the language used by the reporter or announcer (intro); overall tone;

Nickname		Words Coded	0
Created	3/19/2005 4:16 PM	Paragraphs Coded	0
Modified	7/17/2006 9:02 PM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Lawyers	Tree Node
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Does not include O'Conner;

Nickname		Words Coded	969
Created	3/19/2005 4:29 PM	Paragraphs Coded	108
Modified	7/9/2006 11:07 PM	Coding References	27
		Sources Coded	10
		Cases Coded	5

Lawyers	Tree Node
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Nickname		Words Coded	397
Created	3/19/2005 4:41 PM	Paragraphs Coded	44
Modified	7/10/2006 9:30 PM	Coding References	6
		Sources Coded	3
		Cases Coded	1

Lawyers	Tree Node
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Nickname		Words Coded	47
Created	3/19/2005 4:48 PM	Paragraphs Coded	7
Modified	7/3/2006 2:00 PM	Coding References	1
		Sources Coded	1
		Cases Coded	1

Lawyers ~Questioners~	Tree Node
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Coding the questions that are being asked;

Nickname		Words Coded	4,733
Created	3/19/2005 4:35 PM	Paragraphs Coded	496
Modified	7/17/2006 9:18 PM	Coding References	195
		Sources Coded	25
		Cases Coded	18

Media Data Information	Tree Node
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Nickname		Words Coded	0
Created	1/22/2006 1:32 PM	Paragraphs Coded	0
Modified	1/22/2006 1:34 PM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Media Statements**Tree Node**

Statements the media/journalists make about what should have happened (their opinion -editorial);

Nickname		Words Coded	1,880
Created	7/2/2006 2:08 PM	Paragraphs Coded	193
Modified	7/19/2006 12:18 PM	Coding References	38
		Sources Coded	5
		Cases Coded	0

More Negative**Tree Node**

The story is balanced in reporting, but leans more to the negative

Nickname		Words Coded	5,893
Created	2/7/2006 1:56 PM	Paragraphs Coded	1,738
Modified	9/25/2006 10:53 AM	Coding References	207
		Sources Coded	69
		Cases Coded	46

More Positive**Tree Node**

The story is balanced in reporting, but leans a bit more to the positive

Nickname		Words Coded	2,625
Created	2/7/2006 1:57 PM	Paragraphs Coded	814
Modified	9/25/2006 10:53 AM	Coding References	91
		Sources Coded	53
		Cases Coded	26

Municipal**Tree Node**

Nickname		Words Coded	959
Created	3/19/2005 4:31 PM	Paragraphs Coded	101
Modified	6/28/2006 11:13 AM	Coding References	27
		Sources Coded	11
		Cases Coded	7

Municipal**Tree Node**

Nickname		Words Coded	1,046
Created	3/19/2005 4:42 PM	Paragraphs Coded	143
Modified	6/28/2006 11:06 AM	Coding References	37
		Sources Coded	7
		Cases Coded	5

Municipal		Tree Node	
Nickname		Words Coded	0
Created	3/19/2005 4:42 PM	Paragraphs Coded	0
Modified	4/21/2006 12:53 PM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Municipal		Tree Node	
Nickname		Words Coded	88
Created	3/19/2005 4:48 PM	Paragraphs Coded	12
Modified	7/6/2006 10:15 PM	Coding References	2
		Sources Coded	2
		Cases Coded	0

Municipal Government		Tree Node	
Mayor; health officers, etc; elected officials; other local officials; only current official of any municipality;			
Nickname		Words Coded	1,081
Created	1/23/2006 7:15 AM	Paragraphs Coded	222
Modified	9/25/2006 10:53 AM	Coding References	164
		Sources Coded	46
		Cases Coded	33

Negative		Tree Node	
System broke down; trust is lost; blaming; negativity is a major component of the story; grief; community in disaster;			
Nickname		Words Coded	11,641
Created	2/4/2006 1:06 PM	Paragraphs Coded	3,469
Modified	9/25/2006 10:53 AM	Coding References	414
		Sources Coded	91
		Cases Coded	57

Neutral		Tree Node	
Just stating facts			
Nickname		Words Coded	7,971
Created	3/19/2005 4:23 PM	Paragraphs Coded	856
Modified	9/25/2006 10:53 AM	Coding References	108
		Sources Coded	49
		Cases Coded	30

Neutral		Tree Node	
Nickname		Words Coded	20,867
Created	3/19/2005 4:52 PM	Paragraphs Coded	2,482
Modified	9/25/2006 10:53 AM	Coding References	282
		Sources Coded	83
		Cases Coded	55

Neutral		Tree Node	
Just stating facts			
Nickname		Words Coded	4,715
Created	4/5/2005 5:55 AM	Paragraphs Coded	547
Modified	9/25/2006 10:51 AM	Coding References	45
		Sources Coded	34
		Cases Coded	25

Other		Tree Node	
Anything that does not fit into the above; leak of the final report (but not the information from the report itself); Government action as a result of Walkerton; class action lawsuit; compensation;			
Nickname		Words Coded	20,512
Created	3/19/2005 4:22 PM	Paragraphs Coded	2,246
Modified	9/25/2006 10:53 AM	Coding References	407
		Sources Coded	82
		Cases Coded	49

Other		Tree Node	
Media; former government officials; non-citizens (Rest of Ontario);			
Nickname		Words Coded	4,701
Created	3/19/2005 4:31 PM	Paragraphs Coded	492
Modified	9/25/2006 10:53 AM	Coding References	133
		Sources Coded	38
		Cases Coded	19

Other		Tree Node	
Media; the media asking questions about what questions should be asked at the Inquiry;			
Nickname		Words Coded	2,513
Created	2/5/2006 12:22 PM	Paragraphs Coded	271
Modified	9/25/2006 10:52 AM	Coding References	56
		Sources Coded	22
		Cases Coded	13

Other	Tree Node
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Hydrogeologists; O'Conner; Dr. Ellis - Health Canada Epidemiologist; MOE;

Nickname		Words Coded	3,028
Created	3/19/2005 4:36 PM	Paragraphs Coded	364
Modified	7/17/2006 9:21 PM	Coding References	68
		Sources Coded	12
		Cases Coded	7

Other	Tree Node
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Lawyers; media comments regarding the testimony;

Nickname		Words Coded	2,039
Created	3/19/2005 4:38 PM	Paragraphs Coded	191
Modified	7/17/2006 9:25 PM	Coding References	54
		Sources Coded	16
		Cases Coded	10

Other	Tree Node
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Investigations of other water facilities in Ontario; compensation (Koebels and community); lawsuits; Coroners investigation (which deaths are related to the contamination); documents that could be used in the Walkerton Inquiry; Sierra Legal Defene Report; RCMP searching Harris office; misconduct notice/Investigation;

Nickname		Words Coded	18,257
Created	3/19/2005 4:39 PM	Paragraphs Coded	2,031
Modified	9/25/2006 10:53 AM	Coding References	361
		Sources Coded	43
		Cases Coded	24

Other	Tree Node
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Nickname		Words Coded	1,874
Created	3/19/2005 4:41 PM	Paragraphs Coded	193
Modified	7/13/2006 2:16 PM	Coding References	36
		Sources Coded	9
		Cases Coded	4

Other	Tree Node
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All others

Nickname		Words Coded	3,018
Created	3/14/2006 2:43 PM	Paragraphs Coded	346
Modified	7/16/2006 5:23 PM	Coding References	73
		Sources Coded	19
		Cases Coded	9

Other	Tree Node
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Media indicates generally that trust is lost or gained;

Nickname		Words Coded	758
Created	3/19/2005 4:48 PM	Paragraphs Coded	72
Modified	7/16/2006 5:05 PM	Coding References	23
		Sources Coded	12
		Cases Coded	9

Other	Tree Node
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Lawyers; legal teams; citizens of other areas (as not defined by Citizens of Walkerton); religious leaders (not part of Walkerton); past government officials; Walkerton Hospital Administration; Researchers; Doctors; labs;

Nickname		Words Coded	2,967
Created	1/23/2006 7:15 AM	Paragraphs Coded	609
Modified	9/25/2006 10:53 AM	Coding References	444
		Sources Coded	78
		Cases Coded	49

Other	Tree Node
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Nickname		Words Coded	5,854
Created	4/5/2005 5:52 AM	Paragraphs Coded	626
Modified	9/25/2006 10:53 AM	Coding References	97
		Sources Coded	49
		Cases Coded	28

Other Investigations	Tree Node
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All investigations that are concerned with the Walkerton events; MOE documents discussing cutbacks that could lead to problems; lawsuits; right to know; special reports to the inquiry (non-testimony);

Nickname		Words Coded	395
Created	3/19/2005 4:34 PM	Paragraphs Coded	46
Modified	9/25/2006 10:50 AM	Coding References	6
		Sources Coded	2
		Cases Coded	2

People seen as heros	Tree Node
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Nickname		Words Coded	985
Created	3/24/2005 10:20 AM	Paragraphs Coded	114
Modified	9/25/2006 10:53 AM	Coding References	33
		Sources Coded	14
		Cases Coded	11

Police ~Criminal Investigation~**Tree Node**

Only the criminal investigations;

Nickname		Words Coded	2,407
Created	3/19/2005 4:39 PM	Paragraphs Coded	249
Modified	9/25/2006 10:52 AM	Coding References	71
		Sources Coded	22
		Cases Coded	14

Political**Tree Node**

Impact of the events on the government (PROV); attacks against the government as a whole rather than just against this one event;

Nickname		Words Coded	5,107
Created	6/15/2006 10:50 AM	Paragraphs Coded	564
Modified	7/16/2006 5:06 PM	Coding References	93
		Sources Coded	23
		Cases Coded	3

Positive**Tree Node**

Everything will work out; finding hope in what happened; victims recovering from illnesses; glad that process is over- able to move on;

Nickname		Words Coded	2,825
Created	2/4/2006 1:05 PM	Paragraphs Coded	904
Modified	9/25/2006 10:53 AM	Coding References	107
		Sources Coded	53
		Cases Coded	26

Post-events**Tree Node**

After media begins reporting stories to the public since this is when the rest of the public begins to define Walkerton;

Nickname		Words Coded	5,098
Created	1/23/2006 7:16 AM	Paragraphs Coded	505
Modified	9/25/2006 10:51 AM	Coding References	155
		Sources Coded	42
		Cases Coded	31

Pre-events**Tree Node**

Before media begins reporting stories to the public; before the contamination affects the public;

Nickname		Words Coded	514
Created	1/23/2006 7:16 AM	Paragraphs Coded	51
Modified	9/25/2006 10:51 AM	Coding References	19
		Sources Coded	9
		Cases Coded	7

Provincial		Tree Node	
Nickname		Words Coded	5,029
Created	3/19/2005 4:31 PM	Paragraphs Coded	559
Modified	9/25/2006 10:52 AM	Coding References	117
		Sources Coded	24
		Cases Coded	14

Provincial		Tree Node	
Includes Brenda Elliott, who held the Env portfolio during the Conservative cuts;			
Nickname		Words Coded	2,167
Created	3/19/2005 4:43 PM	Paragraphs Coded	236
Modified	7/9/2006 1:35 PM	Coding References	69
		Sources Coded	10
		Cases Coded	9

Provincial		Tree Node	
Nickname		Words Coded	2,309
Created	3/19/2005 4:43 PM	Paragraphs Coded	259
Modified	7/13/2006 2:15 PM	Coding References	45
		Sources Coded	11
		Cases Coded	5

Provincial		Tree Node	
Nickname		Words Coded	863
Created	3/19/2005 4:48 PM	Paragraphs Coded	97
Modified	9/25/2006 10:52 AM	Coding References	23
		Sources Coded	13
		Cases Coded	5

Provincial Government		Tree Node	
Elected officials; associated with a political party; include deputy ministers;			
Nickname		Words Coded	1,953
Created	1/23/2006 7:15 AM	Paragraphs Coded	449
Modified	9/25/2006 10:53 AM	Coding References	374
		Sources Coded	56
		Cases Coded	32

Public Utilities Commission	Tree Node
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Of Walkerton; Including the Koebels

Nickname		Words Coded	339
Created	3/19/2005 4:29 PM	Paragraphs Coded	36
Modified	7/9/2006 6:04 PM	Coding References	13
		Sources Coded	6
		Cases Coded	3

Public Utilities Commission	Tree Node
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Including Koebels

Nickname		Words Coded	0
Created	3/19/2005 4:41 PM	Paragraphs Coded	0
Modified	3/19/2005 4:44 PM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Public Utilities Commission	Tree Node
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Including Koebels

Nickname		Words Coded	157
Created	3/19/2005 4:48 PM	Paragraphs Coded	16
Modified	7/3/2006 12:45 PM	Coding References	5
		Sources Coded	1
		Cases Coded	0

Public Utilities Commission	Tree Node
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Nickname		Words Coded	722
Created	3/19/2005 4:36 PM	Paragraphs Coded	106
Modified	7/1/2006 5:47 PM	Coding References	15
		Sources Coded	3
		Cases Coded	1

PUC	Tree Node
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Including the Koebels; those who were at the time of the contamination associated with the PUC

Nickname		Words Coded	377
Created	1/23/2006 7:15 AM	Paragraphs Coded	89
Modified	7/13/2006 6:53 PM	Coding References	71
		Sources Coded	18
		Cases Coded	13

Reaction to other Investigations**Tree Node**

Investigations; law suits; compensation;

Nickname**Words Coded**

53

Created

3/24/2005 9:13 AM

Paragraphs Coded

3

Modified

5/2/2006 9:57 PM

Coding References

1

Sources Coded

1

Cases Coded

1

Reaction to Release of Inquiry Repor**Tree Node****Nickname****Words Coded**

110

Created

3/19/2005 4:34 PM

Paragraphs Coded

10

Modified

7/10/2006 9:29 PM

Coding References

3

Sources Coded

3

Cases Coded

2

Reaction to Testimony**Tree Node****Nickname****Words Coded**

33

Created

3/19/2005 4:33 PM

Paragraphs Coded

3

Modified

5/2/2006 9:56 PM

Coding References

1

Sources Coded

1

Cases Coded

1

Report Editorial on Inquiry**Tree Node**

The reporter's account of the testimony; paraphrasing testimony;

Nickname**Words Coded**

26,548

Created

3/19/2005 4:34 PM

Paragraphs Coded

2,838

Modified

7/13/2006 10:56 PM

Coding References

638

Sources Coded

38

Cases Coded

25

Reporter~Announcer Commentary**Tree Node**

Analysis of the events through the additional questioning of the reporter.

Nickname**Words Coded**

3,030

Created

3/24/2005 10:00 AM

Paragraphs Coded

345

Modified

5/2/2006 10:05 PM

Coding References

18

Sources Coded

8

Cases Coded

8

Sequence of Events	Tree Node
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How this tragedy occurred (including people getting sick from the water)

Nickname		Words Coded	5,035
Created	3/19/2005 4:20 PM	Paragraphs Coded	563
Modified	9/25/2006 10:53 AM	Coding References	189
		Sources Coded	49
		Cases Coded	30

Sequence of Events	Tree Node
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Investigation results; documents; Evidence of what happened and is happening; Not Inquiry;

Nickname		Words Coded	32,309
Created	2/14/2006 12:01 PM	Paragraphs Coded	3,516
Modified	9/25/2006 10:53 AM	Coding References	765
		Sources Coded	69
		Cases Coded	37

Sequence of Events	Tree Node
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How this tragedy occurred (including people getting sick from the water)

Nickname		Words Coded	1,879
Created	4/5/2005 5:52 AM	Paragraphs Coded	203
Modified	7/16/2006 5:13 PM	Coding References	53
		Sources Coded	26
		Cases Coded	11

Short Story	Tree Node
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Use this code when the story is short (ie 1 or 2 paragraphs) . It could be just a brief story that mentions facts

Nickname		Words Coded	0
Created	4/5/2005 5:49 AM	Paragraphs Coded	0
Modified	4/5/2005 5:51 AM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Situations of Stigmatization	Tree Node
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Nickname		Words Coded	481
Created	1/27/2006 4:27 PM	Paragraphs Coded	47
Modified	9/25/2006 10:51 AM	Coding References	15
		Sources Coded	8
		Cases Coded	7

Statements made about the story or r			Tree Node
Nickname		Words Coded	0
Created	3/19/2005 4:50 PM	Paragraphs Coded	0
Modified	3/19/2005 4:51 PM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Statements made by Officials			Tree Node
Statements made that are related to the Walkerton events that are non-victim stories or resident of Walkerton; general commnts of what occurred; emotional comments about what happened; statements made about how the government is dealing with the events; comments about what is needed/req'd			
Nickname		Words Coded	11,251
Created	3/24/2005 10:16 AM	Paragraphs Coded	1,171
Modified	9/25/2006 10:53 AM	Coding References	277
		Sources Coded	52
		Cases Coded	34

Stating new information			Tree Node
statement of things to come			
Nickname		Words Coded	24,313
Created	3/19/2005 4:51 PM	Paragraphs Coded	2,887
Modified	9/25/2006 10:53 AM	Coding References	301
		Sources Coded	69
		Cases Coded	39

Testimony			Tree Node
Actual accounts of the Inquiry testimony; does not include the reporter paraphrasing testimony (unless required to understand the testimony);			
Nickname		Words Coded	551
Created	3/19/2005 4:32 PM	Paragraphs Coded	62
Modified	7/17/2006 9:20 PM	Coding References	16
		Sources Coded	4
		Cases Coded	2

Timeline			Tree Node
Nickname		Words Coded	1,116
Created	2/16/2006 3:51 PM	Paragraphs Coded	139
Modified	9/25/2006 10:50 AM	Coding References	2
		Sources Coded	2
		Cases Coded	2

Topic or subject matter of broadcast		Tree Node	
Coding of the subject matter to be discussed during the segment			
Nickname		Words Coded	0
Created	3/19/2005 4:14 PM	Paragraphs Coded	0
Modified	3/19/2005 4:15 PM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Topic or subject matter of broadcast		Tree Node	
Nickname		Words Coded	0
Created	4/5/2005 5:50 AM	Paragraphs Coded	0
Modified	4/5/2005 5:50 AM	Coding References	0
		Sources Coded	0
		Cases Coded	0

Trust		Tree Node	
Record where individuals/groups indicate loss or regain of Trust; Loss of confidence (in drinking water, drinking water systems, government,etc)			
Nickname		Words Coded	16
Created	3/19/2005 4:26 PM	Paragraphs Coded	2
Modified	9/25/2006 10:52 AM	Coding References	1
		Sources Coded	1
		Cases Coded	1

Trust ~Loss~Gain~			Tree Node
Includes such things as loss of confidence in drinking water; in government; other			
Nickname		Words Coded	946
Created	3/19/2005 4:20 PM	Paragraphs Coded	112
Modified	7/14/2006 4:18 PM	Coding References	41
		Sources Coded	27
		Cases Coded	17

Trust~Loss~Gain			Tree Node
Includes such things as loss of confidence in drinking water; in government; other			
Nickname		Words Coded	81
Created	4/5/2005 5:52 AM	Paragraphs Coded	8
Modified	6/26/2006 11:52 AM	Coding References	5
		Sources Coded	4
		Cases Coded	3

Walkerton Health Study**Tree Node**

Information related to the Walkerton Health Study

Nickname**Words Coded**

820

Created

6/9/2006 5:33 PM

Paragraphs Coded

89

Modified

7/13/2006 2:32 PM

Coding References

17

Sources Coded

3

Cases Coded

1

APPENDIX B – Coding Scheme – MS Word Version

The following coding scheme is the Microsoft Word version. The coding structure found in Appendix A is directly from *NVivo7*. That version does not contain the full descriptions of the codes since I exceeded the maximum allowable word count for the descriptions. As such, Appendix B contains the full version of the descriptions for the codes. This is the only difference between the two coding structures.

NOTE: Transcripts labeled as “Introductions” in the CBC National reports will not be coded as CTV News does not have the same type of introduction to their segments.

Citizen or Resident refers to those who live in/lived in Walkerton during the contamination period.

FREE NODES

CODE#	THEMES	DESCRIPTIONS
1.	Hazard Sequence	Anything to do with how people are reacting to the events based on the information they receive about the Walkerton events or based on past events (similar or not – ie could be a completely different type of risk event); hazard notifications (individual instances); Citizen rxn to Reserve DW issues based on their experience with Walkerton;
2.	Citizen Comments	Any comments made by citizens (will be double coded with other nodes from the tree nodes); includes testimony of residents of Walkerton (Koebels, Mayor, etc);
3.	Media	Information about what the media focus on; comments from anyone on what they feel the media is doing;
4.	Metaphors	

TREE NODES

CODE #	THEMES	DESCRIPTIONS
1.	MEDIA DATA INFORMATION	
2.	Date	Code the title, broadcast media, and date
3.	Headline	Title of the broadcast segment or the title of the article
4.	Announcer/Reporter/ Journalist	Name of the person making the report; also includes Canadian Press/Wire; Editorial;
5.	FRAME/PERCEPTION OF OVERALL STORY	
6.	Positive	Everything will work out; finding hope in what happened; victims recovering from illnesses; glad that process is over
7.	Negative	System broke down; trust is lost; blaming; negativity is a major component of the story; grief; community in disaster;
8.	Balanced	Equal representation; not sure of either above
9.	• More Positive	Balanced but slight weight on the positive side
10.	• More Negative	Balanced but slight weight on the negative side
11.	INTRODUCTION	Coding first paragraph or introduction of the segment (could be anchor or reporter themselves); Coding of the first 2 paragraphs of the print media articles;
12.	Topics/subject matter to be covered during broadcast	Coding of the subject matter to be discussed during the segment
13.	• Ill/Dead	Reporting of the number of people ill or dead as a result of the contamination; also code use of phrase “tainted water”;
14.	• Blame	Anyone blaming anyone else for the tragedy; indications of

		specific individual(s) that should not be blamed; finger pointing;
15.	• Inquiry/Testimony	Calls for inquiry; wanting information to come out; police investigation; other investigations (not civil suits); questions raised by the citizens, media, gov't, etc; final report;
16.	• Sequence of Events	How this tragedy occurred (including people getting sick from the water);
17.	• Trust (loss/gain)	Includes such things as loss of confidence in DW, in gov't, other;
18.	• Other	Anything that does not fit into the above: Gov't action as a result of Walkerton; class action lawsuit, compensation;
19.	Language of Reporter/Announcer/Journalist	Coding the language used by the reporter or announcer (intro); overall tone
20.	• Neutral	Just stating facts
21.	• Emotional	Negative/Positive way; devastation, deadliest, dramatic, anger; hope lost; troubling
22.	BODY	All material between the introduction (or what is indicated as introduction) and the concluding statement (or what is indicated as part of the concluding statement)
23.	Blame	Who is doing the blaming and capture who they are not blaming to see if this changes as time goes on; making criticisms; blaming certain individuals; groups of people; organizations
24.	• Citizens	Those who live in Walkerton and along the perimeter of the city that are affected by the contamination (based on Edelstein, 2004);
25.	• Government Officials	Accepting responsibility and issuing blame; current officials
26.	o Municipal	
27.	o Provincial	
28.	o Federal	
29.	• Public Utilities Commission	Of Walkerton; including Koebels
30.	• Lawyers	Does not include O'Conner;
31.	• Health Officials	Medical Officer of Health; Other Medical Officials (nurses, doctors)
32.	• Other	Media; former government officials; non-citizens (rest of Ontario);
33.	Inquiry/Testimony	Included initial interviews with citizens (in the summer) about what happened;
34.	• Calls for an Inquiry	People asking for what happened; asking for truth to come out (this could also be occurring during the time of the Inquiry); other questions that are coming out as a result of Walkerton; requests for standing;
35.	o By Citizens	Those who live in Walkerton and along the perimeter of the city that are affected by the contamination (based on Edelstein, 2004);
36.	o By Government	Calls by the opposition; all levels of government; current officials only;
37.	o By Lawyers/Council	Includes O'Conner;
38.	o Other	Media; former government officials; non-citizens;
39.	• Inquiry Findings	Anything to do with the findings from the inquiry; what it showed overall; general information found after the inquiry is over; not to include reaction to the reports;
40.	• Testimony	Actual accounts of the Inquiry testimony; does not include the reporter paraphrasing testimony (unless required to understand testimony);
41.	o Koebels	
42.	o Health Officials	
43.	o Lawyers/Questioners	Coding the questions being asked;

44.	○ Public Utilities Commission	
45.	○ Government Officials	Current government officials;
46.	▪ Municipal	
47.	▪ Provincial	
48.	▪ Federal	
49.	○ Other	Hydrogeologists; O'Conner; Dr. Ellis – Health Canada Epidemiologist; MOE;
50.	• Reaction to Testimony	
51.	○ Citizen Reaction	Those who live in Walkerton and along the perimeter of the city that are affected by the contamination (based on Edelstein, 2004);
52.	○ Government Officials Reaction	Federal, provincial, municipal (mayor); all current officials;
53.	○ Health Officials	Medical officer of health, nurses, doctors
54.	○ Other	Lawyers; media comments regarding the testimony;
55.	• Other Investigations	All investigations that are concerned with the Walkerton events; MOE documents discussing cutback that could lead to problems; lawsuits; right to know; special reports to the inquiry (non-testimony);
56.	○ Police (Criminal Investigation)	Only the criminal investigation;
57.	▪ Inquiry Report Leak	Information about the leak of the report; related to the criminal investigation;
58.	○ Other (List each one)	Investigations of other water facilities in Ontario; compensation (Koebels and community); Lawsuits; Coroners investigation (which deaths are related to the contamination); documents that could be used in the Walkerton Inquiry; Sierra Legal Defense report; misconduct; RCMP investigation of Harris Gov't Offices;
59.	• Reactions to other investigations	
60.	○ By Citizens	Those who live in Walkerton and along the perimeter of the city that are affected by the contamination (based on Edelstein, 2004);
61.	○ By Government	Current officials;
62.	○ Other	All others;
63.	• Reaction to Release of Inquiry Reports	
64.	○ Citizens	Those who live in Walkerton and along the perimeter of the city that are affected by the contamination (based on Edelstein, 2004);
65.	○ Government Officials	Current officials;
66.	• Municipal	
67.	• Provincial	
68.	• Federal	
69.	○ Public Utilities Commission	Including Koebels
70.	○ Lawyers	
71.	○ Health Officials	Medical Officer of Health; Other Medical Officials (nurses, doctors)
72.	○ Other	
73.	• Reporter Editorial on Inquiry	The reporter's account of the testimony; paraphrasing testimony;
74.	Trust	Record where individuals/groups indicate loss or regain of Trust; Loss of Confidence (in drinking water, drinking water systems, government, etc)

75.	• Citizens	Those who live in Walkerton and along the perimeter of the city that are affected by the contamination (based on Edelstein, 2004);
76.	• Government Officials	Current officials
77.	o Municipal	
78.	o Provincial	
79.	o Federal	
80.	• Public Utilities Commission	Including Koebels
81.	• Lawyers	
82.	• Health Officials	Medical Officer of Health; Other Medical Officials (nurses, doctors)
83.	• Other	Media indicate generally that trust is lost or gained;
84.	• Causes of Mistrust	Specific instances of where trust is lost and why; Possible causes of mistrust;
85.	Evidence	Evidence: Health impacts on the community members and sequence of events
86.	• Health - Victim Stories	Stories about the Victims of the contamination; Description of illnesses and death related to contamination; Victim stories from the victim's point of view or reporter telling their story; personal stories
87.	• Health – All others	Scientific evidence; expert information; information from medical journals; statements of # of people ill, dead, in hospitals, etc; not related to specific individuals, but more generalized;
88.	o Walkerton Health Study	Information related to the Walkerton Health Study
89.	• Sequence of Events	Investigation results; documents; evidence of what happened and is happening; Not Inquiry;
90.	Individuals and Groups	Any mention of individuals, groups, etc, in the media reports to determine who is saying what, but also who the media are going to for information (Only counts – comments not need) Does not include reporters/journalists who are telling the story; only include 1 mention of person in broadcast since it could be an interview, part of testimony; only those associated with the Walkerton events or if the story is a result of or impacts the Walkerton events; only those who make a statement or the media is paraphrasing what that person said
91.	• Citizens	Those who live in Walkerton and along the perimeter of the city that are affected by the contamination (based on Edelstein, 2004);
92.	• PUC	Including the Koebels; those who were at the time of the contamination associated with the PUC;
93.	• Municipal Government	Mayor, Health Officers, etc; elected officials; other local officials; only current official of any municipality
94.	• Provincial Government	Elected officials; associated with a political party
95.	• Federal Government	Elected officials; associated with a political party
96.	• Groups or Organizations	Local groups (can include in citizens also); Police, Health Canada; Catholic Edu Board; Concerned Walkerton Citizens; Pollution Probe; MOE; Ministry of the Solicitor General; Chief Coroner; Association of Municipalities; OMA;
97.	• Other	Lawyers; legal teams; citizens of other areas; religious leaders (not part of Walkerton); past gov't officials; Walkerton Hospital Admin; Researchers; Doctors; Labs;
98.	Community Definition	Media accounts of Walkerton before and after the event
99.	• Pre-events	Before media begins reporting stories to the public; before the contamination affects the public;
100.	• Post events	After media begins reporting stories to the public since this is when the rest of the public begins to define Walkerton

101.	• Situations of stigmatization	
102.	Statements made by Officials	Statements made that are related to the Walkerton events that are non victim stories or residents of Walkerton; general comments of what occurred; emotional comments about what happened; statement made about how the government is dealing with the events; Comments about what is needed and required
103.	• Media statements	Statements the media/journalists make about what should have happened (their opinion – editorial);
104.	People seen as heroes	
105.	Additional Concerns by Citizens	Concepts that are not captured by the above; when will the water get turned on; when will the children get back to school; when will life get back to normal; wanting Harris to apologize;
106.	Impact of Walkerton	Action taken as a result of Walkerton - changes in government regulations, public changes in water behaviour; impact of new regulations on communities (Big, small); Perkel's book; lessons learned; reactions to legislation (from Inquiry)
107.	• Political	Impact of the events on the government (PROV); attacks against the government as a whole rather than just against this one event;
108.	CONCLUSION	Concluding statements (by announcer or reporter covering story)
109.	Statements made about report	Statements made about the story just heard/seen
110.	Go over facts	Recounting what was said in the news report
111.	Stating new information	
112.	Language of reporter/announcer	Negative/Positive
113.	Neutral	
114.	Emotional	Negative/Positive way (searching for hope);
115.	Reporter/Announcer Commentary	Analysis of events through questioning of reporter
116.	SHORT STORY	200 words and under; chronology of what happened (timelines)
117.	Topics/subject matter to be covered during broadcast	
118.	• Ill/Dead	
119.	• Blame	
120.	• Inquiry/Testimony	
121.	• Sequence of Events	
122.	• Trust (loss/gain)	
123.	• Timeline	
124.	• Other	
125.	Language of Reporter/Announcer	
126.	Neutral	Just stating facts
127.	Emotional	Negative/Positive way; devastation, deadliest, dramatic, anger; hope lost; troubling

Extra codes:

Anything that sticks out that is not captured by the above.